



BOARD AGENDA FACT SHEET

CLERK USE ONLY
BOS ACTION

Planning & Development Services Department

Requested Board Date: **January 23, 2024**

1. Request:

Board Approval

XX

Information
Only/Presentation
Scheduled Hearing
Time: 11:00 A.M.

XX

Other (specify)

2. Requested Action: *Type requested action below*

The Planning & Development Services Department respectfully requests that the Board of Supervisors conduct a public hearing to consider Appeal #23-0004 of the December 13, 2023, Planning Commission's decision of approval for Hell's Kitchen PowerCo 1, LLC and Hell's Kitchen LithiumCo 1, LLC, as submitted by the Control Thermal Resources, Inc.:

1. Consider Approval or Denial of Appeal #23-0004; and,
2. Consider Approval or Denial of the followings; and,
 - a. Water Supply Agreement; and,
 - b. Final EIR (SCH #2022030704), and Findings of Fact; and,
 - c. Mitigation Monitoring and Reporting Program; and,
 - d. Conditional Use Permit #21-0020 (PowerCo 1, LLC); and,
 - e. Conditional Use Permit #21-0021 (LithiumCo 1, LLC); and,
 - f. Variance #21-0004 (PowerCo 1, LLC); and,
 - g. Variance #21-0005 (LithiumCo 1, LLC).

3. Cost \$ 0 Source: N/A

4. If approval of Contract, reviewed/approved by County Counsel on: N/A

By: _____ Action Request # N/A
Assigned by County Counsel's Office

5. If approval of position allocation change, reviewed by Human Resources on: N/A

By: _____

6. Electronic copy submittal date: 01/11/24 By: Rosa A. Soto, Office Supervisor


Department Head/Agency Representative

INSTRUCTIONS: Back-up must be submitted **15 BUSINESS days** prior to requested date (Please note a Holiday counts as a Business day.) Back-up submitted must contain an **Original and 2 copies**. Copies must be submitted to the County Executive Office double sided and three (3) hole punched. Back-up must be submitted in a PDF format to vanessasalcido@co.imperial.ca.us and gracielaalvarez@co.imperial.ca.us

Reviewed By: _____
Deputy CEO

Reviewed By: _____
Deputy CEO

CEO/CLERK USE ONLY:

BOARD DATE: _____

DATE STAMP

Action	_____	Filing	_____
Consent	_____	Presentation	_____
Hearing	_____	CEO Approval	_____
Other (specify)	_____		
_____	_____	_____	_____
CEO		Date	



Imperial County Planning & Development Services Planning / Building

Jim Minnick
DIRECTOR

TO: Board of Supervisors

January 23, 2024

FROM: Jim Minnick, Director of Planning & Development Services

M/O _____

SUBJECT: APPEAL #23-0004 OF THE DECEMBER 13, 2023, PLANNING COMMISSION DECISION'S OF APPROVAL FOR THE HELL'S KITCHEN POWER AND LITHIUM PROJECTS

Dear Board Members:

REQUESTED ACTION:

The Planning & Development Services Department respectfully requests that the Board of Supervisors conduct a public hearing to consider Appeal #23-0004 of the December 13, 2023, Planning Commission's decision of approval for Hell's Kitchen PowerCo 1, LLC and Hell's Kitchen LithiumCo 1, LLC, as submitted by the Control Thermal Resources, Inc.:

1. Consider Approval or Denial of Appeal #23-0004; and,
2. Consider Approval or Denial of the followings; and,
 - a. Water Supply Agreement; and,
 - b. Final EIR (SCH #2022030704), and Findings of Fact; and,
 - c. Mitigation Monitoring and Reporting Program; and,
 - d. Conditional Use Permit #21-0020 (PowerCo 1, LLC); and,
 - e. Conditional Use Permit #21-0021 (LithiumCo 1, LLC); and,
 - f. Variance #21-0004 (PowerCo 1, LLC); and,
 - g. Variance #21-0005 (LithiumCo 1, LLC).

BACKGROUND:

The project's plant and facilities will be located on undeveloped land owned by Imperial Irrigation District (IID), which is approximately 3.6 miles southwest of the community of Niland on sixteen parcels: APNs 020-010-012, -013, 020-070-060, 020-010-031, -032, 034, 035, -042, -044, 020-060-001, -002, -039, -040, 020-070-025, -026, -029, -055, 020-100-044. The purpose of the project is for the construction of geothermal power plant facility. Pursuant to Title 9, Division 5, Sections 90518.02, 90519.02, and 90516.02, Major facilities relating to the generation and transmission of electrical energy is a use that is permitted in the S-1-G (Open Space, Geothermal Overlay), S-2-G (Open Space/Recreation, Geothermal Overlay), and M-2-G (Medium Industrial, Geothermal Overlay) Zone subject to approval of a CUP from the County. Therefore, the proposed use is consistent with the purpose of the zone or sub-zone within which the uses will be located (Supervisorial District #4).

Controlled Thermal Resources (US) Inc. via its subsidiary Hell's Kitchen Geothermal, LLC is proposing the Hell's Kitchen PowerCo 1 (HKP1), and Hell's Kitchen LithiumCo 1, LLC is proposing the Hell's Kitchen LithiumCo 1 (HKL1) in Imperial County, California. HKP1 involves the development of a geothermal power plant that will produce up to 49.9 megawatts (MW) net of geothermal green energy. HKL1 involves development of mineral extraction and processing facilities capable of producing lithium hydroxide, silica and polymetallic products, and possibly boron compounds, for commercial sale. HKP1 and HKL1 (together referred to as the Proposed Project) will be constructed by Hell's Kitchen PowerCo 1, LLC and Hell's Kitchen LithiumCo 1, LLC respectively, both subsidiaries of Controlled Thermal Resources (US) Inc. (CTR) and will have shared facilities. Hell's Kitchen Operating Services LLC, also a subsidiary of Controlled Thermal Resources (US) Inc., will operate and maintain these facilities. The project proposes to produce over 20,000 mt's of Lithium.

Land Use Analysis:

Major facilities relating to the generation and transmission of electrical energy is a use that is permitted in the S-1-G (Open Space, Geothermal Overlay), S-2-G (Open Space/Recreation, Geothermal Overlay), and M-2-G (Medium Industrial, Geothermal Overlay) Zone subject to approval of a CUP from the County. Therefore, the proposed use is consistent with the purpose of the zone or sub-zone within which the uses will be located.

In a letter December 22, 2023, Law Office of Jordan R. Sisson filed an appeal on behalf of Comité Civico del Valle of the December 13, 2023, Planning Commission's approval of the Conditional Use Permits and Variances for the Hell's Kitchen Power & Lithium Projects.

Staff will attempt to answer any questions you may have. Thank you.

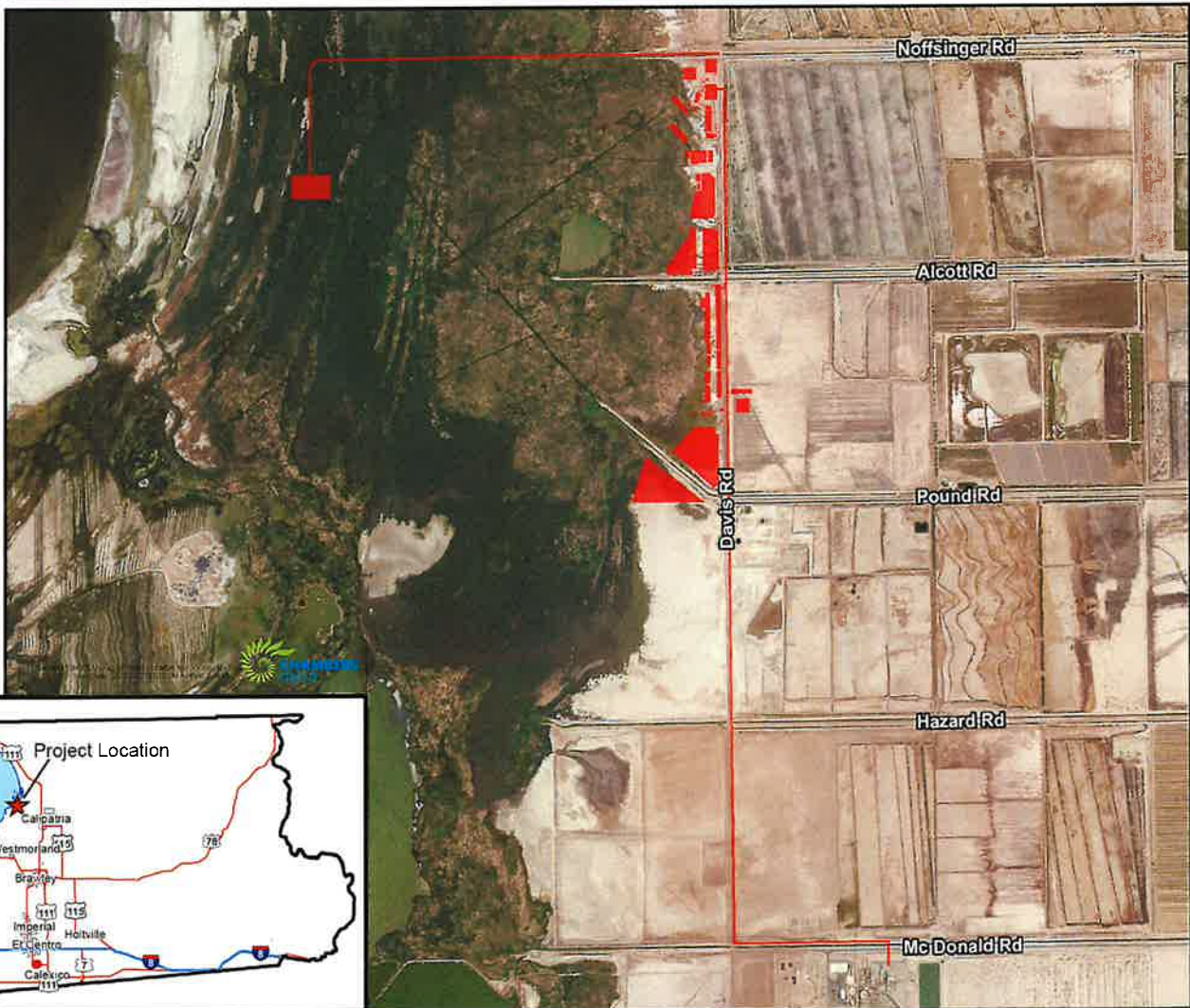
ATTACHMENT:

- A. Location Map
- B. Response to Appeal by Applicant
- C. Appeal Request by Comité Civico de Valle
- D. Water Supply Assessment - Resolution
- E. EIR (SCH # 2022030704) & Findings of Fact - Resolution
- F. Mitigation Monitoring and Reporting Program - Resolution
- G. Conditional Use Permit # 21-0020 - Resolution
- H. Conditional Use Permit #21-0021 - Resolution
- I. Variance #21-0004 - Resolution
- J. Variance #21-0005 - Resolution
- K. PC & EEC Original Package CD

cc: Miguel Figueroa, County Executive Officer
Eric Havens, County Counsel
Jim Minnick, Director of ICPDS
Michael Abraham, AICP Assistant Director of ICPDS
David Black, Planner IV
APP23-0004; CUP21-0020 & 21 0021 APN 020-010 -012
Files 10.101; 10.110; 40.103; 40.110; 40.111

**Attachment A
Location Map**

PROJECT LOCATION MAP



**HELL'S KITCHEN
POWER AND LITHIUM PROJECT**
**CUP #20-0020 & CUP #20-0021 & V #21-0004
 & #21-0005 APN 020-010-012, -013,
 020-070-060, 020-010-031, -032, -035, -042,
 020-060-001, -002, -039, -040,
 020-070-025, -026, -029, -055**

- Project Location
- Centerline
- Parcels



Attachment B
Response to Appeal by Applicant

January 8, 2024

VIA EMAIL & HAND-DELIVERY

Mr. Ryan E. Kelley
Chairman of the Board
Imperial County Board of Supervisors
940 W. Main Street, Suite 209
El Centro, CA 92243-2839
ryankelley@co.imperial.ca.us

RECEIVED
JAN 08 2023
IMPERIAL COUNTY
PLANNING & DEVELOPMENT SERVICES

Re: Response of Controlled Thermal Resources (US) Inc. and its Subsidiaries Hell’s Kitchen Power Co 1 LLC And Hell’s Kitchen Lithium Co 1 LLC to the Appeal Of Hell’s Kitchen Power Co 1 And Lithium Co 1 Project; Conditional Use Permit Nos. Cup #21-0020 & Cup #21-0021; Variances Nos. V #21-0004 & V #21-0005; Water Supply Assessment Environmental Impact Report (Sch No. 2022030704)

Dear Chairman Kelley:

Controlled Thermal Resources (US) Inc. (“**CTR**”), and its subsidiaries Hell’s Kitchen Power Co 1 LLC (“**HKP1**”) And Hell’s Kitchen Lithium Co 1 LLC (“**HKL1**”) submit this response (“**Response**”) to the Comité Civico del Valle (“**Comité**”) appeal filed on December 22, 2023 (“**Appeal**”). On December 13, 2023, the Imperial County Planning Commission (“**Commission**” “**County**,” or “**Lead Agency**”) approved two Conditional Use Permits (Nos. 21-0020 & 21-0021), two Variances (Nos. 21-0004 & 21-0005), the Environmental Impact Report¹ (SCH # 2022030704) (“**EIR**”), Mitigation Monitoring and Reporting Program (“**MMRP**”), and the Water Supply Assessment (“**WSA**”) for the proposed CTR project (“**Project**”).

The Project is comprised of construction of a geothermal power plant that will produce up to 49.9 megawatts net of geothermal renewable energy and a related mineral extraction and processing facilities capable of producing lithium hydroxide, silica, bulk sulfide, and polymetallic products for commercial sale. The Project is located within the Salton Sea geothermal field adjacent to Davis Road and south of Noffsinger Road in Imperial County, California (“**Site**”). CTR, HKP1 and HKL1 (collectively “**Applicant**”) are providing this Response to support the Commission’s decision. The Applicant respectfully requests that the Imperial County Board of Supervisors (“**Board**”) affirm the actions of the Commission and deny the Appeal.

INTRODUCTION

An EIR is an informational document that is meant “to provide public agencies and the public in general with detailed information about the effect a proposed project is likely to have on the environment; to list ways the significant effects of such a project might be minimized; and to provide alternatives to such a project. *Laurel Heights v. Regents of University of California* (1988)

¹ Within this Response, EIR refers to the Draft EIR, Final EIR and Appendices, unless otherwise stated.

47 Cal.3d 376, 391. An adequate project description is important in that it ensures that the California Environmental Quality Act (“CEQA”) goals of providing information about a project’s environmental impacts to government agencies and the public to allow consideration of mitigation measures and alternatives will not be rendered useless. *County of Inyo v. City of Los Angeles* (1977) 71 Cal. App.3d 185, 192-193, 197-198, 203. Under CEQA, “an EIR is presumed adequate and the plaintiff in a CEQA action has the burden of proving otherwise.” *Larson Boat Shop Inc. v. Board of Harbor Commissioners* (1993) 18 Cal. App.4th 729, 740. “Technical perfection is not required; the courts have looked not for exhaustive analysis but for adequacy, completeness and a good-faith effort at full disclosure.” *Rio Vista Farm Bureau Center v. County of Solano* (1992) 5 Cal.App.4th 351, 368. Reviewing courts do not pass upon the correctness of the EIR’s environmental conclusions, but only upon its sufficiency as an informative document. *A Local & Regional Monitor v City of Los Angeles* (1993) 16 Cal.App.4th 630, 639. (“We may not set aside an agency’s approval of an EIR on the ground that an opposite conclusion would have been equally or more reasonable.”).

For CEQA purposes, substantial evidence is enough relevant information and reasonable inferences for that information that fair argument can be made to support a conclusion, even if other conclusions might also be reached. Cal. Code, tit. 14 § 15384(a);² *Preserve Wild Santee v. City of Santee*, (2012) 210 Cal. App. 4th 260. Substantial Evidence includes “facts, reasonable assumptions predicted upon facts, and expert opinion supported by facts” and it “does not include argument, speculation unsubstantiated opinion or narrative, clearly erroneous or inaccurate evidence, or evidence of social or economic impacts, which do not contribute to or are not caused by physical impacts on the environment.” CEQA Guidelines § 15384(a), (b).

The CEQA Guidelines provide that “[t]he description of the project [in the EIR] shall contain the following information but should not supply extensive detail beyond that needed for evaluation and review of the environmental impact:

- (a) The precise location and boundaries of the proposed project shall be shown on a detailed map, preferably topographic. The location of the project shall also appear on a regional map.
- (b) A statement of the objectives sought by the proposed project. A clearly written statement of objectives will help the lead agency develop a reasonable range of alternatives to evaluate in the EIR and will aid the decision makers in preparing findings or a statement of overriding considerations, if necessary. The statement of objectives should include the underlying purpose of the project and may discuss the project benefits.
- (c) A general description of the project’s technical, economic, and environmental characteristics, considering the principal engineering proposals, if any, and supporting public service facilities.
- (d) A statement briefly describing the intended uses of the EIR.

² California Code of Regulations, title 14, Section 15204, et seq., hereinafter referred to as CEQA Guidelines.

- (1) This statement shall include to the extent that the information is known to the lead agency: (A) A list of the agencies that are expected to use the EIR in their decision-making, and (B) A list of permits and other approvals required to implement the project. (C) A list of related environmental review and consultation requirements required by federal, state, or local laws, regulations, or policies. To the fullest extent possible, the lead agency should integrate CEQA review with these related environmental review and consultation requirements.
- (2) If a public agency must make more than one decision on a project, all its decisions subject to CEQA should be listed, preferably in the order in which they will occur. On request, the Office of Planning and Research will provide assistance in identifying state permits for a project.

CEQA Guidelines § 15124.

The County conducted an environmental review under CEQA to develop the EIR, MMRP, and WSA as Lead Agency. EIR Section 2.4 at 6. The environmental review met the requirements of the CEQA Guidelines. The County did not err or abuse its discretion in certifying the FEIR for the Project. The environmental review was thorough, considered existing Site conditions, evaluated cumulative impacts, and was developed with substantial and meaningful community and stakeholder engagement. The County evaluated all comments on environmental issues received on the Draft EIR (“**DEIR**”) and prepared a written response consistent with the requirements of CEQA Guidelines Section 15088. Throughout the environmental review process, as reflected by the DEIR and the Final EIR (“**FEIR**”), the County engaged in a good faith effort at full disclosure of significant environmental impacts and feasible mitigation in compliance with CEQA Guidelines Section 15204. The approved Project includes numerous mitigation measures, some of which were incorporated into the Project proposal, others added during the environmental review process. The Project and the related environmental review meet or exceed the requirements of CEQA and applicable federal, state, and local laws.

Comité’s Appeal fails to provide substantial supporting evidence. Comité cites ten bases for its assertion that the environmental review process conducted by the County for the Project is inadequate under the requirements of the CEQA statute and guidelines. CTR and its subsidiaries have contributed to a 1,894 page DEIR, a 200 page FEIR, and multiple meetings with stakeholders to comply with CEQA. These many pages and the community engagement process reflect the Applicant’s and the County’s deep commitment to transparency and compliance with the law. The Applicant discusses its responses to Comité’s comments below.

RESPONSE TO SPECIFIC ISSUES RAISED IN THE APPEAL

1. The Project EIR Relied on an Accurate, Stable, and Finite Project Description

Comité's Appeal Comment 1: The Project EIR fails to use an accurate, stable and finite project description [sic] is the sine qua non of an informative and legally sufficient EIR.

Comité contends that “the Project EIR fails to use an accurate, stable, and finite project description” and that there is a “lack of information about the Project operations details about the brine pond, clarifiers, filter cake press, brine composition, and proprietary information about the extraction and reinjection process.” The comment also states that the Project would not achieve the stated efficiency and further objects that the EIR failed to consider “potential impacts from rapid mineral extraction, such as the long delay to recharge the reinjected brine with concentrated lithium,” or “directional drilling and dewatering activities” resulting in a lack of sufficient project description. Appeal at 3-4. These contentions are not well founded.

A project description “should not supply extensive detail beyond that needed for evaluation and review of the environmental impact.” CEQA Guidelines § 15124. The EIR project description meets this requirement. Comité cites to *San Joaquin Raptor Rescue Center v. City of Merced* for the proposition that the Project EIR fails to provide an “accurate, stable and finite project description.” (2007) 149 Cal.App.4th 645, 655. “A curtailed or distorted project description may stultify the objectives of the reporting process.” *County of Inyo v. City of Los Angeles* (3d Dist. 1977) 71 Cal. App. 3d 185, 192-193 (cited by *San Joaquin Raptor Rescue Center*).

Those cases provide an excellent example of the type of distortion or unstable EIR that is prohibited and stand in stark contrast to the current Project EIR. For example, in *County of Inyo*, the City of Los Angeles referred to the project differently throughout the EIR. The *County of Inyo* EIR incorrectly defined the project to include only the extraction of groundwater for use on city-owned lands located in Inyo and Mono Counties. Other parts of the EIR defined the project more broadly. It was described as “one part of the larger operation of the Los Angeles Aqueduct System” and also as “the whole of the Los Angeles Aqueduct System.” *County of Inyo*, 71 Cal. App. 3d at p. 190. In sharp contrast to those case, there are no persistent or material inconsistencies in the Project description in the EIR here, as discussed in the section 1 of the Response.

Each of the relevant issues was addressed in sufficient detail in the EIR and supporting information. Specifically, the brine pond is described in Section 2.6.5 of the DEIR and FEIR, as follows:

The brine pond will be cement-lined, with an underliner-leak detection system, and will allow for storage of brine during upset conditions and collection of brine during flow testing and plant start-up. The brine pond will be sized to accommodate two times the volume of the largest vessel and up to four hours of normal-brine-flow equivalent during system upset conditions plus two feet of freeboard. The brine pond will be constructed as a waste management unit (WMU) to meet Colorado River Regional Water Quality Control Board (CRRWQCB) surface-discharge requirements. Groundwater-monitoring wells will be constructed adjacent to the brine pond in conformance with CRRWQCB requirements.

FEIR, § 2.6.5, at 2.0-11. These pond specifications comply with engineering design standards to provide vessel secondary containment as well as meet stormwater management requirements. As defined in the Project description (*see* FEIR § 2.6.5, at 2.0-11), the brine pond would only be used during system shutdowns or upset conditions to temporarily store brine and the pond would meet all regulatory standards and requirements.

The clarifiers and filter presses would be used in the lithium extraction process and are listed in EIR Section 2.5.1. at 2.0-8. These are standard process components that will be located inside the HKL1 facility and, as such, would not have operational environmental impacts. The lithium extraction process is described under “Metal Recovery” in Section 2.9.2 of the EIR at 2.0-18. The potential waste streams from the filter presses, filter cake, are discussed in several sections of the EIR that describe that waste stream, including EIR Findings, Section 6.8 at 35, Executive Summary at ES-43, and FEIR Section 4.13.5 at 4.13-2 (90 percent of filter cakes will be below California thresholds for soluble threshold limit concentration and total threshold limit concentration, the remaining 10 percent is expected to be disposed of at an Arizona landfill). Notably, the filter cake generation and management does not require mitigation as it is expected to have less than significant impact. *See* Table ES-1 at ES-43.

Brine composition is specifically provided in EIR Section 2.6.4, Table 2.0-2 at 2.0-10, 11, with concentrations of minerals expressed in mg/L. While proprietary information about the extraction process itself, is not disclosed in the EIR, the area of impact and all aspects of the Project that could result in environmental impacts were disclosed in the EIR. The proprietary aspects of the Project do not affect the analysis of impacts in the EIR and therefore do not need to be disclosed in the EIR to have a complete description of the Project for environmental review and CEQA purposes. The Project description provides information on the location and footprint of Project facilities, shipping and handling, operational workforce and traffic, water supply, energy demand, fire protection, wastewater, hazardous materials handling, waste management, and decommissioning procedures relevant to, and in sufficient detail to, analyze Project environmental impacts under CEQA.

The Project efficiency described in the EIR is similar to other operational geothermal power plants in the region. The assertion that the Project would be less efficient is speculative and not supported by substantial evidence or fact and does not include an explanation. *See* CEQA § 21080(e). The comment does not meet the requirements of CEQA Guidelines Section 15204. Pursuant to CEQA Guidelines Section 15064, because the comment is not supported by substantial evidence, questions about Project efficiency are not considered significant.

Similarly, the comment about a long delay to recharge reinjected brines with concentrated lithium is both speculative and irrelevant to the analysis of environmental impacts. It is not supported by substantial evidence and cannot be considered to present a significant impact. CEQA Guidelines § 15204.

The Project describes the location of well pads which would result in impacts on the land surface. Maps showing the location of Project features and facilities, including well pads, are included in the Project description. Directional drilling refers to a common method of drilling

deep geothermal wells directionally subsurface. The Project geothermal wells would extend several thousand feet subsurface to reach the geothermal resource. The wells would be cased to the target geothermal reservoir in compliance with California Department of Conservation Geologic Energy Management Division (“**CalGEM**”) regulations. Geothermal wells are commonly drilled directionally, and directional drilling does not result in different environmental impacts than vertical drilling. Directional drilling would not result in different water demand or requirements than any other form of geothermal drilling and would not cause dewatering. The impacts of well drilling are appropriately addressed in the EIR.

Moreover, CTR reaffirms the response provided to the State Lands Commission, Comment Letter #3, that any proposal to access subsurface resources potentially on State lands is not part of the Project and was properly excluded from the Project description. The proposal referenced in Comment letter # 3 is speculative as it is not currently known whether there are valuable subsurface resources beneath the State lands referenced in the letter.

Other Comité comments are included by reference to exhibits attached to the Appeal. Those comments that address the Project description and that have not been addressed above are discussed in the following subsections a. through d.

a. Appeal Exhibit A, Comité comments to DEIR

- “Sufficient storage capacity” or what shall be considered foreseeable periodic interruptions in IID canal water availability is not described (p. 2.0-14).

In response to this comment, the FEIR was updated to specify that the freshwater pond will have a capacity of 18 acre-feet (“**AF**”). FEIR Section 2.8.2 at 2.0-14. The onsite water storage pond is sized to meet requirements of the Imperial Irrigation District (“**IID**”), which requires a 5-day supply of water to address periods of interruption in water supply due to maintenance of IID’s canals or other infrastructure. The storage requirement is specified by IID and the facility is designed to meet IID standards and requirements. The availability of water to supply the Project is a Project requirement and an IID requirement. If water were unavailable during periods when IID service is interrupted, there would be no impact on the environment; the impact would be on the operation of the Project. CEQA does not consider impacts on the Project, but rather requires consideration of impacts on the environment. The information provided in the Project description regarding the storage capacity of the freshwater pond is sufficient.

- End locations for off-site product shipment are not described (p. 2.0-17).

The end location for product shipment is either a battery manufacturing location or other end user of lithium. As the lithium market is still expanding with the expansion of the electric vehicle market, the actual end location for battery manufacturing and product shipment is not currently known and could be multiple locations including a nearby rail line. The end location for product shipment is irrelevant to the analysis of environmental impacts in the EIR as the analysis assumed that all product shipment

would occur via electric trucks which would not produce air quality or greenhouse emissions. Vehicle delay (as measured by level of service) due to trucks is no longer an impact considered within the context of CEQA pursuant to SB 743.

- The Transportation Plan should be made more specific and tied to a specific performance metric (p. 2.0-23).

The Transportation Plan included in the Project description is a Project Design Feature that was proposed by the Project proponent (Applicant). The Transportation Plan is not a mitigation measure and is not required to mitigate any environmental impact. The Transportation Plan that is described in the Project Design Feature is a measure that requires detailed understanding of actual materials procurement and delivery schedule to plan for those deliveries to occur during off peak hours. The Transportation Plan is typically prepared by the construction contractor immediately prior to and during construction to account for knowledge of supplies and deliveries that will travel to the site and to allow the labor unions that would construct the Project under the Project Labor Agreement to develop the rideshare program. Because the exact timing and location of all workers and deliveries is not yet known, the plan cannot be prepared in advance. However, the Project Design Feature defines the criteria that would be included in the plan. The Transportation Plan would reduce traffic and associated delays, which are no longer considered an impact within the context of CEQA pursuant to SB 743.

Transportation related environmental impacts are discussed in detail in EIR Sections 2.9.1. at 2.0-16 regarding construction traffic and 2.9.2 at 2.0-18 regarding operational traffic associated with the work force and product shipments. To the extent that this comment goes beyond the Project description to address transportation-related impacts, the MMRP includes numerous mitigation measures associated with traffic on unpaved roads, dust mitigation, track-out cleanup, road paving requirements, and exhaust emission controls. *See* MMRP Mitigation Measures AQ-1 and AQ-2.

- Claims of electric vehicle use are unclear and the impacts from shipments exceeding 73 daily trucks and emissions caused by electric trucks being unavailable should be analyzed (p. 2.0-24).

The County correctly analyzed the Project as proposed by the Applicant, which included use of 100% electric trucks for material hauling and 73 daily truck trips. Use of more truck trips is speculative and is inconsistent with the assumed volume of material/product that would be produced by the Project. It is feasible that an electric truck fleet would be developed prior to operation of HKL1 and the Project Proponent has committed to use of electric trucks. This approach is consistent with mitigation of transportation impacts under SB 743. *See* Table 4.7-4 at 4.7-15. Shipment with non-electric trucks would constitute a change in the Project. If the Project is changed or modified in the future, that change would be analyzed separately by the County and evaluated relative to CEQA Guidelines Section 15162.

b. Appeal Exhibit E, Dr. Sharbat's comments to DEIR

- Dr. Sharbat requested more information on water use for air quality mitigation.

The water usage for dust control is presented on page 2.0-17 of the Draft EIR, which discusses that the water usage for construction is for dust control and compaction. The estimated maximum water use for dust control and compaction during construction is 240 AF. The actual water demand would be dependent on the environmental factors at the time of construction (rainfall and wind) and water would be applied for dust control to comply with Imperial County Air Pollution Control District (“ICAPCD”) dust control requirements and the Project specific permit from ICAPCD. The water for dust control would be obtained from IID. EIR at 2.0-17. No specific water quality parameters apply to water used for dust control as the water is applied to the surface for the purpose of reducing dust and would not generate runoff. The Project would not treat water that is used for dust control.

During operation, the Project site would be paved or covered in gravel as a permanent dust control measure.

- Dr. Sharbat requested a hydrogeology study focused on the geological interconnection between deep well injection and geothermal resources specific to the Project, suggested that brine injection could potentially affect existing geothermal resources, and requested information on injection pressure, well depth, and potential seismic impacts.

CalGEM has jurisdiction over the geothermal resource to protect existing uses. CalGEM has standards for the distance/separation between production and injection wells to conserve the geothermal resource and requires a Notice of Intent for each new well. *See* Comment Letter #2. The Project approach to reinjection of spent brine/geothermal fluid is consistent with the approach used at all commercial geothermal projects in Imperial County and within the State of California. Reinjection of geothermal brine is critical to conserve mass within the geothermal reservoir and avoid reduction in pressure in the reservoir. The existing geothermal plants in operation at the Salton Sea have used the same approach to reinjection of brine as that proposed for the Project without any impact on any other operating geothermal power plant, therefore, there is no evidence to suggest that the reinjection of brine proposed by the Project would create any impact on existing geothermal operations over a mile away.

The exact design and final depth of the geothermal wells would be subject to CalGEM permitting requirements. The Project will comply with CalGEM requirements. The Project would have continuous monitoring of geothermal reservoir pressure. The geothermal reservoir at the Salton Sea is highly permeable and no hydraulic fracturing is proposed or required to operate the Project. The spent geothermal brine would be injected back into the geothermal reservoir under pressure via injection pumps through

the injection pipeline system. *See also* response to comment 3d in the Appeal letter, below. Further, evaluation of effects on the geothermal resource is an economic consideration and not an environmental effect, economic effects are not environmental impacts. CEQA Guidelines § 15131(a).

- The comment suggests that additional information is needed on the reverse osmosis and reject brine stream disposal and waste management strategy.

The approach to reinjection of spent brine is described in EIR Sections 2.6.1, 2.6.2, and 2.9.2 on pages 2.0-8-2.0-9 and 2.0-20. “Spent geothermal brine will be injected into the subsurface geothermal reservoir via the primary injection wells.” EIR Section 2.9.2 at 2.0-20. The reverse osmosis and reject brine would be discharged to the geothermal reservoir to ensure maintenance of pressure in the reservoir. As stated in the EIR, the discharge of brine via the injection wells is subject to and will conform with CalGEM requirements. *See* EIR at 2.0-9 and 2.0-20.

- Dr. Sharbat suggested that more information was needed about the composition and volume of the filter cake and its disposal.

The EIR presents sufficient information to evaluate the potential environmental impacts of the filter cake and its disposal. Filter cake is discussed in several sections of the EIR, including EIR Findings, Section 6.8 at 35, Executive Summary at ES-43, and FEIR Section 4.13.5 at 4.13-2. The volume and composition of the filter cake is described on Page 4.13-2 of the Draft EIR as follows:

It is estimated that 90 percent of filter cakes would fall below California thresholds for soluble threshold limit concentration (STLC) and total threshold limit concentration (TTLC). The remaining 10 percent, or approximately 4,178 cy, would exceed these standards and would be trucked to the Copper Mountain Landfill located at 34853 County 12th Street in Wellton, Arizona, approximately 96 miles southeast of the Project site. This landfill has a design capacity for 2.5 million megagrams. Although the remaining landfill capacity is not available, the amount of solid waste sent to this facility would be minimal. If the filter cakes were to exceed Arizona’s toxicity standards which is not expected to occur, the Applicant will arrange for hazardous materials to be trucked to Idaho or Nevada.

Notably, the filter cake generation and management does not require mitigation as it is expected to have less than significant impact. *See* Table ES-1 at ES-43.

- Additionally, Dr. Sharbat requested clarification on whether the spent resin is considered a hazardous or solid waste and the disposal plan for spent resin and requests additional information on the chemicals used to regenerate the resins in the HKL1 plant.

The hazardous materials that would be used or produced by the Project are described on page 2.0-21 of the Draft EIR. Additional information on hazardous material storage and handling is provided on page 2.0-22 of the Draft EIR.

c. Appeal Exhibit K, Earthworks comments to FEIR

- The first comment in Exhibit K on Project description suggested that more information is needed about potential brine spills.

All brine would be contained within pipelines and would not be exposed to the environment. The brine pipelines are described on page 2.0-13 of the Draft EIR as follows “The geothermal brine delivery and return pipelines will be constructed with minimal usage of flanged connections to reduce the potential for pipeline leaks. Automatic valves will be integrated into the pipeline system that will close or divert the geothermal brine in the event of a pipeline issue to minimize the size of any potential spill. An Emergency Response Plan will be prepared and implemented should a fluid spill event occur.”

The Emergency Response Plan would be prepared according to Health and Safety Code, Division 20, Chapter 6.95, Article 1 as described on page 4.8-8 of the Draft EIR.

- Appeal Exhibit K requests revisions to the WSA to address IID comments and requests detailed mitigation measures to address scenarios of water shortages.

The WSA was revised to address IID comments including contingencies for water shortages due to drought. Additionally, all IID comments were addressed in Response to Comment Letter # 6. EIR at ES-99 to ES-100. *See also* response to comment 3a, below.

- Appeal Exhibit K contends that there is no supporting evidence that hazardous waste trucking to Nevada will be extremely rare.

The EIR describes that non-hazardous waste would be sent to local landfills in Imperial County (see pages 4.13-18 and 4.13-19 of the Draft EIR). Hazardous waste would generally be sent to a landfill certified to accept hazardous waste in Arizona (see page 4.13-19 of the Draft EIR) which has a capacity of 2.5 million megagrams. The Project would only send waste to Nevada in a scenario where the hazardous waste was not accepted in Arizona. This scenario is very unlikely or extremely rare given that there is sufficient landfill capacity at the facility in Arizona, which is located closer to the Project. Moreover, this comment simply raises a question and is speculative. Accordingly, it does not require a response. *See* CEQA § 21080(e); CEQA Guidelines § 15064.

- Appeal Exhibit K also contends that no response was provided to the comment about the need to mitigate HCl emissions.

Page 2.0-10 of the Draft EIR describes the delivery and use of HCl and includes a figure showing the potential HCl injection during operations. Page 2.0-20 of the Draft EIR describes the size and construction of the HCl tanks and notes that the tanks will include scrubbers to avoid emissions of HCl. The HCl will be used to produce the lithium product and no HCl will be produced from the process. *See also* EIR Section 2.10 at 2.0-24. Because HCl would not be released to the atmosphere, no mitigation is needed.

d. Appeal Exhibit M, IID comments to DEIR

- All of the IID comments regarding the Project description were addressed in the FEIR. *See* Comment Letter # 6 and Response to Comment Letter # 6. The WSA was amended to respond to IID comments related to water supply and a revised WSA was included with the FEIR. IID approved the WSA on December 7, 2023. The final version of the WSA includes minor revisions from the version of the WSA included in the FEIR. *See* attached Exhibit A (“**Final WSA**”). Both the revised and the Final WSA specify the total annual water demand of 6,500 acre feet per year (“**AFY**”). The minor revisions to the WSA include: 1) a calculation of the total water demand for the Project to reflect a 30-year water demand, based upon the specified 6,500 AFY, consistent with the term of the water supply agreement; 2) an update of the interconnection station name to IID Davis Switching Station; and 3) updated references to IID policies and plans. These revisions did not materially affect the WSA and the updated IID references have no Project environmental impact but were provided for clarity. The conclusion of the Final WSA is that IID has sufficient water supplies to serve the Project. The Final WSA conclusion is consistent with the WSA included with the FEIR. The minor edits to the WSA do not constitute a substantial change in the Project, change in Project circumstances, or new information of substantial importance, and therefore do not affect any impact determinations in the FEIR.
- One IID comment states that the location of the interconnection is incorrectly stated in the DEIR and should be restated as the new, not yet built, IID Davis Switching Station just outside the Hudson Ranch facility.

The EIR analyzed construction of an interconnection generation-tie (gen-tie) and collocated power line from the Project site to “the IID interconnect station near Hudson Ranch” (Draft EIR Page 3.0-1). The EIR describes the length and location of the gen-tie line. While the comment provides a name for the IID interconnect station described in the EIR as “IID Davis Switching Station”, the comment does not change the location of the interconnection station nor the approach to construction of the gen-tie line and power line. The naming of the interconnection station does not affect any environmental impacts described in the EIR.

- IID commented that IID is the sole load serving entity in the territory and a system impact study is needed to define any system updates required to serve the Project.

The EIR assumed installation of a gen-tie line for the new HKP1 facility generation and a separate power line (collocated on the same poles) to supply power to HKL1. The EIR did not assume power would be supplied from HKP1 to HKL1. It is recognized that a System Impact Study will be required prior to interconnection to IID's system. *See* Response to Comment Letter # 6. Should any additional upgrades be required beyond those defined in the EIR, the additional upgrades would be reviewed for potential to create environmental effects and documented consistent with the requirements of CEQA Guidelines Section 15162.

- In its comments to the DEIR, IID requested modification of operational water supply requirements for consistency.

Clerical errors in the WSA included in the DEIR were corrected and the revised WSA included with the FEIR reflected the water demand in the EIR of 6,500 AFY. The total water demand reflected and analyzed in the FEIR is correct and consistent with the Final WSA.

- IID suggested that the impact analysis should address IID L, M, O, P, Q, R, S, and Vail 3 Drains; Alamo River; the L, M, O, P, Q, R, and S Laterals.

The DEIR discusses that the Project would obtain water from the Q or R laterals. The Project does not propose extension of any Drains or laterals. While it is recognized that IID may need to conduct maintenance to provide water to the Project, the Project would not cause relocation of any IID Drains or facilities and would not modify any IID facilities. The FEIR was revised to state that no work would be done within the P, Q, R or S Drains. The Project will comply with regulatory requirements that apply to the Drains. *See* Response to Comment Letter # 6.

2. **The FEIR Does Not Piecemeal the Project**

Comité's Appeal Comment 2: The FEIR also potentially engages in improper piecemealing.

Comité's second Appeal issue states that the Project "potentially engages in improper piecemealing." Appeal at 4. The Appeal then references two comments that included discussion of directional drilling: Appeal Exhibit K, Earthworks comments to FEIR, and Appeal Exhibit L, California State Lands Commission Comment Letter # 3 to the DEIR, dated October 23, 2023. The Project does not include directional drilling to access subsurface resources potentially on state lands and the Appeal comment has no factual basis.

"Project" is defined as "the whole of an action, which has a potential for resulting in either a direct physical change in the environment, or a reasonably foreseeable indirect physical change in the environment" and "refers to the activity which is being approved." CEQA Guidelines § 15378. "Project" is also defined as "an activity which may cause either a direct physical change

in the environment, or a reasonably foreseeable indirect physical change in the environment. CEQA § 21065. Here, the EIR defines the Project generally as:

HKP1 involves the development of a geothermal power plant that would produce up to 49.9 megawatts (MW) net of geothermal green energy. HKL1 involves development of mineral extraction and processing facilities capable of producing lithium hydroxide, silica, and polymetallic products, and possibly boron compounds, for commercial sale. HKP1 and HKL1 [are] together referred to as the Proposed Project.

FEIR Chapter 2.0, Section 2.1. at 2.0-1. The entirety of Chapter 2.0 is then devoted to describing the Project in detail. The EIR properly evaluates the impacts of the whole of the action or the Project, as defined in the EIR and for purposes of the activities that were subject to Imperial County review under the two Conditional Use Permits (Nos. 21-0020 & 21-0021), two Variances (Nos. 21-0004 & 21-0005), the EIR (SCH # 2022030704), the MMRP, and the WSA.

The Project evaluated in the EIR is a whole action with independent utility and functionality. *See Del Mar Terrace Conservancy, Inc. v. City Council of the City of San Diego* (1992) 10 Cal. App. 4th 712 (disapproved on other grounds in *Western States Petroleum Assn. v. Superior Court* (1995) 9 Cal. 4th 559, 570-574). In *Del Mar Terrace*, the appellate court found that a project that was a freeway segment within a long-term, multi-segment regional plan to expand the freeway system throughout the County was not piecemealing. As in *Del Mar Terrace*, this Project is not an example of piecemealing. The Project will operate without directional drilling to reach geothermal resources on adjacent properties. Further, the Project is not a cause of directional drilling. The Applicant currently has a functional well on their property because of the presence of geothermal resources on the property that could be accessed independent of drilling directionally onto adjacent properties.

As described in response to Appeal comment 1, above, directional drilling of geothermal wells is common in geothermal well construction and does not result in separate or different environmental impacts than direct vertical well drilling. Because directional drilling into adjacent properties is not necessary to construct and operate the Project and would not result in any greater or different environmental impacts than those evaluated in the EIR, the EIR is complete and no piecemealing has occurred.

The directional drilling comments incorporated in the Appeal from Appeal Exhibit K, Earthworks comments to FEIR, and Appeal Exhibit L, California State Lands Commission Comment Letter # 3 to the DEIR, are not part of the Project. It is common for Projects to involve subsequent actions at a later date to optimize Project operation and performance. Separate evaluation and authorization of subsequent actions is not viewed as piecemealing in the context of CEQA. Subsequent environmental review is addressed under CEQA Guidelines Section 15162.

3. Substantial Evidence Supports Each EIR Conclusion

Comité’s Appeal Comment 3: The Project EIR lacks substantial evidence to support many of its each of its [sic] conclusions in its impact analysis, such as the following areas that suffer various flaws.

This section of the Appeal identifies a number of topics and contends that the EIR lacks substantial evidence to support each of its conclusions in the impact analysis for these topics. These contentions should be rejected. The EIR impact analysis was well supported by substantial evidence, including facts, reasonable assumptions predicated upon facts, and expert opinions supported by facts. CEQA Guidelines § 15384; *see also Preserve Wild Santee v. City of Santee*, (2012) 210 Cal. App. 4th 260, 276. “In reviewing for substantial evidence, the reviewing court ‘may not set aside an agency’s approval of an EIR on the ground that an opposite conclusion would have been equally or more reasonable’ because on factual questions, the Court’s task ‘is not to weigh conflicting evidence and determine who has the better argument.’” *Preserve Wild Santee*, 210 Cal. App. 4th at 276 (citations omitted). Rather, the court must resolve any reasonable doubts and any conflicts in the evidence in favor of the agency’s findings and decision. *Preserve Wild Santee*, 210 Cal. App. 4th at 276.

a. Water

The Appeal comment suggests that the EIR presented conflicting information about the water supply requirements for the Project and that the EIR lacks substantial evidence to support the Project’s water supply. Comments to the DEIR about water supply were fully responded to in the FEIR and evaluated in significant detail in the WSA that was included with the FEIR package. The Project water demand of 6,500 AFY, as analyzed in the EIR is reasonable and similar to other regional geothermal and lithium extraction projects. The assumption that the water demand would be less or more than what was analyzed in the EIR is speculative. The comment also speculates that IID will need to make further water cuts from its Colorado River allotment. Accordingly, it does not require a response. *See* CEQA § 21080(e); CEQA Guidelines § 15064.

The EIR included a draft WSA that was subject to IID review. All IID comments on the draft WSA were incorporated into the revised WSA that was included with the FEIR. IID approved the WSA on December 7, 2023. The Final WSA (attached as Exhibit A), is consistent with the revised WSA regarding water supply requirements and addressed all of IID’s issues. IID, as the entity who serves as the regional wholesale water supplier in the Project region, has knowledge regarding its water supply and resources and has the authority to manage its water supplies and determine whether it has adequate supplies for the Project. As noted in comments from IID, the IID adopted an Interim Water Supply Policy (“IWSP”) “in 2009...under which water supplies up to 25,000 acre-feet annually, have been assessed for new non-agricultural development.” *See* Comment Letter # 6 at FEIR ES-94; Response to Comment Letter # 6 at FEIR ES-99 and ES-100. Under the IWSP, as stated in the WSA, as of November 2023 a balance of 18,620 AFY remains available under the IWSP for new non-agricultural projects. Final WSA at 10, 70. The WSA properly identified that there is currently water available for the Project. Revised WSA at 70; Final WSA at 70-71.

Assumptions about future changes in water supply and how those changes in water supply may relate to any potential future changes in the Colorado River allotment are speculative. Under CEQA, the environmental setting/baseline is defined at the time of the Notice of Preparation (NOP) per CEQA Guidelines Section 15125(a) and not a future condition with reduced water availability. While the Appeal comment is speculative and does not require a response, the Final WSA states that “due to temporary land conversion for solar use and urban land expansion that will reduce agricultural acres in the future, a water savings of approximately 217,000 AFY will likely be generated into the future and for the lifetime of the proposed Project.” Revised WSA at 62; Final WSA at 62. Moreover, as specified in the WSA, the Project will require a water supply agreement with IID, which will include requirements to mitigate water supply demand through conservation measures and best management practices. Revised WSA at 70; Final WSA at 70. The IID regulatory framework, including the IID Equitable Distribution Plan (“EDP”) and the Project water supply agreement define what actions would be taken by the Applicant if there were a reduction in water supplies imposed by a regulatory agency in the future. *See* response to comment 5, below, for additional discussion about mitigation measures.

b. Air Impacts

The Appeal comment suggests that the EIR improperly evaluated emissions of HCl vapor and potential impacts related to consumption of freshwater that would otherwise flow to the Salton Sea.

The Project description describes how scrubbers will be installed on the HCl storage tanks to eliminate discharge of gas in the venting system. EIR Section 2.9.2 at 2.0-20. HCl is commonly used by other geothermal facilities in the area, and the operation of HCl scrubbers is well understood. *See* EIR Section 2.10 at 2.0-24. Because HCl will be eliminated in the venting system and HCl used in the process will not be exposed to the atmosphere, the Project does not improperly evaluate emissions of HCl vapor.

The WSA describes how IID has allocated water for industrial uses. The use of water by the Project will not result in reduction in flows to the Salton Sea because the water that would be used by the Project is currently part of IID’s non-agricultural allocation under the IWSP (“water supplies up to 25,000 acre-feet annually, have been assessed for new non-agricultural development.”) *See* Comment Letter # 6 at FEIR ES-94; Response to Comment Letter # 6 at FEIR ES-99 and ES-100. As stated in the WSA, “the environmental impacts of conserving up to 25,000 acre-feet of IWSP water were analyzed in the *Imperial Irrigation District Interim Water Supply Policy for Non-Agricultural Projects* Negative Declaration, State Clearinghouse No. 2009061103 dated June 25, 2009. The IID Board adopted this Negative Declaration on September 29, 2009.” WSA at 36. Accordingly, any impacts of Project water use regarding flows to the Salton Sea have already been evaluated, resulting in the 2009 Negative Declaration. Reduction in water supply to the Salton Sea as a result of the Quantification Settlement Agreement is separate from the Project and will not be exacerbated by the Project.

c. Hazards & Waste

The Appeal comment suggests that the EIR lacks sufficient details about the Project's byproducts after mineral extraction and does not adequately discuss their disposal and potential spill cleanup.

The hazardous waste generation and handling for the Project is described on Pages 2.0-20 and 2.0-21 and also on Pages 4.8-12 through 4.8-13 and 4.13-17 through 4.13-19 of the Draft EIR. The EIR correctly discloses and analyzes the hazardous material storage and generation included in the Project. As described in the EIR, the Project design includes secondary containment for all storage tanks of hazardous materials to provide containment of hazardous materials in the event of a spill. EIR at 2.0-20 and 4.13-18. The EIR also discusses how compliance with law, including preparation of a project specific Emergency Response Plan and Hazardous Materials Business Plan, would address the risk of spills of hazardous materials. EIR Section 2.7.1 at 2.0-13, Section 4.8.2. at 4.8-9, and Section 6.1.4. at 6.0-3 (finding impacts would be less than significant).

d. Increased Seismic Activity

The Appeal comment suggests that geothermal drilling and mineral extraction/injection may lead to increased seismic activity.

The approach to reinjection of spent brine is described in EIR Sections 2.6.1, 2.6.2, and 2.9.2 on pages 2.0-8-2.0-9 and 2.0-20. "Spent geothermal brine will be injected into the subsurface geothermal reservoir via the primary injection wells." EIR Section 2.9.2 at 2.0-20. The reverse osmosis and reject brine would be discharged to the geothermal reservoir to ensure maintenance of pressure in the reservoir. As stated in the EIR, the discharge of brine via the injection wells is subject to and will conform with CalGEM requirements. *See* EIR at 2.0-9 and 2.0-20. As further discussed in the Draft EIR at 4.6-8, the Project is in a seismically active region. The geothermal reservoir at the Salton Sea is highly permeable, so the reinjection of spent geothermal fluids proposed by the Project would include injection back into the geothermal reservoir under pressure via injection pumps through the injection pipeline system but would not include hydraulic fracturing.

There are numerous existing geothermal production and injection wells in proximity to the Project, including the well field associated with the Hudson Ranch Geothermal Power Plant. Geothermal drilling and production and injection of geothermal fluids within the Salton Sea geothermal field has occurred for decades without inducing earthquakes. Because the Project geothermal wells would be similar to those that currently occur in the area and the major seismic events in the region are caused by major regional faults unrelated to geothermal drilling or production or injection activities, the EIR adequately analyzed the impacts of increased seismic activity as any potential seismic activity attributed to the Project would be insignificant.

CalGEM regulates the drilling, operation, maintenance, and plugging and abandonment of geothermal production and injection wells. The exact design and final depth of geothermal wells would be subject to CalGEM permitting requirements. The CalGEM comment letter, Comment Letter #2 at ES-58, states that the geothermal system in the Salton Sea is a liquid dominated system that has not historically had earthquakes induced by the geothermal activity. Nonetheless, due to

concerns about induced seismicity, if required in CalGEM permitting, a seismic monitoring system will be installed to the Project boundary that will be connected to the USGS Southern California network. The Project also would have continuous monitoring of geothermal reservoir pressure and no hydraulic fracturing is proposed or required to operate the Project. Further, evaluation of effects on the geothermal resource is an economic consideration and not an environmental effect, economic effects are not environmental impacts. CEQA Guidelines § 15131(a).

e. Land Use Inconsistencies

The Appeal comment suggests that the EIR fails to identify inconsistencies with the County General Plan goals and programs for Conservation and Open Space Goals I, 6, and 6.3 and the Water Element as referenced in IID's comments on the Draft EIR.

All of IID's comments (Comment Letter # 6 at ES-83 through ES-98) were responded to and fully addressed by revisions to the DEIR and the draft WSA. *See* Response to Comment Letter # 6 at ES-99 to ES-100. The comments submitted by IID regarding consistency with County General Plan Open Space Goals 1, 6, and 6.3 and the Water Element discussed concern about a net reduction in drainage flow to the Salton Sea. These comments are resolved by the revisions incorporated in the revised WSA. As discussed above, the Project would not result in a reduction in drainage flow to the Salton Sea because IID has already allocated 25,000 AFY of water for non-agricultural use, of which 18,620 AFY remain. *See* response to Appeal comment 3a; *see also* FEIR Table 4.3-1.

f. GHG

This Appeal comment suggests that the EIR does not substantiate the CO₂e emissions that would be avoided or the impact of trucking in the event that the truck fleet is not electric.

Evaluation of displaced CO₂ emissions from generation of renewable (non-fossil fuel) energy is common in CEQA analyses for solar, geothermal, and wind projects. Greenhouse gas emissions are of global concern and are not analyzed at a Project location scale, but rather at a global, national, or state, level as the emissions affect the entire planet. The generation of geothermal power at the Project site would offset existing non-renewable (e.g., gas fired power plant) power production elsewhere that is currently contributing power to the electrical grid. As discussed in the FEIR, page ES-178:

HKL1 would consume approximately 275,940,000 kilowatt-hours per year of electricity (per 90 percent availability or 7,884 hours); (assumed to be "brown" power via the electrical grid). However, HKP1 would generate approximately 430,567,140 kilowatt-hours per year of (renewable) electricity (per 98.5 percent availability or 8,630 hours); assumed to be "green" power avoiding the electrical grid. Therefore, there will be a surplus of renewable electrical generation of approximately 154,627,140 kilowatt-hours per year of electricity, which results in a net reduction of GHG emissions.

The electrical generation of the HKP1 would likely be greater than the electrical demand of the HKL1. Importantly, the HKL1 would not operate if the HKP1 was not operating due to maintenance or outage. The air quality analysis conservatively assumes that the electrical demand of the HKL1 would be provided by the electrical grid (“brown” power) instead of being provided by the HKP1 (“green” power). Nevertheless, under this conservative condition, the operations of the HKP1 and the HKL1 would have a net 154,627,140 kilowatt-hours per year of (renewable) electricity generation. The GHG emission calculations are based on this conservative condition.

The amount of renewable electricity generation would be even greater under the condition that HKP1 supplies the entire power demands of HKL1. There would be an avoidance of the 275,940,000 kilowatt-hours per year of electricity from the HKL1 plus generation of the 154,627,140 kilowatt-hours per year of (renewable) electricity. This results in a surplus of renewable electrical generation of approximately 430,567,140 kilowatt-hours per year of (renewable) electricity (assumed to be “green” power avoiding the electrical grid); which results in an even greater reduction of GHG emissions.

The Project description describes use of 100% electrical vehicles for HKL1 trucking of mineral products during Project operations/shipping. It will take several years to construct the Project, during which time electric vehicle and trucking fleets are expected to expand. Should trucking with all electric vehicles be infeasible, a change in approach to trucking/shipping would constitute a change in the Project, which would require review to evaluate whether the change in trucking/shipping approach would result in new or substantially more significant impacts. If a change in trucking/shipping approach caused a new or substantially more severe significant impact, then subsequent environmental review would be required under CEQA Guidelines Section 15162. Because no change is proposed at this time, no additional analysis is required.

4. **Relevant Past, Current & Future Projects’ Cumulative Impacts Were Considered**

Comité’s Appeal Comment 4: The EIR fails to consider relevant past, current, and reasonable probable future projects related to renewable energy, including geothermal power and lithium extraction, which ultimately infects the EIR’s cumulative impacts analysis.

The comment suggests that the EIR fails to consider relevant past, current, and reasonable probable future projects, including the BHE Renewables proposed geothermal plants in the analysis of cumulative impacts, as it relates to water supply. “The discussion of cumulative impacts shall reflect the severity of the impacts and their likelihood of occurrence, but the discussion need not provide as great detail as is provided of the effects attributable to the project alone.” *Fairview Neighbors v. County of Ventura*, (2nd Dist. 1999) 70 Cal. App. 4th 238, 245-246 (citing CEQA § 21083; CEQA Guidelines § 15130). The *Fairview Neighbors* case concerns a mining project in which the Court determined that the EIR properly discussed the cumulative impacts and found that a good faith and reasonable disclosure of such impacts is sufficient. *Fairview Neighbors*, 70 Cal. App. 4th at 245-246.

As in *Fairview Neighbors*, the Project DEIR has a lengthy section, approximately 214 pages and 13 appendices, devoted to analysis of the significant and cumulative impacts of the Project and four other adjacent and pending projects. DEIR, §§ 3.2, 4.0, Appendices A-M. The EIR evaluates cumulative impacts and considers mitigation related to aesthetics, air quality, biological resources, cultural resources, energy, geology and soils, greenhouse gases, hazards and hazardous materials, hydrology and water quality, noise, transportation, tribal cultural resources, and utilities and service systems. DEIR, § 4.0, pp. 4.0-1 to 4.13-3.

While the cumulative impact analysis did not specifically address the three BHE Renewables Projects raised in the appeal: Morton Bay Geothermal; Black Rock Geothermal; and Elmore North Geothermal, these geothermal projects are located more than 1 mile away from the Project. The DEIR discusses that the air impacts and hazard and hazardous materials impacts would generally not combine with the Project due to the distance between the Project and these other geothermal projects. DEIR §§ 4.2.6 at 4.2-14, 4.8.6 at 4.8-4; *see also* FEIR at ES-56 and ES-57 (addressing cumulative impacts to biological resources from all of the renewable energy projects in the region). As discussed in response to Appeal comment 3a, above, the IID has adequate non-agricultural water supply available for the proposed Project, estimated to require 6,500 AFY and therefore the impact on water supply would be less than cumulatively considerable and therefore less than significant. In addition, the WSA considers all non-agricultural water supplies proposed to IID and evaluates the potential for cumulative impacts with all other non-agricultural uses. The Project discussion of cumulative impacts clearly reflects all impacts and their likelihood of occurrence and satisfies CEQA requirements.

5. The EIR Properly Incorporates Feasible Mitigation Measures

Comité's Appeal Comment 5: The EIR fails to use mitigation measures that are based on enforceable performance criteria and/or relies on deferred mitigation.

The comment suggests that the EIR mitigation measures are not based on enforceable performance criteria and mitigation is deferred. The Appeal comment is not well founded. Here, the Project FEIR includes forty-four pages of mitigation measures in a Table of Significant Impacts and Mitigation Measures evaluating approximately ninety-nine mitigation measures and disclosing the analysis and providing substantial evidence to support its findings. FEIR, E.S.8, Table ES-1, ES-4 through ES-44. In addition, the DEIR includes 214 pages evaluating significant impacts and 13 appendices. DEIR, §§ 3.2, 4.0, Appendices A-M. The Project included numerous mitigation measures and additional measures were incorporated in the EIR.

When an agency has evaluated the potentially significant impacts of a project and identified measures that will mitigate those impacts, the agency does not have to commit to any particular mitigation measure in the EIR, as long as the agency commits to mitigating the significant impacts of the project. *Oakland Heritage Alliance v. City of Oakland*, (1st Dist. 2011) 195 Cal. App. 4th 884, 906. Mitigation measure details can be deferred pending completion of a future study. *Oakland Heritage Alliance v. City of Oakland*, (1st Dist. 2011) 195 Cal. App. 4th 884, 906. The mitigation measures analyzed in the EIR are not deficient because they are more than generalized

goals. *Contra Communities for a Better Environment v. City of Richmond* (1st Dist. 2010) 184 Cal App. 4th 70. The mitigation measures are described below.

The Transportation Plan that is described in the Project Design Feature is a measure that requires detailed understanding of actual materials procurement and delivery schedule to plan for those deliveries to occur during off peak hours. The Transportation Plan is typically prepared by the construction contractor immediately prior to and during construction to account for knowledge of supplies and deliveries that will travel to the site and to allow the labor unions that would construct the Project under the Project Labor Agreement to develop the rideshare program. Because the exact timing and location of all workers and deliveries is not yet known, the plan cannot be prepared in advance. However, the Project Design Feature defines the criteria that would be included in the plan to reduce impacts.

As discussed on Page ES-177 of the Final EIR, Tier 4 construction equipment is generally commercially available. Mitigation Measure AQ-2 requires “All off-road diesel-powered equipment greater than 50 horsepower that is used on-site during construction of the Project shall meet USEPA Tier 4 offroad emission standards and Level 3 diesel particulate filters.” Use of Tier 4 equipment was included in the mitigation measure.

Mitigation Measure AQ-2 was defined to reduce potential NOx emissions. NOx emissions would be less than significant as documented in the air quality modeling documentation enclosed in the EIR. The Combustion Exhaust Emissions Control Program is also consistent with Imperial County Air Pollution Control District standards. The mitigation measure is not deferred as all details of the emissions control program and measures that would be implemented to reduce impacts (e.g., use of Tier 4 offroad equipment, prohibition of diesel engines where alternative sources of power are available, and limits of VOC content in paint) are properly defined within the measure.

The biological measures included in the EIR are specific in their requirements and have clear standards. Hiring of a qualified biologist (MM BIO-1), biological monitoring (MM BIO-2), worker environmental awareness training (MM BIO-3), flagging of work area limits (MM BIO-4), power washing equipment (MM BIO-5), sediment and erosion control in compliance with the Construction General Permit and Stormwater Pollution Prevention Plan (MM BIO-6), and solid waste management (MM BIO-7) are common biological resource protection measures, the effectiveness of which have been well documented on projects for decades. As documented in the Draft and Final EIR, the habitat conditions in the Project area are not static. The mitigation measures included in the EIR were defined to provide a conservative approach to ensure all potential species impacts would be addressed if habitat were to change and a species were to be encountered in the area in the Project area during construction or operation. The desert pupfish protection and relocation plan (MM BIO-8) includes specific requirements for construction timing, and protocols for preconstruction surveys as well as procedures for pupfish capture and relocation to reduce impacts. MM BIO-9, MM BIO-10, MM BIO-11, and MM BIO-12 are specific in their requirements to 1) avoid construction in Yuma Ridgway’s rail habitat during the nesting or molting and flightless season, 2) to conduct monitoring for Yuma Ridgway’s rail and black rail and halt construction immediately if any Yuma Ridgway’s rail or black rail are detected in the work area,

3) reduce vehicle speeds to 15 miles per hour adjacent to Yuma Ridgway's rail habitat, 4) and limiting noise levels to 60 dBA at the nearest Yuma Ridgway's rail occupied habitat to 60 dBA during the nesting season. As described on Page ES-55 of the Final EIR, BIO-13 "was designed to be adaptive to the changing habitat conditions and allow for quantification of impacts and approaches to offset those impacts at the time of construction." MM BIO-14 requires pre-construction surveys for burrowing owls and implementation of avoidance measures consistent with the 2012 CDFW Staff Report, which is the current guidance for avoidance and minimization of impacts on burrowing owl. MM BIO-16 was revised in the Final EIR in response to CDFW comments and includes specific protocols for ensuring compliance with state and federal law for protection of migratory birds. MM BIO-19 defines specific mitigation ratios for mitigation of wetland and riparian areas and defines a proposed mitigation area totaling 159.61 acres with the types of habitats that will be included in the area. The level of detail provided in MM BIO-19 is more than is typical at the time of the EIR as further mitigation details are typically defined during final design.

MM HAZ-2 requires future soils sampling to evaluate whether the gen-tie pole locations have elevated levels of hazardous chemicals. The measure defines procedures that would be implemented if the pole sites do contain elevated levels of hazardous materials such that no significant impact would result after the materials are properly handled. Testing was not conducted during the EIR preparation as the pole locations will be determined during final design. The sampling and analysis therefore are dependent on additional design details as the majority of the gen-tie alignment would be spanned and only soils at the pole locations would be disturbed.

Mitigation Measure GEO-1 requires a Final Geotechnical Report be submitted with a grading permit. While a geotechnical report was included with the EIR, a more detailed geotechnical evaluation would be conducted with the final design and could not be completed prior to project approval due to potential for the County review process to trigger changes in the design that would need to be addressed in the final geotechnical report.

Mitigation Measure GEO-2 references implementation of recommendations included in the geotechnical evaluation report included in the Draft EIR. The County review of the final plans could only happen after the project is approved and final plans can be prepared; that review is not improperly deferred.

The WSA included with the FEIR provides measures for reduction in IID water usage should a reduction in IID water supplies occur, which replace UTIL-1. Proposed measurements include water conservation and augmentation commitments as a requirement of the water supply agreement with IID. Additional operational changes that may be implemented may include producing groundwater at property, exploring temporary use of recycled drain water, and/or reducing production rates in line with water supply reductions. As described in response to Appeal comment 3a, above, the potential reduction in Colorado River allocations in the future is speculative and does not reflect the current circumstances. Under CEQA, the environmental circumstances are defined at the time of the NOP.

The EIR mitigation measures are detailed and include enforceable performance criteria. To the extent that certain mitigation will be incorporated into permits or plans, additional requirements will be incorporated into those plans and permits and will be enforceable by the issuing agency (e.g., dust control will comply with ICAPCD dust control requirements). Mitigation measures that are not issued by another agency in connection with approval of a plan or permit will be enforceable by Imperial County.

6. The EIR Considered a Reasonable Range of Alternatives and Mitigation Measures in Compliance with the CEQA Statute and Guidelines

Comité’s Appeal Comment 6: The Project EIR fails to consider a reasonable range of alternatives and mitigation measures.

The comment suggests that the EIR fails to consider a reasonable range of alternatives and mitigation measures. This comment is inaccurate and reflects a checklist approach to CEQA litigation rather than delving into the facts and law of this case. As to the Alternatives, the CEQA Guidelines state that an “EIR need not consider every conceivable alternative to a project ... but must foster informed decision making and public participation. CEQA Guidelines § 15126.6. An EIR is not required to consider alternatives which are infeasible. CEQA Guidelines § 15126.6. Further, “there is no ironclad rule governing the nature or scope of the alternatives to be discussed other than the rule of reason.” CEQA Guidelines § 15126.6; *see also Citizens of Goleta Valley v. Board of Supervisors* (1990) 52 Cal.3d 553; *Laurel Heights Improvement Association v. Regents of the University of California* (1988) 47 Cal.3d 376.

Comité cites the California Supreme Court case *Mountain Lion Foundation v. Fish & Game Com.*, to support its assertion that CTR failed to adequately consider a reasonable range of alternatives and mitigation measures. (1997) 16 Cal. 4th 105. In *Mountain Lion Foundation*, the California Fish and Game Commission removed the Mojave ground squirrel from the threatened species list without complying with CEQA. 16 Cal. 4th 105.³ The Court determined that there was no evidence in the record that the Commission evaluated feasible alternatives or mitigation measures during its review of the petition to delist the Mojave ground squirrel. 16 Cal. 4th at 134-135.

There is no evidence that the Project EIR fails to consider a reasonable range of alternatives and mitigation measures. In *Mountain Lion Foundation*, the agency failed to prepare an EIR, failed to develop any mitigation measures, and failed to consider and analyze any alternatives. None of those facts apply here. The EIR considers both the Project and a No Project Alternative. Reducing the Project size and relocating the Project to another site in the area were considered and deemed to be infeasible alternatives. FEIR, E.S.7, ES-3. Project mitigation or alternatives are not

³ The Court concluded the Commission is entitled to an exemption from the EIR process as provided in CEQA § 21080.5 if it adhered to its certified regulatory program when carrying out a delisting under the California Endangered Species Act. 16 Cal.4th at 129. The Court also required that the agency, while exempted from the CEQA EIR requirements, must also consider feasible alternatives—at least the no project alternative—and respond to comments during the administrative review process. 16 Cal.4th 105.

required where they are infeasible.⁴ “Feasible” means capable of being accomplished in a successful manner within a reasonable period of time, taking into account economic, environmental, social, and technological factors. CEQA § 21061.1. In the circumstances presented here, the Project and No Project alternative are a “reasonable range of alternatives.” CEQA Guidelines § 15126.6 (a).

The No Project Alternative is “environmentally superior” to the Project, but the No Project Alternative will not meet the Project objectives such as: 1) it would not provide a sustainable domestic source of lithium, a designated critical mineral identified by the U.S. Department of Energy;⁵ 2) produce 49.9 MW (net) of geothermal renewable energy;⁶ 3) minimize the distance between the geothermal power plant and lithium extraction plant for production efficiency; or 4) minimize and mitigate potential impacts to sensitive environmental resources within the Project area. FEIR, E.S.6, pp. ES-2-3; DEIR, ES.5, p. ES-2. Analysis of the No Project Alternative includes a discussion of “what would be reasonably expected to occur in the foreseeable future if the project were not approved, based on current plans and consistent with available infrastructure and community services.” CEQA Guidelines § 15126.6 (e)(2). The discussion of alternatives need not be exhaustive, and the requirement as to the discussion of alternatives is subject to a construction of reasonableness. The statute does not demand what is not realistically possible, given the limitation of time, energy, and funds. “‘Crystal ball’ inquiry is not required.” *Foundation for San Francisco’s Architectural Heritage v. City and County of San Francisco* (1980) 106 Cal.App.3d 893, 909-910.

The EIR describes and considers mitigation measures in a Table of Significant Impacts and Mitigation Measures within forty-four pages of the FEIR evaluating approximately ninety-nine mitigation measures and disclosing the analysis and providing substantial evidence to support its findings. FEIR, E.S.8, Table ES-1, ES-4 -ES-44. The EIR found that eleven items were found significant: Air Quality, Biological Resources, Cultural Resources, Energy, Geology and Soils, Greenhouse Gases, Hazards and Hazardous Materials, Hydrology and Water Quality, Noise, Transportation, Utilities and Service Systems. FEIR, E.S.8, Table ES-1, ES-4 -ES-44. All were reduced to less than significant impact with mitigation. FEIR, E.S.8, Table ES-1, ES-4 -ES-44. The range of alternatives and mitigation measures considered is reasonable and adequate under the circumstances of this Project.

7. **The EIR Provides No Statement of Overriding Considerations**

Comité’s Appeal Comment 7: The EIR’s skewed analysis infected the EIR’s statement of overriding considerations.

⁴ CEQA Guidelines §§ 15091 (a)(3), 15126.6. (Economic, legal, social, technological, or other considerations” the mitigation measures or project alternatives infeasible.)

⁵ 2022 Final List of Critical Minerals, 87 Fed. Reg 10381 (February 24, 2022). In addition, the U.S. Defense Logistics Agency lists boron, another material potentially produced by the Project as a “Material of Interest.” Defense Logistics Agency, Materials of Interest, <https://www.dla.mil/Strategic-Materials/Materials/>, (last visited January 2, 2024).

⁶ U.S. Energy Information Administration, Geothermal Explained, <https://www.eia.gov/energyexplained/geothermal/>, last updated December 27, 2022. (“Geothermal energy is a renewable energy source because heat is continuously produced inside the earth.”)

The comment indicates that the EIR understated the environmental impacts and the County could not determine whether the benefits of the Project outweigh its impacts. This comment is conclusory (stating the EIR “understated impacts that could be mitigated or avoided”) and is not supported by any facts or specific examples. Such conclusory comments do not require further response. Comment 7 also highlights that the Appeal may be following a checklist that is not tied to the facts and law of this Project because there are no overriding considerations asserted in the EIR. Findings of Fact, Staff Report, p. 2. Thus, Comité Appeal comment 7 is moot.

8. **The EIR Includes a Legally Compliant, Good Faith Response to Comments**

Comité’s Appeal Comment 8: The Final EIR’s response to comments is legally inadequate because it fails to provide a good faith, reasoned analysis of numerous expert comments.

The comment indicates that the response to comments in the EIR was generic and legally inadequate because the EIR lacked responses to individual comments. To the contrary, Comité’s authority to support this comment, *City of Long Beach v. Los Angeles Unified School District*, supports the Project’s EIR comment responses. (2nd Dist. 2009) 176 Cal. App. 4th 889 (Court found that the school district satisfied the requirements to CEQA in its responses.) The requirement for providing responses to comments in an EIR is defined in CEQA Guidelines Section 15088. Section 15088 (c) states:

(c) The written response shall describe the disposition of significant environmental issues raised (e.g., revisions to the proposed project to mitigate anticipated impacts or objections). In particular, the major environmental issues raised when the lead agency’s position is at variance with recommendations and objections raised in the comments must be addressed in detail giving reasons why specific comments and suggestions were not accepted. There must be good faith, reasoned analysis in response. Conclusory statements unsupported by factual information will not suffice. The level of detail contained in the response, however, may correspond to the level of detail provided in the comment (i.e., responses to general comments may be general). A general response may be appropriate when a comment does not contain or specifically refer to readily available information or does not explain the relevance of evidence submitted with the comment.

Imperial County prepared itemized responses to individual comments, but it was not required to do so by CEQA. CEQA Guidelines § 15088. CEQA Guidelines Section 15088 (c) specifically references the use of general responses. It is customary for many CEQA lead agencies to use master or general responses to comments in EIRs. The general responses to comments provided in the EIR do not affect the ability of decisions makers to consider all comments, which were included in the Final EIR, nor do they affect the opportunity for meaningful public participation. Contrary to the Appeal comment, the County considered the letter from Pacific Institute (Appeal Exhibit J). *See* EIR Section 1.2.1 at 1.0-3. Moreover, the EIR considered Project area existing conditions (*see* EIR Sections 2.3 at 2.0-2 and 3.1 at 3.0-1, 3.0-2). The EIR was made available for public comment according to CEQA requirements and all CEQA procedures for

notice and receipt of comments were properly implemented. The EIR reasonably and in good faith discussed comments in adequate detail, with references to specific documents.

9. **The WSA is Supported by Substantial Evidence, Meeting CEQA & the Water Code**

Comité's Appeal Comment 9: The EIR's flawed water analysis infects the WSA in violation of CEQA and the State Water Code.

The comments that were addressed in the WSA did not trigger any CEQA requirements for subsequent environmental analysis under CEQA Guidelines § 15162. Rather the revisions to the WSA involved clarifications and corrections to the WSA, which were appropriately addressed as part of the environmental review process. The FEIR and revised WSA responds to all of IID's comments. *See* Comment Letter # 6 and Response to Comment Letter # 6, FEIR ES-83 through ES-100; *see also* response to Appeal comment 3a, above.

10. **The EIR, WSA, and Related Project Approvals Meet Legal Requirements**

Comité's Appeal Comment 10: The flawed EIR and WSA analysis, [sic] infect the code-required findings for many of the Project Approvals.

In this comment, Comité simply refers to and reiterates issues cited in earlier sections of the Appeal in broad-brush fashion, including failure to address Project-level and cumulative impacts (addressed in response to Appeal comment 4), impacts about water usage (addressed in response to Appeal comments 1.a, 1.b., and 3.a.), and General Plan consistency (addressed in response to Appeal comment 3.e.). By identifying alleged deficiencies in these portions of the EIR, this Appeal comment then concludes that the EIR Findings concerning each of these issues is not supported by substantial evidence. Throughout this Response letter, Applicant has identified the locations in the EIR record where each of the above-listed issues was addressed and the substantial evidence provided to support EIR findings and conclusions.

The EIR, WSA, and related Project approvals are not flawed and certainly do not "infect" any process or decision making. *See* discussion for Appeal comments 1-9. The Applicant and the County both carefully followed the requirements of the CEQA Statute and Guidelines, as discussed above. The Project record submitted to the Commissioners provides substantial evidence to support the Project. The Applicant is committed to compliance with the law to complete a Project that will ultimately result in providing renewable energy to the community, economic benefits to the community, and production of critical mineral for the U.S. energy goals.

CONCLUSIONS

The Applicant has provided substantial evidence to support its Project. The EIR, MMRP, and WSA were all developed in accordance with the CEQA Statute and Guidelines. The environmental review was appropriately and thoroughly conducted by the Imperial County Planning and Development Services Department. The Project's proposed land use is consistent with County General Plan Goals. The objectives of the Project are laudable and reflect the energy

January 8, 2024

aims of the United States, providing renewable energy for the community and providing a critical mineral designated by the U.S. Department of Energy. The Project will provide construction and operations employment opportunities important to the County. Despite the claims raised by Comité, the Project record has been painstakingly created with attention to requirements of the law and transparency for the decision-makers and stakeholders.

Controlled Thermal Resources and its subsidiaries respectfully request that the Imperial County Board of Supervisors deny Comité's Appeal and approve the Project.

Sincerely,

CONTROLLED THERMAL RESOURCES (US) INC.



Jim Turner, President

cc: Supervisor Jesus Eduardo Escobar (jesusescobar@co.imperial.ca.us)
Supervisor Luis A. Plancarte (luisplancarte@co.imperial.ca.us)
Supervisor Michael W. Kelley (michaelkelley@co.imperial.ca.us)
Supervisor John Hawk (johnhawk@co.imperial.ca.us)
Blanca Acosta, Clerk of the Board (blancaacosta@co.imperial.ca.us)
Jim Minnick, Planning & Development Services Director (jimminnick@co.imperial.ca.us)
David Black, Senior Planner (davidblack@co.imperial.ca.us)
Jeff Garber, Chief Legal Officer (jeff.garber@cthermal.com)
Faye Winkler, Assistant General Counsel (faye.winkler@cthermal.com)
Sergio Cabanas, Director, EHS & Laboratories (sergio.cabanas@cthermal.com)
Mariela Moran, Permitting and Regulatory Assistant (Mariela.Moran@cthermal.com)

Exhibit A

Final Water Supply Assessment

SB 610 – Draft Water Supply Assessment
For
Hell’s Kitchen PowerCo 1 and LithiumCo 1 Project

Prepared For:

Imperial County Planning and Development Services

**801 Main Street
El Centro, California 92243**

Prepared by:

Chambers Group, Inc.

**3151 Airway Avenue, Suite F208
Costa Mesa, California 92626**

December 2023

(This page Intentionally left blank)

Hell’s Kitchen PowerCo 1 and LithiumCo 1 Project

Contents

PURPOSE OF WATER SUPPLY ASSESSMENT	7
Project Determination According to SB 610 - Water Supply Assessment	8
EXECUTIVE SUMMARY	9
PROJECT DESCRIPTION.....	11
HKP1 Facilities.....	13
HKL1 Facilities.....	16
HKP1 and HKL1 Shared Facilities and Design.....	17
Project Operations.....	18
Water Requirements	24
Description of IID Service Area	29
Climate Factors	29
Imperial Valley Historic and Future Land and Water Uses.....	32
Imperial Integrated Regional Water Management Plan (October 2012).....	33
IID Interim Water Supply Policy for Non-Agricultural Projects (September 2009)	36
IID Temporary Land Conversion Following Policy (May 2012).....	37
IMPERIAL IRRIGATION DISTRICT’S WATER RIGHTS	38
California Law	38
Law of the River	38
IMPERIAL IRRIGATION DISTRICT WATER SUPPLY AND DEMAND	48
WATER AVAILABILITY – NORMAL YEAR	48
EXPECTED WATER AVAILABILITY – SINGLE DRY AND MULTIPLE DRY YEARS	51
Water Management under a Suspended Inadvertent Overrun Payback Policy (IOPP).....	51
Equitable Distribution Plan (EDP) History	54
Projected Water Supplies	55
PROJECT WATER AVAILABILITY FOR A 20-YEAR PERIOD TO MEET PROJECTED DEMANDS.....	56
EXPECTED WATER DEMANDS FOR THE PROPOSED PROJECT.....	59
IID’S ABILITY TO MEET DEMANDS WITH WATER SUPPLY	61
Expanding Water Supply Portfolio.....	65
IID Near Term Water Supply Projections	67
IMPERIAL COUNTY PLANNING AND DEVELOPMENT SERVICES (LEAD AGENCY) FINDINGS	68
ASSESSMENT CONCLUSION	70
RESOURCES AND REFERENCES	72
ATTACHMENTS	73

Figures

Figure 1. Project Site Regional Location	26
Figure 2. Aerial Map of Project Vicinity	27
Figure 3. Project Layout/Site Plan	Error! Bookmark not defined.
Figure 4. IID Imperial Unit Boundary and Canal Network.....	30
Figure 5. Major Colorado River Reservoir Storage Facilities and Basin Location Map.....	44
Figure 6. Lake Mead Water Elevation Levels November 2023.....	47
Figure 7. Lake Mead Schematic (June 15, 2022).....	53

Tables

Table 1. Climate Characteristics, Imperial, CA 100-Year Record, 1923-2022.....	31
Table 2. IID Areawide Annual Precipitation (In), (1990-2022)	31
Table 3. Monthly Mean Temperature (°F) – Imperial, CA 10-Year, 30-Year & 100-Year (2013-2022, 1993-2022, 1923-2022)	31
Table 4. Monthly Mean Rainfall (In) – Imperial, CA 10-Year, 30-Year & 100-Year (2013-2022, 1993-2022, 1923-2022)	32
Table 5. Non-Agricultural Water Demand within IID Water Service Area, 2015-2055 (KAFY).....	34
Table 6. Historic and forecasted Agricultural Water Consumptive Use and Delivery Demand within IID Water Service Area, 2015-2055 (KAFY)	35
Table 7. IID System Operations Consumptive Use within IID Water Service Area and from AAC at Mesa Lateral 5 to Imperial Dam, (KAF), 2020	36
Table 8. Interim Water Supply Policy 2023 Annual Non-Agricultural Water Supply Development Fee Schedule.....	37
Table 9. CRWDA Annual 4.4 MAF Apportionment (Priorities 1 to 4) for California Agencies (AFY).....	42
Table 10. Unregulated Inflow to Lake Powell, Percent of Historic Average, 2000-2022.....	45
Table 11. IID Historic and Forecast Net Consumptive Use for Normal Year, Single-Dry Year and Multiple-Dry Year Water Supply, 2003-2037, et seq. (CRWDA Exhibit B)	50
Table 12. IID Annual Rainfall (In), Net Consumptive Use and Underrun/Overrun Amounts (AF), 1988-2022	52
Table 13. IID Inadvertent Overrun Payback to the Colorado River under the IOPP, 2012-2022.....	53
Table 14. Project Operational Water Uses (AFY)	59
Table 15. Ten-Year Historic Delivery (AFY), 2013-2022.....	59
Table 16. IID System Operations Consumptive Use within IID Water Service Area and from AAC at Mesa Lateral 5 to Imperial Dam, (KAF), 2022	61
Table 17. IID Historic and Forecasted Consumptive Use vs CRWDA Exhibit B IID Net Available Consumptive Use, volumes at Imperial Dam (KAFY), 2015-2055.....	62

Table 18. 2020 Approved Water Order, Actual CU (Decree Accounting Report) and IID Underrun, KAF at Imperial Dam 63

Table 19. IID Capital Project Alternatives and Cost (May 2009 price levels \$)..... **Error! Bookmark not defined.**

Attachments

Attachment A: IID Interim Water Supply Policy for Non-Agricultural Projects

Attachment B: IID Equitable Distribution Plan

DRAFT

Acronyms

AF	Acre-Foot or Acre-Feet
AFY	Acre-Feet per Year
AOP	Annual Operations Plan
CAP	Central Arizona Project
CDCR	California Department of Corrections and Rehabilitation
CDPH	California Department of Public Health
CDWR	California Department of Water Resources
CEQA	California Environmental Quality Act
CRRWQCB	Colorado River Basin Regional Water Quality Control Board
CRWDA	Colorado River Water Delivery Agreement
CTR	Controlled Thermal Resources (US), Inc. (the Applicant)
CUP	Conditional Use Permit
CVWD	Coachella Valley Water District
CWC	California Water Code
EDP	IID Equitable Distribution Plan
EIS	Environmental Impact Statement
HCl	Hydrochloric Acid
HDPE	High Density Polyethylene
HKL1	Hell's Kitchen LithiumCo 1
HKP1	Hell's Kitchen PowerCo 1
H ₂ S	Hydrogen Sulfide
ICAPCD	Imperial County Air Pollution Control District
ICPDS	Imperial County Planning and Development Services
ICPHD	Imperial County Public Health Department
ICS	Intentionally Created Surplus
IID	Imperial Irrigation District
IOPP	Inadvertent Overrun Payback Policy
ISG	Interim Surplus Guidelines
IRWMP	Integrated Regional Water Management Plan
IWSP	Interim Water Supply Policy
KAF	Thousand Acre Feet
LAFCO	Local Agency Formation Commission
LCR	Lower Colorado Region
LiCl	Lithium Chloride
LiOH	Lithium Hydroxide
MCI	Municipal, commercial, industrial
MGD	Million Gallons per Day
MW	Megawatt
MWD	Metropolitan Water District of Southern California
NAF	Naval Air Facility
NCG	Incondensable Gas
PVID	Palo Verde Irrigation District
QSA/	Quantification Settlement Agreement and Related Agreements
RO	Reverse Osmosis
ROW	Right-of-Way
Transfer Agreements	
SB	Senate Bill
SDCWA	San Diego County Water Authority
SNWA	Southern Nevada Water Authority
SO ₄ ²⁻	Sulfate
TLCFP	Temporary Land Conversion Following Policy
USBR	United States Bureau of Reclamation
USEPA	United States Environmental Protection Agency
WSA	Water Supply Assessment

PURPOSE OF WATER SUPPLY ASSESSMENT

This Water Supply Assessment (WSA) was prepared for the Imperial County Planning and Development Services (Lead Agency) by Chambers Group, Inc. (Chambers Group), regarding Controlled Thermal Resources (US), Inc. (CTR) (the "Applicant") Hell's Kitchen PowerCo 1 and LithiumCo 1 Project (the "Project"; HKP1 and HKL1, respectively). This study is a requirement of California law, specifically Senate Bill 610 (referred to as SB 610). SB 610 is an act that amended Section 21151.9 of the Public Resources Code, and Sections 10631, 10656, 10910, 10911, 10912, and 10915 of the Water Code. SB 221 is an act that amended Section 11010 of the Business and Professions Code, while amending Section 65867.5 and adding Sections 66455.3 and 66473.7 to the Government Code. SB 610 was approved by the Governor and filed with the Secretary of State on October 9, 2001, and became effective January 1, 2002.¹ SB 610 requires a lead agency, to determine that a project (as defined in CWC Section 10912) subject to California Environmental Quality Act (CEQA), to identify any public water system that may supply water for the project and to request the applicants to prepare a specified water supply assessment.

This study has been prepared pursuant to the requirements of CWC Section 10910, as amended by SB 610 (Costa, Chapter 643, Stats. 2001). The purpose of SB 610 is to advance water supply planning efforts in the State of California; therefore, SB 610 requires the Lead Agency, to identify any public water system or water purveyor that may supply water for the project and to prepare the WSA after a consultation. Once the water supply system is identified and water usage is established for construction and operations for the life of the project, the lead agency is then able to coordinate with the local water supplier and make informed land use decisions to help provide California's cities, farms, and rural communities with adequate water supplies.

Under SB 610, water supply assessments must be furnished to local governments for inclusion in any environmental documentation for certain projects (as defined in California Water Code (CWC) Section 10912 [a]) that are subject to the California Environmental Quality Act (CEQA). Due to increased water demands statewide, this water bill seeks to improve the link between information on water availability and certain land use decisions made by cities and counties. This bill takes a significant step toward managing the demand placed on California's water supply. It provides further regulations and incentives to preserve and protect future water needs. Ultimately, this bill will coordinate local water supply and land use decisions to help provide California's cities, farms, rural communities, and industrial developments with adequate long-term water supplies. The WSA will allow the lead agency to determine whether water supplies will be sufficient to satisfy the demands of the project, in addition to existing and planned future uses.

¹SB 610 amended Section 21151.9 of the California Public Resources Code, and amended Sections 10631, 10656, 10910, 10911, 10912, and 10915, repealed Section 10913, and added and amended Section 10657 of the Water Code. SB 610 was approved by California Governor Gray Davis and filed with the Secretary of State on October 9, 2001.

Project Determination According to SB 610 - Water Supply Assessment

With the introduction of SB 610, any project under the California Environmental Quality Act (CEQA) shall provide a Water Supply Assessment if the project meets the definition of CWC § 10912. Water Code section 10911(c) requires for that the lead agency “determine, based on the entire record, whether projected water supplies will be sufficient to satisfy the demands of the project, in addition to existing and planned future uses.” Specifically, Water Code section 10910(c)(3) states that “If the projected water demand associated with the proposed project was not accounted for in the most recently adopted urban water management plan, or the public water system has no urban water management plan, the water supply assessment for the project shall include a discussion with regard to whether the total projected water supplies, determined to be available by the city or county for the project during normal, single dry, and multiple dry water years during a 20 year projection, will meet the projected water demand associated with the proposed project, in addition to the public water system’s existing and planned future uses, including agricultural and manufacturing uses.”

After review of CWC § 10912a, and Section 10912 (a)(5)(B), it was determined that the proposed Hell's Kitchen PowerCo 1 and LithiumCo 1 Project is deemed a project as it is considered an industrial use that will occupy more than 40 acres of land and will have more than 650,000 square feet of floor area.

EXECUTIVE SUMMARY

The Imperial County Planning and Development Services in coordination with Imperial Irrigation District has requested a WSA as part of the environmental review for the proposed Hell's Kitchen PowerCo 1 and LithiumCo 1 Project ("Project"). This study is intended for use by Imperial County Planning and Development Services and Imperial Irrigation District in its evaluation of water supplies for existing and future land uses. The evaluation examines the following water elements:

- Water availability during a normal year
- Water availability during a single dry year, and multiple dry water years
- Water availability during a 20-year projection to meet existing demands
- Expected 30-year water demands of the Project
- Reasonably foreseeable planned future water demands to be served by the Imperial Irrigation District under Equitable Distribution Plan apportionment

The proposed Project site is located within undeveloped land predominantly owned by IID, land partially owned by Hell's Kitchen Geothermal LLC, and a right-of-way (ROW) corridor for the gen-tie and power line to the IID Davis Switching Station which has not been constructed. The Project would be located within Sections 11 and 12, Township 11 North, Range 13 East in Imperial County near the eastern shore of the Salton Sea. The Project is approximately 3.6 miles west of the town of Niland. The majority of the proposed HKP1 and HKL1 facilities are located immediately west of Davis Road, with administrative buildings and warehouses located east of Davis Road. The 230-kilovolt (kV) gen-tie line for HKP1 will run from Noffsinger Road approximately 2 miles south to McDonald Road and then will run approximately 0.3 miles east to Hudson Ranch. The gen-tie line would be located east of Davis Road and north of McDonald Road, within the IID's transmission ROW and within new ROW. The power line to supply power to the HKL1 facilities would be collocated on the HKP1 transmission structures/poles. The proposed Project is within IID's Imperial Unit and district boundary and as such is eligible to receive water service. Water infrastructure capacity is not a part of this analysis. Hell's Kitchen Geothermal LLC is responsible for contacting IID Water Engineering Department for an infrastructure capacity assessment. Any infrastructure improvements, costs and environmental compliance associated with improvements to accommodate the Project or for the conservation of the water supply needed for the Project is the sole responsibility of Hell's Kitchen Geothermal LLC.

IID adopted an Interim Water Supply Policy (IWSP) in 2009 for new Non-Agricultural Projects, under which water supplies may be contracted to serve new developments within IID's water service area. For applications processed under the IWSP, applicants shall be required to pay a processing fee and, after IID board approval of the corresponding water supply agreement, will be required to pay a reservation fee(s) and annual water supply development fees. The water supply development fees are collected for the development of water supply projects, such as water conservation projects, water storage projects and/or water augmentation projects.

Under the IWSP, IID may set aside up to 25,000 acre-feet annually (AFY) of IID's Colorado River water supply to serve new non-agricultural projects with water created from IID efficiency conservation projects and programs. As of November 2023, a balance of 18,620 AFY remain available under the IWSP for new non-agricultural projects, providing a mechanism for the development of reasonably sufficient water supplies for such projects. The proposed Project water demand of approximately 6,500 AFY represents 34.9 % of the annual unallocated supply that may be created and set aside for new non-agricultural projects.

Imperial County Planning and Development Services anticipates non-agricultural project water supply demand within their jurisdiction, as the land use authority, is likely to exhaust the 18,620 AFY available under the IWSP within the foreseeable 20-year planning period. Thus, the proposed Project's estimated water demand, combined with other development anticipated in the area is likely to adversely affect IID's ability to provide water to other users in IID's water service area unless mitigation is incorporated. This industrial water use project will need to enter into a water supply agreement with IID under which water conservation and augmentation commitments will be required of Hell's Kitchen Geothermal LLC.

In efforts to address any potential water supply/demand imbalances, on June of 2022, IID adopted a revised Equitable Distribution Plan for the apportionment of water to all water user categories including for commercial/industrial water uses such as the proposed Project. Implementation of the EDP initiates every January 1st and continues throughout the year unless the IID Board of Directors takes specific action. Under the EDP, water supplies may be restricted to Hell's Kitchen PowerCo 1 and LithiumCo 1 Project as described under the IID Water Supply & Demand Section, Equitable Distribution Plan subsection of this WSA.

IID's EDP implementation efforts in 2022 and 2023 coincide with efforts communicated by the U.S. Bureau of Reclamation to all Colorado River Basin contractors during the same time period. In June 2022, Commissioner Camille Touton testified before a congressional committee and called for the Basin states to develop a plan before the end of the year to reduce demands by 2-4 million acre-feet per year, through 2026, or the Secretary of the Interior would take regulatory action to force these reductions in order to protect the Colorado River system in light of the prolonged drought conditions and climate change impacts.

California has submitted a voluntary conservation proposal to Reclamation to conserve up to 400,000 AFY through 2026 as the state's commitment to Lake Mead and the Colorado River System, as of the date of this WSA. IID is working diligently with federal agencies and Colorado River contractors to minimize impacts to the local community while simultaneously ramping up water conservation programs in an effort to augment local water supplies, to some degree, should Basin-wide cuts be unavoidable. In the interim, IID has gone on record that its share of the California proposal under a voluntary plan would not exceed 250,000 AFY (through 2026) as long as there are no obligatory reductions imposed.

PROJECT DESCRIPTION

CTR is proposing to build, operate, and maintain a geothermal power plant (HKP1) and mineral extraction and processing facilities (HKL1) on approximately 65.0 acres of predominantly public lands (leased from IID) in the Imperial Valley in Imperial County. More specifically, the Project is located within undeveloped land owned by IID and a right-of-way (ROW) corridor for the gen-tie and power line to the IID Davis Switching Station which has not been constructed. The Project would be located within Sections 11 and 12, Township 11 North, Range 13 East in Imperial County near the eastern shore of the Salton Sea. Section 11 is being leased with a purchase negotiation underway. The 2.5 acres on Section 12 is owned Hell's Kitchen LLC. The Project is approximately 3.6 miles west of the town of Niland. The majority of the proposed HKP1 and HKL1 facilities are located immediately west of Davis Road, with administrative buildings and warehouses located east of Davis Road. The 230-kV gen-tie line for HKP1 will run from Noffsinger Road approximately 2 miles south to McDonald Road and then will run approximately 0.3 miles east to Hudson Ranch. The gen-tie line would be located east of Davis Road and north of McDonald Road, within the IID's transmission ROW and within new ROW. The power line to supply power to the HKL1 facilities would be collocated on the HKP1 transmission structures/poles. A majority of the development area is zoned S-1-G (open space/geothermal overlay zone) with a portion zoned S-2-G (open space/preservation/geothermal overlay) and is entirely within the renewable energy/geothermal map overlay zone in the 2015 Renewable Energy and Transmission Element update to the County General Plan. The gen-tie and power line ROW is zoned S-1-G and M-2-G-PE (medium industrial/geothermal overlay). The General Plan Land Use designation for the entire Project is Agriculture. Individual Assessor Parcel Numbers (APNs) and associated zoning designations are as follows: Zoning Designation S-1-G and S-2-G, 020-010-012; Zoning Designation S-1-G, 020-010-013, 020-070-060, 020-010-042, 020-060-001, 020-060-002, 020-060-039, 020-060-040, 020-070-026, 020-070-025, 020-070-029, 020-070-055, 020-010-031, 020-010-032; Zoning Designation M-2-G-PE, 020-010-035, 020-100-044. Please refer to Figure 1 for the Project's Regional Location (**Figure 1. Site Regional Location**), and Figure 2 for the Project Site and Vicinity (**Figure 2. Aerial View of Project Site and Vicinity**).

In general, the Project can be described as follows:

HKP1 will include construction of the following structures: three production wells, four injection wells and associated well pads; geothermal fluid production and injection pipelines; a brine processing facility; a brine pond; 49.9-MW net geothermal turbine generator facility; a cooling tower; material and equipment storage; a control building; administrative and warehouse buildings; a water storage pond and water storage tank; an on-site substation; and a 230-kV gen-tie line to the IID Davis Switching Station to be constructed. HKL1 will include construction of the following structures: geothermal pipelines to transfer brine from HKP1; a cooling tower; truck entrance security; a cooling tower and flocculation facilities; brine crystallizers, clarifiers, thickeners, and filter presses; a lithium-recovery resin vessel and systems; raw water filtration, fire-water storage, and reverse osmosis (RO) facilities; electrical buildings to house electric power switchgear and electrical metering; a substation; reagent storage and

preparation buildings; two motor-control centers and a control room building; lithium product handling and packaging buildings (that will house the filtration and drying equipment for the lithium products and bagging and palletizing of finished products); polymetallic product handling facilities; bulk sulfide product handling facilities; silica product manufacturing facilities; bulk boron product handling facilities; two lime silos; hydrochloric acid (HCl) offloading and storage tanks; and an RO water treatment facility. Please refer to Figure 3 for the conceptual project layout and tentative site plan. (Figure 3. Project Layout/Site Plan).

The geothermal power plant (HKP1) and mineral extraction and processing facilities (HKL1) will require regional, State, and federal permits as follows, Lead Agency required permits: CUP, Zoning Variance, Development Agreement (if needed), Building and Grading Permit, and Encroachment Permit; Reviewing Federal Agency required permits: USFWS Incidental Take Permit (ITP, if needed) and USACE Individual Permit under Section 404 of the Clean Water Act; Reviewing State Agency required permits: California Department of Transportation (Caltrans) Encroachment Permit, CDFW Lake or Streambed Alteration Agreement and ITP (if needed), California Department of Toxic Substances/Certified Unified Program Agency (CUPA) Hazardous Materials/Environmental Protection Agency Approvals and Permits, and CalGEM Permit(s) to drill; Reviewing Regional Agency required permits: CRRWQCB Waste Discharge Requirement and 401 Water Quality Certification, IID Encroachment Permit, Imperial County Air Pollution Control District Permit to Construct and Permit to Operate; Use of Generators (if needed), Imperial County Public Health Department Nontransient-Noncommunity Water System Permit, Imperial County Building Department Building and Grading Permits, Imperial County Public Works Department Encroachment Permit(s), and any requirements set forth by Imperial County Fire Department and Office of Emergency Services. These permits and agreements will allow for the Project operations and outputs described below.

The potable water provider for the Project will be onsite. Facilities construction will include installation of an on-site potable water treatment system provided by a qualified supplier (e.g., Water Treatment Services Inc, El Centro) and conforming to the permit requirements of the Imperial County Public Health Department.

The proposed Project owner will need to contract with IID to deliver up to 6,500 AFY of untreated water, via the Q and R laterals. The proposed Project is anticipated to use approximately 6,500 AFY of water for geothermal and lithium operations, including 0 AFY necessary for periodic dust control while in operation.

Construction of HKP1 facilities will occur over a period of about 22 months. The engineering and construction of HKL1 facilities lags that of HKP1 by about 13 months. Construction of HKL1 facilities will occur over a period of about 19 months. The amount of water required for HKP1 and HKL1 construction during these construction periods is expected to be 50 acre-feet and 120 acre-feet, respectively.

HKP1 Facilities

Production and Injection Wells

The Project will use Well Pad 1 and a well pad adjacent and south of the Q Drain for geothermal fluid production and injection. The Project may also use Well Pad 4 for geothermal fluid production or injection. Well Pad 1 was previously approved for geothermal exploration drilling and was constructed in 2021. The geothermal production wells will be drilled at Well Pad 1, and one or two injection wells will also be drilled at Well Pad 1. The existing footprint of Well Pad 1 will be expanded during construction of the commercial facility by approximately 160 feet to the north to accommodate the wells required for commercial operation of the Project. Well Pad 4 was previously approved by the County for geothermal exploration drilling but was not constructed. The Project will include a total of seven wells, three production and four injection, including one well for injection of aerated fluids. The two previously drilled geothermal exploration wells will be used as commercial production wells for the Project. All production and injection wells will be operated in accordance with California Geologic Energy Management Division (CalGEM) regulations.

Well-Site Production and Injection Equipment

Production and injection wellhead dimensions are not expected to exceed a height of 15 feet above the ground surface or 4 feet in diameter. The wellhead will consist of control valves, warmup bypass valves, and isolation valves. The wellheads will be insulated, and the insulation cladding will be supplied with an appropriate color to blend with the area and minimize visibility. The injection wells will be located to avoid geothermal fluid interference with the production wells. Each injection well will be remotely monitored for pressure, temperature, and flow rate. Injection pumps located at the power plant site will pump the geothermal injection fluid through the injection pipeline system, providing sufficient pressure to inject the geothermal brine back into the geothermal reservoir. Limited electrical equipment is required at the injection well sites. A flow meter will be integrated into the injection pipeline equipment at the injection well pad and remotely operated from the control room. Overhead lighting will be constructed on the injection well pads. The injection well pad will be fenced. The geothermal production and injection wells will be drilled from the production and injection well pads using steel, titanium or titanium alloy, nickel alloy, duplex stainless steel, or equivalent as appropriate to the final well completion depth.

Geothermal Pipeline Systems

Above-ground pipelines will be constructed to interconnect the production and injection wells with the power plant site facilities. The pipelines will be constructed at ground level on pipeline supports on drilled foundations approximately every 20 to 40 feet along the pipeline routes. The pipelines will use a cattleguard type crossing at the Q and R Drains to avoid impacts on the irrigation drains, and the crossing will be constructed in collaboration with IID. Pipeline construction will be conducted concurrently with construction of the power plant. The production wellheads will be located on Well Pad 1, south of the power plant site. An above-ground pipeline will be constructed from the production wells to the brine

and steam-handling facilities on the power plant site. The production pipelines will be constructed from alloy or alloy-lined pipe designed, constructed, tested, and inspected pursuant to current industry standards for high temperature, high-pressure piping. Above-ground geothermal fluid pipelines, approximately 30-inches in diameter, will be covered with approximately 2 inches of insulation and a protective metal sheath appropriately colored to blend with the area. The brine injection pipeline will be either cement-lined carbon steel, alloy, or a combination of both. The brine injection pipeline will be approximately 24 inches in diameter and will be insulated then covered with a protective metal sheath appropriately colored to blend with the area.

Brine Processing Facility

The brine processing facility will prepare the geothermal fluid produced from the production wells for steam extraction. The geothermal fluid will be delivered through aboveground pipelines to the brine-processing facility. The spent brine will be injected back into the geothermal reservoir through injection wells (discussed below). A pH-modification system will be installed should silica management be necessary to prevent scaling in either surface equipment or injection wellbores. The pH modification system will involve injection of dilute HCl into the brine stream exiting the high-pressure separator at a rate to establish a known bulk fluid pH value. The pH modification system consists of a concentrated acid storage tank, acid transfer pumps, a diluted acid storage tank, diluted acid injection pumps, and an injection nozzle to distribute the diluted acid into the brine injection pipeline. Concentrated HCl (approximately 32% by weight) will be delivered to the Project site by truck for storage. The concentrated acid will be mixed with service water to create a diluted acid solution (approximately 4% by weight). This diluted acid solution, should it be necessary for silica management, would then be injected into the brine pipeline between the high-pressure separator and the brine-injection pumps.

Brine Pond

The brine pond will be cement-lined, with an underliner-leak detection system, and will allow for storage of brine during upset conditions and collection of brine during flow testing and plant start-up. The brine pond will be sized to accommodate two times the volume of the largest vessel and up to six hours of normal-brine-flow equivalent during system upset conditions plus two feet of freeboard. The brine pond will be constructed as a waste management unit (WMU) to meet Colorado River Regional Water Quality Control Board (CRRWQCB) surface-discharge requirements. Groundwater-monitoring wells will be constructed adjacent to the brine pond in conformance with CRRWQCB requirements.

Turbine Generator Facility

The Project will use flash-based power plant technology utilized in the Salton Sea geothermal field since 1982 to convert geothermal-based renewable steam energy into electricity. Steam from the high temperature geothermal fluid in the brine-handling facilities will be delivered to the turbine generator facility. The turbine generator facility will include a 49.9-MW (net) condensing turbine/generator set, a gas removal and emission abatement system, and a heat rejection system (i.e., condenser and cooling tower). The steam will be purified using a scrubber and demister before being admitted into the

condensing steam turbine. The turbine will be directly coupled to a totally enclosed water and air-cooled (TEWAC) synchronous-type generator. The turbine-generator unit will be fully equipped with all the necessary auxiliary systems for turbine control and speed protection, lubricating oil, gland sealing, generator excitation, and cooling. Facilities associated with the turbine generator facility include a control building, a service water storage tank, lube oil skid, and other ancillary facilities. One 3-MW diesel generator will be installed to provide black start capability and emergency site power when the steam turbine generator is shut down. An 800-kW emergency generator will also be installed to provide backup for critical instrument and equipment control power. The diesel engines will meet California Air Resources Board (CARB) air pollutant emission limits. The generators are expected to operate fewer than 600 hours per year.

Heat Rejection and Non-Condensable Gas Removal Systems

The heat rejection system will be comprised of a shell-and-tube type condenser, a counterflow cooling tower, and a noncondensable gas (NCG) removal system. The cooling tower, NCG removal system, and condenser design will be similar to those employed at other geothermal power plants at the Salton Sea. The cooling tower will be up to 40 feet tall. Steam from the turbine will be condensed in the condenser. The geothermal steam condensate from the condenser will be collected in an aeration tank and used as a source of makeup water for the cooling tower. Gases that accumulate in the condenser will be evacuated by the NCG removal system. NCG will be pressurized and vented to a hydrogen sulfide (H₂S) abatement system during normal plant operation. During plant start-up or load rejection (i.e., plant trip offline), steam to the turbine will be diverted to a rock muffler for safe venting as is currently the procedure at the existing geothermal power plants in the Salton Sea KGRA. During this time, H₂S and other NCG will be released to the atmosphere. A combination of best available control technology, management practices, and process-monitoring equipment will be used to minimize air emissions from the power plant facilities. Permits to construct and operate the facility will be obtained from the Imperial County Air Pollution Control District (ICAPCD).

Hydrogen Sulfide Abatement System

H₂S gas is a naturally occurring compound found in Salton Sea geothermal brines. To minimize H₂S from being released to the atmosphere and to meet permitted requirements during routine operations, the project will employ proven abatement systems. The H₂S abatement system effectively oxidizes the gas to a sulfate (SO₄²⁻) that is highly soluble and then returns the sulfate product to injectate streams via the cooling tower blowdown process. Non-condensable gases, including H₂S, are removed from the main condenser through a series of steam-powered air ejectors, vacuum pumps, and compressors. Once the gas stream is pressurized, it is sent to a sparging system located in the cooling tower basin, where the H₂S reacts with H₂S abatement chemicals to oxidize the sulfide to sulfate. The sulfate product is injected into the reservoir with cooling tower blowdown. Additionally, condensate flowing from the main condenser is routed to a tank where oxygen (sparged air) is introduced along with oxidizing chemicals. This process oxidizes any remaining H₂S gas to soluble sulfate. The treated condensate is then introduced to the cooling tower basin as a source of makeup water. As stated above, the sulfate product is subsequently injected into the reservoir as cooling tower blowdown.

Substation and Electrical Power Transmission

The electricity from the geothermal power plant will be converted to 230-kV in the onsite substation. The output of the turbine generator facility is connected through a generator breaker to a (13.8-kV to 230-kV) main step-up transformer in the facility substation. The transformer will be set on a concrete pad within an oil containment system. The transformer will include gas-insulated switchgear. The high voltage side of the main step-up transformer will be connected to a new gen-tie line located within IID's transmission ROW to the IID interconnect station at the IID Davis Switching Station which has not been constructed. The gen-tie line will be constructed as part of the power plant construction but turned over to IID for ownership and operation. The transmission line will be installed on steel structures that will support up to two 230-kV three-phase electrical circuits, including optical ground and static wire. The steel structures will consist of direct-bury steel poles approximately 120 feet tall and will span an average length of 800 feet.

HKL1 Facilities

Pipe Rack and Process Pipelines

A pipe rack will be constructed from the HKL1 Project's process area to the HKP1 site. A geothermal brine delivery pipeline from HKP1 will feed brine to the HKL1 Project's process area. Steam/steam-condensate pipelines will also be constructed on the pipe rack. After minerals processing, the depleted brine will be delivered to the HKP1 injection system for reinjection into the geothermal reservoir. The geothermal brine delivery and return pipelines will be constructed with minimal usage of flanged connections to reduce the potential for pipeline leaks. Automatic valves will be integrated into the pipeline system that will close or divert the geothermal brine in the event of a pipeline issue to minimize the size of any potential spill. An Emergency Response Plan will be prepared and implemented should a fluid spill event occur.

Product Extraction Facilities

The lithium extraction areas will be constructed on concrete pads with a containment curb. The lithium extraction processing areas will consist of a series of interconnected tanks, pipelines, and control valves.

Security Fence and Landscaping

A security fence will be constructed around the Project site. The fence will be constructed to meet Imperial County standards for obscured fencing around processing areas.

Power Facilities

A power line will be installed for HKL1 on the transmission structures that are being constructed for HKP1. An electrical substation will be constructed on the site to obtain power from IID. Six electrical-control buildings will be located on the site, and each will house pad-mounted transformers and

switchgear. An emergency standby diesel generator will provide emergency power supply in case of electrical outage.

HKP1 and HKL1 Shared Facilities and Design

Foundations

Buildings and equipment will be constructed on foundations consistent with the overall site plan. Deep foundations for all major equipment are expected to require subsurface improvements in the form of steel and or concrete pilings. Shallow foundations for buildings are not expecting to require piling supports.

Potable Water

During construction of the HKP1 and HKL1 facilities, potable water will be procured as needed from a local potable water vendor (e.g., El Oasis Water Company, Imperial). Facilities construction will include installation of an on-site potable water treatment system provided by a qualified supplier (e.g., Water Treatment Services Inc, El Centro) and conforming to the permit requirements of the Imperial County Public Health Department.

Water Storage

A high-density polyethylene (HDPE)-lined freshwater pond will be constructed at the southern end of the Project site and just north of the Q Drain. The pond will store and provide fresh water for Project operations. The pond will be sized to provide sufficient storage capacity to meet Project demand during foreseeable periodic interruptions in IID canal water availability. A 100,000-gallon water storage tank will be located on site water storage and 5-acre water storage pond for the facility to use would also be on site.

Stormwater Retention

Stormwater retention infrastructure will be constructed along the western boundary of the site. A berm/levee will run along the western boundary of the site to contain any stormwater runoff and prevent stormwater run on. Water accumulated in the stormwater retention basin will be allowed to evaporate or possibly used as a substitute for normal fresh water. The retention basin will be designed to meet State Water Resources Control Board requirements and will include an appropriate mosquito abatement per Imperial County guidelines. The developed Project facility pad generally will be flat but will be designed to effectively drain to the stormwater retention basin. The stormwater drainage system will be sized to accommodate 3 inches of precipitation in a 24-hour period (100-year storm event), and to comply with applicable local codes and standards. Buildings and equipment will be constructed to provide protection from a 100-year storm event. Spill containment areas and sumps subject to spills of miscible chemicals will drain to an enclosed oil/water separator and will be collected in a waste oil tank for off-site recycling. The site will be graded and constructed so that any geothermal fluid spills will be collected in sumps that drain to the brine pond rather than the stormwater retention basin.

Generation Tie Line and Power Facilities

The 230-kV gen-tie structures constructed for the HKP1 project will be used to support the new power line for the HKL1 Project. The gen-tie line will run from Noffsinger Road approximately 2 miles south to McDonald Road and then will run approximately 0.3 miles east to Hudson Ranch. The gen-tie line will be located east of Davis Road and north of McDonald Road within IID's transmission right-of-way and within new right-of-way.

Parking and Site Access

Parking will be available in the administration and control building area. The Project will be accessed from Davis Road via new ingress/egress driveways. Davis Road will be upgraded with aggregate base during construction of the HKP1 Project. Project traffic will access the site from Highway 111 via McDonald Road and Davis Road. A bridge will be constructed across the R Drain to connect the northern and southern portions of the Project site. County road ingress/egress points will be constructed in conformance with Imperial County Public Works Department and Fire Department requirements. Road access will be restricted during construction, and appropriate traffic controls will be in place during construction of the Project. Davis Road will be paved from McDonald Road to Noffsinger Road at the completion of HKL1 Project construction. All structures within IID right-of-way (ROW), including the bridge over the R Drain, will require IID ROW and approval.

Project Operations

Routine operations and maintenance of the facility will include preventative maintenance and repairs of any damaged or otherwise inoperable equipment on an as-needed basis. The operation and maintenance staff will monitor the facility operations over the project life to ensure the power plant is operating to meet design standards. The HKP1 facility will utilize geothermal brine to create geothermal energy which will be sold to IID through the gen-tie line. The HKL1 facility will utilize geothermal brine produced from the geothermal fluid management activities on the neighboring HKP1 power plant site for the commercial production of lithium hydroxide, silica, bulk sulfide, and polymetallic products. The production processing steps may be altered over time as production methods and efficiencies evolve and new or revised product lines are developed at the facility. The process includes the following steps: brine cooling; silica, bulk sulfide, and polymetallic product production; lithium and metals extraction; concentration of lithium extractant; processing of lithium extractant to lithium hydroxide; drying and packaging of lithium and polymetallic products; offsite product shipping.

Each of the general processing steps is discussed further below. After processing of the geothermal brine, the depleted brine will be returned to HKP1 for injection at the wells, developed for HKP1, south of the Q Drain.

Metal Recovery

Geothermal brine from the HKP1 will feed two parallel vacuum-flash brine cooling trains sized for the full operating flow of approximately 5 million pounds per hour (lbs./hr.) The cooled brine will be fed to the mineral extraction process. Silica, bulk sulfide, and polymetallic products will be extracted from the brine using proprietary technology. Silica, bulk sulfide, and polymetallic products will be filtered and shipped offsite in roll-off bins. A lithium chloride (LiCl) product stream will also be produced using a proprietary extraction process. The LiCl will be processed in the subsequent lithium process steps.

Lithium Production

The LiCl product stream will be concentrated and purified. The purified, concentrated LiCl will be transported via pipeline from the lithium purification/concentration operation to the lithium product production buildings. Proprietary technology will be used to convert the LiCl into a LiOH•H₂O product.

The LiOH•H₂O product stream will be crystallized and transported to a lithium product handling, production, and warehouse building, where the crystals will be separated from the lithium-rich process fluid in a filtration system. LiOH•H₂O crystals will be dried and packaged in bulk bags. Packaging is expected to be into 20-kilogram (kg) bags or into 1,000-kg super sacks.

Product Shipping to Offsite Markets

The HKL1 plant will produce multiple products for offsite shipment to market by truck. The average annual amount of product shipped out of the plant operating at 5,000,000 lbs./hr. brine flow capacity is estimated at approximately 5,100 lbs./hr. dry lithium product (LiOH•H₂O), 3,100 lbs./hr. silica, 9,800 lbs./hr. bulk sulfide and 60,000 lbs./hr. polymetallic products. All products will be transported by freight truck on existing roadways to shipping distribution point(s).

Operational Workforce, Schedule, and Traffic

The HKP1 facility will require up to 22 full-time onsite employees during operation. Operational staff will include operators, management and supervisors, maintenance technicians, and lab technicians. On a typical day, the operators will assume a two-shift, 24-hour workday, and all other personnel will assume a standard 8-hour workday. Approximately 22 worker trips, 3 vendor trips, and 1 haul-truck trip will take place during daily operations.

The HKL1 facility is expected to require 90 full-time onsite employees during operation. Facility operations will continue 24 hours per day, 7-days per week. It is projected that up to 44 employees will be on site at any given time, with 28 day-staff employees and two rotating shifts of 16 additional employees overlapping the day staff and covering nights, weekends, and holidays. Approximately 48 trucks per day will travel in and out of the Project site during normal operations. Daily truck traffic includes up to 40 trucks for product shipping. All trucks used for product shipping will be electric. Truck traffic will also include approximately eight truck deliveries of reagent chemicals, cooling tower treatment chemicals, consumptive media, product-packaging materials, and fuel. Outgoing general

waste generated on the site will be removed by truck as needed and is expected to require less than one truck per day.

Operational Water Supply and Requirements

The HKP1 will require up to approximately 200 AFY of fresh water for normal operation, including supplemental cooling tower makeup and other plant uses when operating at full plant load. Average annual demand requirements will vary, depending on the capacity factor of the overall facility. It is anticipated that steam condensate will be utilized to offset freshwater requirements.

The primary source of fresh water for the facility is anticipated to be irrigation water made available under a supply agreement and purchased through IID. Water will be obtained from the "Q" and "R" laterals adjacent to the Project site. Water will be transferred to a water storage pond, with a capacity of approximately 18 AF, located adjacent to the Q Drain. The water would then be transferred to 100,000-gallon aboveground water storage tank via an aboveground fresh-water pipeline. Additional pipelines will be constructed to transport the water from the water storage tank to the power plant facility. The water will be used for steam wash water, purged water for pump seals, and the RO potable water system, process wash water, and, at times, cooling water makeup. The project is designed to minimize reliance on external sources of water supply for process needs as well by using condensed steam from the geothermal steam condensate to the greatest extent practical.

A filtration-based or RO potable water system will be used to process IID fresh water for the non-drinking potable water needs at the site. A Nontransient-Noncommunity Water System Permit will be obtained from the Imperial County Public Health Department (ICPHD) for the onsite potable water system. Bottled drinking water will be purchased for consumption.

The HKL1 facility will require approximately 6,300 AFY of water to be purchased from the IID for project cooling water makeup and additional process water. Approximately 3 AFY of the purchased water will be treated and used for potable water purposes, including potable washbasin water, eyewash equipment water, water for showers and toilets in the administration and control buildings, and sink water in the sample laboratory.

Operational Energy Requirements

HKP1 would generate 49.9 MW of renewable energy which would be sold to IID. HKL1 would require approximately 35 MW of power and have a peak power demand of 40 MW, which would be obtained from IID. Overall, the power demand would be less than what is produced by HKP1. Additionally, HKP1 will require the use of generators for up to 600 hours per year for startups during black start situations. HKL1 generators will only be used in emergency situations and will be operated less than 50 hours per year.

Fire Protection and Safety

The fire protection system will consist of an underground fire main and surface distribution equipment, such as yard hydrants and hose houses, monitors around the perimeter of the cooling tower, automatic sprinklers for the turbine generator and auxiliary equipment, and a complete detection and alarm system. HKP1 will have a fire water storage tank with a capacity of 250,000 gallons, and HKL1 will have three 250,000 gallon tanks for a total capacity of 750,000 gallons. The firewater pumping system will include a total of eight pumps capable of a total pumping capacity of 8,000 gallons per minute. The fire protection systems will be routinely tested, with the pump discharge recycled to the fire water storage tanks. The systems will be designed in accordance with federal, State, and local fire codes, occupational health and safety regulations and other jurisdictional codes, requirements, and standard practices.

Spent Fluid and Wastewater

Under normal operation, the spent brine will be pumped via the main injection system. Spent geothermal brine will be injected into the subsurface geothermal reservoir via the primary injection wells. Geothermal brine will be discharged into the bring pond during upset conditions or maintenance activities (start up and shut down). The fluids from the brine pond also will be injected into the subsurface geothermal reservoir via the dedicated aerated brine injection well. All subsurface fluid injection will conform with CalGEM requirements.

Wastewater including non-process wash water and sanitary waste, will be generated during operations. Sanitary drains will collect all sanitary waste and non-process wash water and discharge to an appropriately sized and County-approved septic system. The septic system will be engineered and operated to meet County Environmental Health requirements.

Hazardous Materials and Waste

Hazardous Material Management

The Project will develop and implement a Hazardous Materials Business Plan (HMBP), in compliance with California Health and Safety Code, Division 20, Chapter 6.95, Sections 25500-25519 and California Code of Regulations, Title 19, Division 2, Chapter 4. The HMBP will be provided to the California Office of Emergency Services, the Imperial County Fire Department, and the Certified Unified Program Agency for Imperial County (the local California Department of Toxic Substances Control office), for review and approval before plant operation. The HMBP will include, at a minimum, procedures for: hazardous materials handling, use and storage; emergency response; spill control and prevention; employee training, and reporting and record keeping.

Portable bins or other storage containers will be on site for storage of maintenance lube oils, chemicals, paints, and other construction materials, as needed. Secondary containment will be provided in all petroleum hydrocarbon and hazardous material storage areas, and all brine processing areas. Safety showers and eyewash stations will be provided in or adjacent to chemical storage and use areas. Safety equipment will be provided for staff use if required during chemical containment and cleanup

activities. All staff working with chemicals will be trained in proper handling and emergency response to chemical spills or accidental releases. Water hose connections will be provided near the chemical storage and feed areas, to flush spills and leaks, and absorbent materials will be stored on site for spill cleanup.

The HKP1 facility may include transformer oil for transformer operation, lube oil for the turbine generator operation, diesel for generator fueling, and HCl (32% by weight). The transformer oil will be contained within the transformers; the lube oil will be stored on a skid. Diesel will be stored in a diesel storage tank with a capacity of approximately 3,000 gallons. Two polymer or fiber-reinforced plastic HCl tanks, with capacities of approximately 20,000 and 75,000 gallons, will store the HCl for the acid modification process. The HCl tanks will be fitted with scrubbers. All chemicals will be stored outdoors on impervious surfaces in above-ground storage tanks with secondary containment. The secondary containment areas for the bulk storage tanks will not have drains. Any chemical spill occurring in these areas will be removed with portable equipment and re-used or disposed properly. Other chemicals will be stored and used in their delivery containers.

Hazardous materials that are expected to be used during construction of HKP1 will include: unleaded gasoline, diesel fuel, oil, hydraulic fluids, lubricants, solvents, adhesives, and paint materials. Hazardous materials that are expected to be used during operation of HKL1 will include: unleaded gasoline, diesel fuel, transformer oil, hydraulic fluid, HCl (32% by weight), calcium oxide, sodium sulfide, sodium hydroxide, and manganese.

No feasible alternatives exist to avoid use of these materials for construction or operation of construction vehicles and equipment, or for painting and caulking buildings and equipment. HCl, calcium oxide, sodium hydroxide, and sodium sulfide will be required for the mineral extraction process. Manganese will be produced for commercial sale. Manganese will be stored in indestructible containers for shipping.

Hazardous Materials Transportation

Hazardous material carriers and hazardous waste transporters are required by law to adhere to applicable local, State, and federal regulations regarding proper truck signage, indicating the materials being transported, carrying a shipping/waste manifest of the types and concentrations of materials being transported, and other appropriate measures. Hazardous material carriers also are responsible for their loads, reporting spills, and initiating appropriate emergency response to releases of any transported hazardous materials, from the point of origin up to the destination of the hazardous material delivery.

HKL1 will communicate with the locally responsible emergency response agencies before shipment of any bulk hazardous materials to or from the Project site. Continuing coordination and communications with these agencies relevant to hazardous material shipments will be undertaken as required by the agencies. HKL1 will also develop an Emergency Action Plan for responding to spills or releases of hazardous substances by hazardous material carriers in the Project area. This plan will conform to all

applicable federal, State, and local requirements for notifications, reporting, and emergency response of hazardous substance release incidents. The plan also will describe cleanup of spilled substances and site reclamation, if required. In the unlikely event of a hazardous materials spill during transportation of materials to or from the plant site, HKL1 will cooperate with the responsible agencies and provide all available information and knowledge about the materials to facilitate the spill response cleanup and spill site remediation.

Solid Waste

Construction and operation of the facility will generate both nonhazardous and hazardous wastes described below.

Nonhazardous Wastes

Solid waste from construction activities may include lumber, excess concrete, metal, glass scrap, empty nonhazardous containers, and waste generated by workers. Management of these wastes will be the responsibility of the construction contractor(s). Typical management practices required for nonhazardous waste management will include recycling, when possible, proper storage of waste and debris to prevent wind dispersion, and weekly pickup and disposal of wastes to local Class III landfills.

The primary source of solid waste during operation will be office waste and other waste generated by workers. Non-hazardous waste will be collected in appropriate on-site storage receptacles, designated for waste and recycling. Recyclable materials will be brought to a recycling center, and non-recyclable waste will be removed and taken to a Class III landfill.

Hazardous Wastes

Hazardous wastes may be generated over the course of construction from spills of hazardous materials used during construction, empty hazardous material containers, or spill cleanup wastes. Hazardous materials that are expected to be used during construction include paints, oil and lubricants, solvents, and welding materials. Used oil will be recycled, and oil or heavy metal contaminated materials (e.g., filters) requiring disposal will be transported to an off-site waste disposal facility that is authorized to accept such wastes. Scale from pipe and equipment cleaning operations will be disposed in a similar manner.

All hazardous wastes generated during construction and operation will be handled and disposed in accordance with applicable laws, ordinances, regulations, and standards. Any hazardous wastes generated during construction will be collected in hazardous waste accumulation containers near the point of generation and moved daily to the contractor's 90-day hazardous waste storage area on site. The accumulated wastes subsequently will be delivered to an authorized waste management facility, which may be as far as Yuma, Arizona. Hazardous wastes will be managed and disposed properly in a licensed Class I waste disposal facility that is authorized to accept the waste.

The Geothermal Power Plant and mineral extraction and processing facility involves a CUP, Zoning Variance, Development Agreement (if needed), Building and Grading Permit, and Encroachment Permit that will allow for HKP1 will be permitted for 49.9MW. Other products include: 5,100 lbs./hr. dry lithium product (LiOH•H₂O), 3,100 lbs./hr. silica, 9,800 lbs./hr. bulk sulfide, and 60,000 lbs./hr. polymetallic products.

Water Requirements

The Project will require domestic water and there is not a domestic water delivery system currently available on the Project site. Therefore, an on-site water treatment system procured from a qualified provider will be installed to process water for the non-drinking potable water needs at the site. A Nontransient-Noncommunity Water System Permit will be obtained from ICPHD for the onsite potable water system. Bottled drinking water will be purchased for consumption.

The proposed Project owner will need to contract with IID to deliver up to 6,500 AFY of untreated water, via the "Q" and "R" laterals adjacent to the project site, specifically gates Q-28 and R-24. The proposed Project is anticipated to use approximately 6,500 AFY of water for steam wash water, brine dilution, purge water for pump seals, process wash water, cooling water makeup, lithium processing and additional water processes. About 170 AFY of raw water will be needed for earthworks and dust control while in construction. Approximately 3 AFY of the purchased water will be treated and used for potable water purposes, including potable washbasin water, eyewash equipment water, water for showers and toilets in the administration and control buildings, and sink water in the sample laboratory.

Water Use Efficiency Best Management Practices Incorporated Into the Project

The Project incorporates an integrated, comprehensive water system designed to extensively measure, recycle and maximize the efficiency of water usage. The primary initial use of raw water is for cooling tower makeup. Cooling tower water is cycled 12-16 times, depending on seasonal conditions, with about 75% of water lost to evaporation. All remaining cooling tower blowdown is recycled to other uses in the brine conditioning and lithium refining process. Geothermal steam is used for electric power generation and evaporation of lithium-rich solutions. All steam condensate produced from these processes is recycled to the lithium extraction process for formulation of chemical reagents, filtration, and final production of lithium hydroxide. Effective water recycling consumes about 95% of the raw water supply, leaving only 5% residual. This residual water is then injected into the geothermal reservoir to provide pressure support for maximizing resource productivity.

Additional Project Measures Under Potential Curtailment

Should reductions to IID's water supply be ordered or directed from a governmental authority having appropriate jurisdiction, the Hell's Kitchen PowerCo 1 and LithiumCo 1 Project may be required to reduce its water supply demand by a proportionate reduction of the total volume of water available to IID. Additional operational changes may be implemented by the Project under these unpredictable conditions may include:

- Produce groundwater at property;
- Explore temporary use of recycled drain water; and/or
- Reduce production rates in line with water supply reductions

Incorporation of these additional measures is anticipated to conserve an estimated 945 AFY of water supply demand for HKL1 if operating under curtailment which is approximately 15 percent of overall water supply demand for the Project.

DRAFT

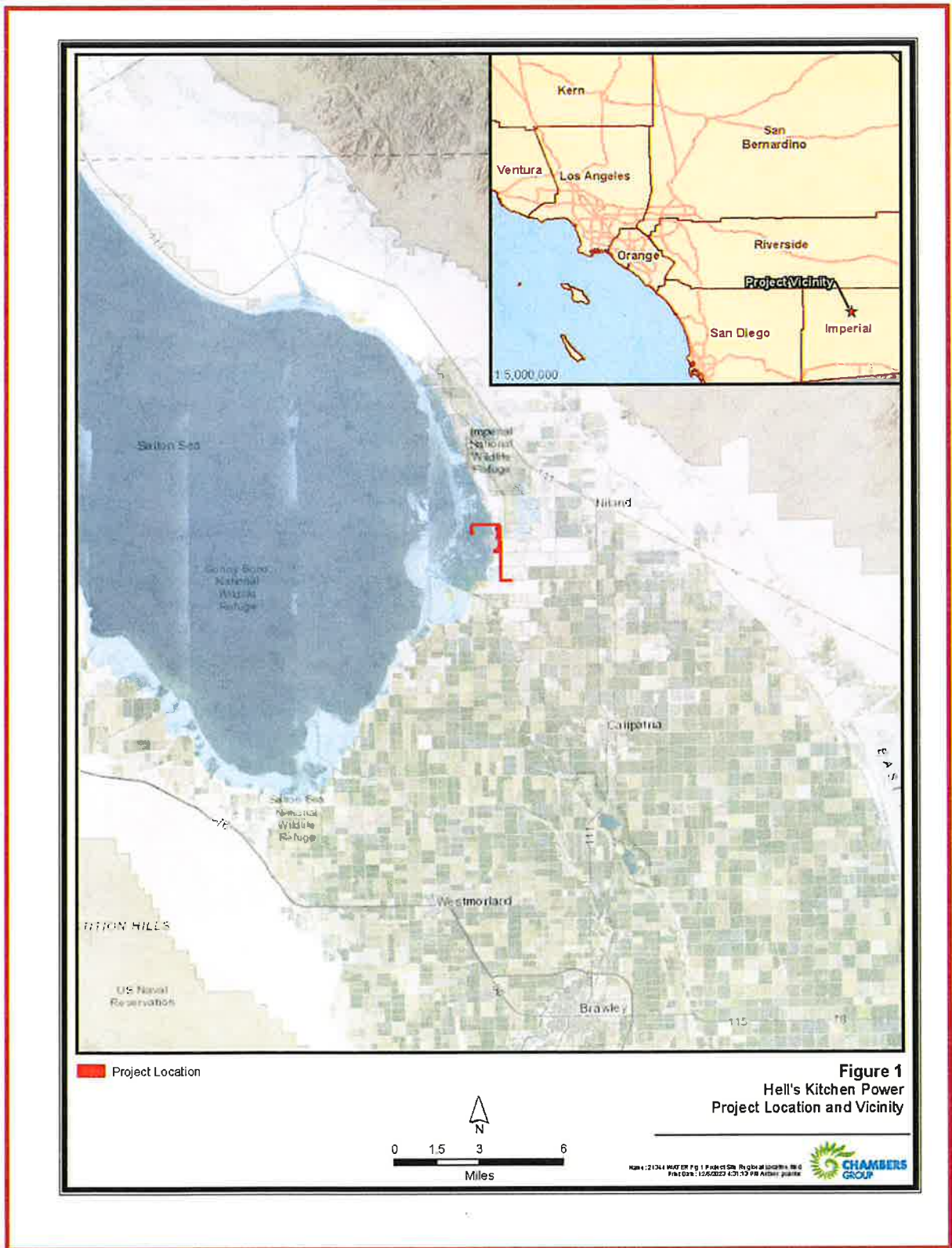


Figure 1. Project Site Regional Location

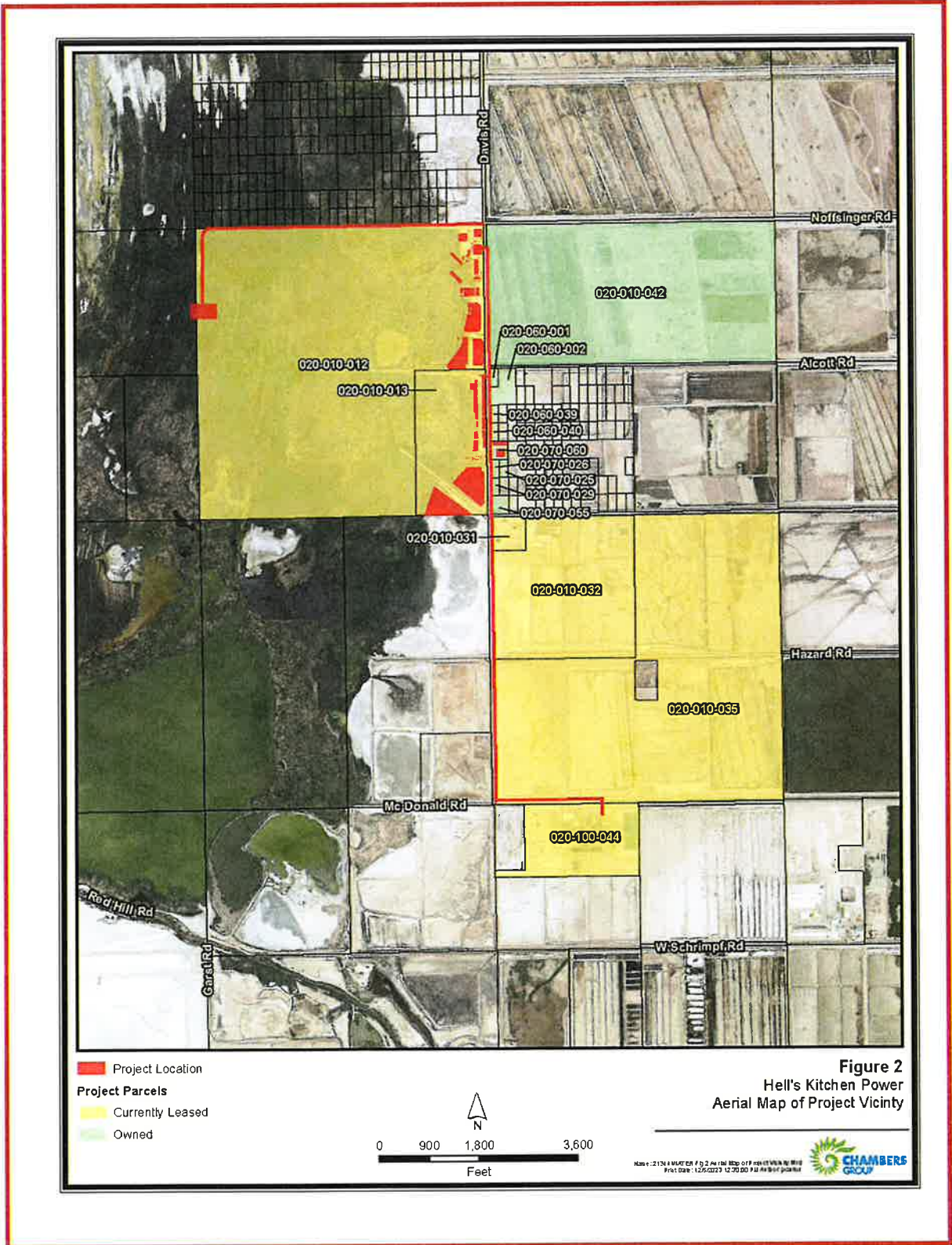


Figure 2. Aerial Map of Project Vicinity

Figure 3. Project Layout/Site Plan



Description of IID Service Area

The proposed Project site is located in Imperial County in the southeastern corner of California. The County is comprised of approximately 4,597 square miles or 2,942,080 acres.² Imperial County is bordered by San Diego County to the west, Riverside County to the north, the Colorado River/Arizona boundary to the east, and 84 miles of International Boundary with the Republic of Mexico to the south. Approximately fifty percent of Imperial County is undeveloped land under federal ownership and jurisdiction. The Salton Sea accounts for approximately 11 percent of Imperial County's surface area. In 2022, approximately sixteen percent (16%) of the area was in irrigated agriculture (468,226 acres), including 14,676 acres of the Yuma Project, some 35 sections or 6,405 acres served by Palo Verde Irrigation District (PVID), and 447,147 acres served by IID.³

The area primarily served by IID is located in the Imperial Valley, which is generally contiguous with IID's Imperial Unit, lies south of the Salton Sea, north of the U.S./Mexico International Border, and generally in the 699,132 acre area between IID's Westside Main and East Highline Canals.⁴ In 2022, IID delivered untreated water to 495,844 net irrigated acres, predominantly in the Imperial Valley, along with small areas of East and West Mesa land, including non-agricultural uses.

The developed area consists of seven incorporated cities (Brawley, Calexico, Calipatria, El Centro, Holtville, Imperial, and Westmorland), three unincorporated communities (Heber, Niland and Seeley), and three institutions (Naval Air Facility [NAF] El Centro, Calipatria CDCR, and Centinela CDCR) and supporting facilities. **Figure 4** provides a map of the IID canal network, as well as cities, communities, and main canals.

Climate Factors

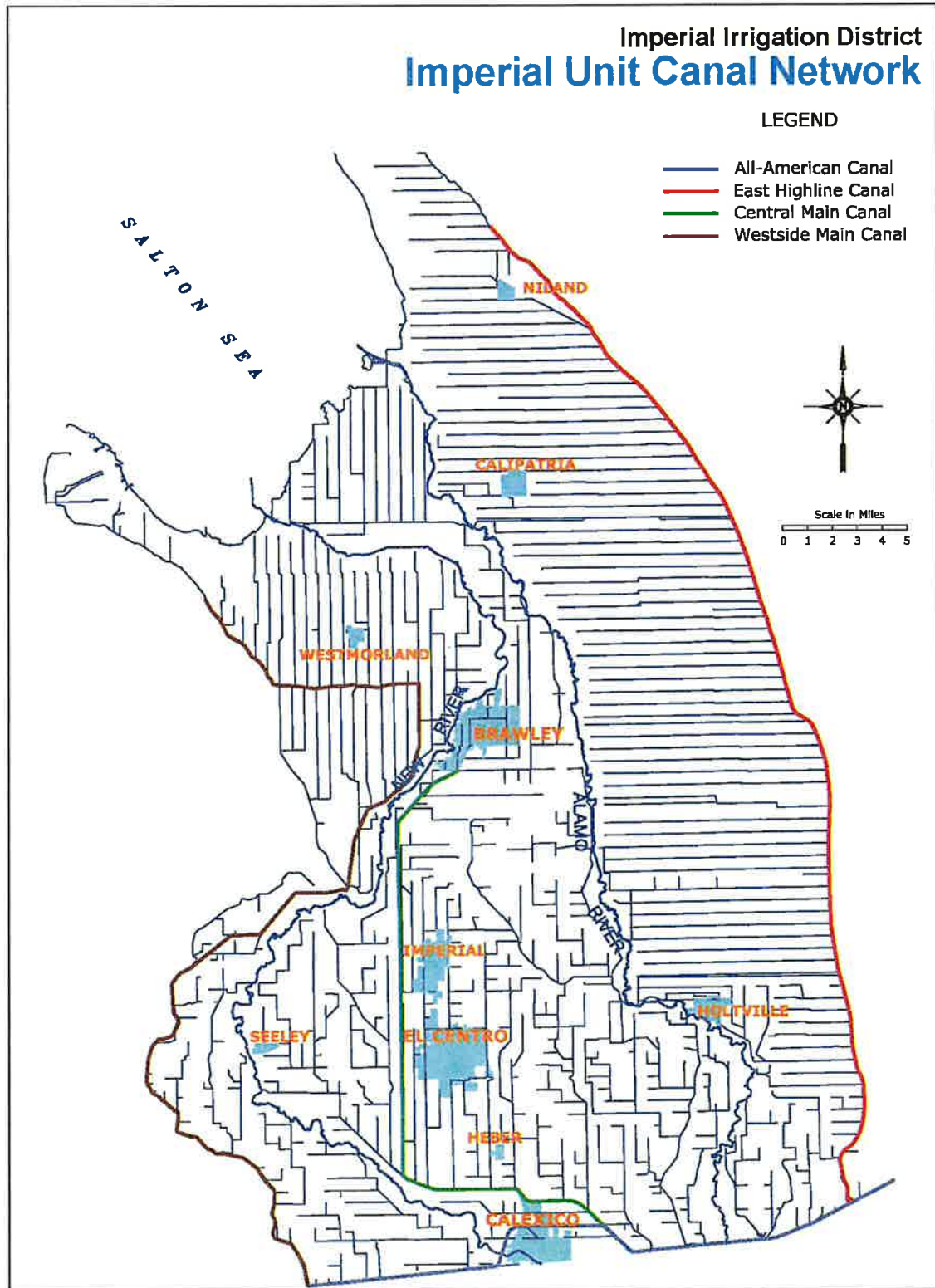
Imperial Valley, located in the Northern Sonoran Desert, which has a subtropical desert climate is characterized by hot, dry summers and mild winters. Clear and sunny conditions typically prevail, and frost is rare. The region receives 85 to 90 percent of possible sunshine each year, the highest in the United States. Winter temperatures are mild rarely dropping below 32°F, but summer temperatures are very hot, with more than 100 days over 100°F each year. The remainder of the year has a relatively mild climate with temperatures averaging in the mid-70s.

The 100-year average climate characteristics are provided in **Table 1**. Rainfall contributes around 50,000 AF of effective agricultural water per inch of rain. Most rainfall occurs from November through March; however, summer storms can be significant in some years. Annual areawide rainfall is shown in **Table 2**.

² *Imperial County General Plan, Land Use Element 2008 Update*

³ *USBR website: [Yuma Project](#). PVID contact for acreage September 30, 2021.*

⁴ *[IID Annual Inventory of Areas Receiving Water Years 2022, 2021, 2020](#)*



The thirty-year, 1993-2022, average annual air temperature was 73.95°F, and average annual rainfall was 2.51 inches, see **Table 3** and **Table 4**. This record shows that while average annual rainfall has fluctuated, the 10-year average temperatures have slightly increased over the 30-year averages.

Table 1. Climate Characteristics, Imperial, CA 100-Year Record, 1923-2022

Climate Characteristic	Annual Value
Average Precipitation (100-year record, 1923-2022)	2.75 inches (In)
Minimum Temperature, Jan 1937	16 °F
Maximum Temperature, July 1995	121 °F
Average Minimum Temperature, 1923-2022	48.4 °F
Average Maximum Temperature, 1923-2022	98.4 °F
Average Temperature, 1923-2022	73.1 °F

Source: IID Imperial Weather Station Record

Table 2. IID Areawide Annual Precipitation (In), (1990-2022)

1990	1991	1992	1993	1994	1995	1996
1.646	3.347	4.939	2.784	1.775	1.251	0.685
1997	1998	1999	2000	2001	2002	2003
1.328	2.604	1.399	0.612	0.516	0.266	2.402
2004	2005	2006	2007	2008	2009	2010
4.116	4.140	0.410	1.331	1.301	0.619	3.907
2011	2012	2013	2014	2015	2016	2017
2.261	2.752	2.772	1.103	2.000	1.867	2.183
2018	2019	2020	2021	2022		
1.305	3.017	2.685	1.688	1.265		

Source: Computation based on polygon average of CIMIS as station came online in the WIS.⁵

Table 3. Monthly Mean Temperature (°F) – Imperial, CA 10-Year, 30-Year & 100-Year (2013-2022, 1993-2022, 1923-2022)

	Jan			Feb			Mar			Apr		
	Max	Min	Avg	Max	Min	Avg	Max	Min	Avg	Max	Min	Avg
10-year	81	33	57	87	37	62	94	43	68	101	49	74
30-year	81	34	57	84	36	60	93	41	66	99	47	72
100-year	80	31	56	84	35	59	91	40	65	99	46	71
	May			Jun			Jul			Aug		
	Max	Min	Avg	Max	Min	Avg	Max	Min	Avg	Max	Min	Avg
10-year	105	55	77	116	62	89	115	72	94	114	72	93
30-year	106	54	78	113	60	87	115	69	92	114	70	92
100-year	105	53	78	113	59	86	114	68	92	113	68	91
	Sep			Oct			Nov			Dec		
	Max	Min	Avg	Max	Min	Avg	Max	Min	Avg	Max	Min	Avg
10-year	111	64	88	100	53	77	91	40	65	81	34	57
30-year	111	62	87	102	50	76	90	39	64	80	33	56
100-year	110	61	86	101	49	75	89	38	63	80	32	56

Source: IID Imperial Headquarters Station Record (Data provided by IID staff)

Notable from Table 2 (above) and Table 3 (below) is that while average annual rainfall measured at IID

⁵ From 1/1/1990-3/23/2004, 3 CIMIS stations: Seeley, Calipatria/Mulberry, Meloland; 3/24/2004-7/5/2009, 4 CIMIS stations (added Westmorland N.); 7/6/2009-12/1/2009, 3 CIMIS stations: Westmorland N. offline; 12/2/2009-2/31/2009, 4 CIMIS stations, Westmorland N. back online; 1/1/2010-9/20/2010.

Headquarters in Imperial, California, has been decreasing, monthly average temperatures are remarkably consistent.

Table 4. Monthly Mean Rainfall (In) – Imperial, CA 10-Year, 30-Year & 100-Year (2013-2022, 1993-2022, 1923-2022)

	Jan	Feb	Mar	Apr	May	Jun	Jul	Aug	Sep	Oct	Nov	Dec	Annual
10-year	0.47	0.13	0.23	0.11	0.08	0.01	0.08	0.32	0.39	0.12	0.25	0.37	2.47
30-year	0.51	0.38	0.23	0.09	0.06	0.00	0.13	0.20	0.29	0.17	0.21	0.32	2.51
100-year	0.39	0.37	0.25	0.11	0.03	0.00	0.11	0.30	0.37	0.26	0.21	0.49	2.75

Source: IID WIS: CIMIS stations polygon calculation (Data provided by IID staff).

Imperial Valley depends on the Colorado River for its water, which IID transports, untreated, to delivery gates for agricultural, municipal, industrial (including geothermal and solar energy), environmental (managed marsh), recreational (lakes), and other non-agricultural uses. IID supplies the cities, communities, institutions, and Golden State Water (which includes all or portions Calipatria, Niland, and some land adjacent within Imperial County territory) with untreated water that they treat to meet state and federal drinking water guidelines before distribution to their customers. Industries outside the municipal areas treat the water to required standards of their industry. To comply with U.S. Environmental Protection Agency (USEPA) requirements and avoid termination of canal water service, residents in the IID water service area who do not receive treated water service must obtain alternative water service for drinking and cooking from a state-approved provider. To avoid penalties that could exceed \$25,000 a day, IID strictly enforces this rule. The IID Water Department tracks nearly 3,200 raw water service accounts required by the State Water Resources Control Board’s Department of Drinking Water to have alternate state approved drinking water service. IID maintains a small-acreage pipe and drinking water database and provides an annual compliance update to the Department of Drinking Water.

Imperial Valley Historic and Future Land and Water Uses

Agricultural development in the Imperial Valley began at the turn of the twentieth century. In 2022, gross agricultural production for Imperial County was valued at \$2,612,578,000, of which approximately \$2.3 billion was produced in the IID water service area.⁶ While the agriculture-based economy is expected to continue, land use is projected to change somewhat over the years as industrial and/or alternative energy development and urbanization occur in rural areas and in areas adjacent to existing urban centers, respectively.

- The Hell’s Kitchen PowerCo 1 and LithiumCo 1 Project would provide geothermal power to the Imperial Irrigation District and would produce renewable energy jobs to the area. The Stage 1 is forecasted to generated 220 jobs. Additionally, the Project would provide a sustainable domestic source of lithium, a designated critical material identified by the U.S. Department of Energy and

⁶ [2022 Imperial County-Agricultural Crop-and Livestock Report](#)

would minimize the distance between the geothermal power plant and lithium extraction plant for production efficiency.

Imperial Valley's economy is gradually diversifying. Agriculture will likely continue to be the primary industry within the valley; however, two principal factors anticipated to reduce crop acreage are renewable energy (geothermal and solar) and urban development. Over the next twenty years, urbanization is expected to slightly decrease agriculture land use to provide space for an increase in residential, commercial, and industrial uses. The transition from agricultural land use typically results in a net decrease in water demand for municipal, commercial, and solar energy development; and a net increase in water demand for geothermal energy development. Local energy resources include geothermal, wind, biomass and solar. The County General Plan provides for development of energy production centers or energy parks within Imperial County. Alternative energy facilities will help California meet its statutory and regulatory goals for increasing renewable power generation and use and decrease water demands in Imperial County.

The IID Board has adopted the following policies and programs to address how to accommodate water demands under the terms of the QSA/ Transfers Agreements and minimize potential negative impacts on agricultural water uses:

Imperial Integrated Regional Water Management Plan: adopted by the board on December 18, 2012, and by the County, the City of Imperial, to meet the basic requirement of California Department of Water Resources (CDWR) for an IRWM plan. In all, 14 local agencies adopted the 2012 Imperial IRWMP.

Interim Water Supply Policy for Non-Agricultural Projects: adopted by the board on September 29, 2009, to ensure sufficient water will be available for new development anticipated renewable energy projects until the board selects and implements capital development projects such as those considered in the Imperial IRWMP.

Temporary Land Conversion Fallowing Policy: adopted by the board on May 8, 2012, and revised on March 29, 2016, to provide a framework for a temporary, long-term fallowing program to work in concert with the IWSP and IID's coordinated land use/water supply strategy.

Equitable Distribution Plan: adopted by the board on July 26, 2023, to provide a mechanism for IID to administer apportionment of the district's quantified annual supply of Colorado River water.

In addition, water users within the IID service area are subject to the statewide requirement of reasonable and beneficial use of water under the California Constitution, Article X, section 2.

Imperial Integrated Regional Water Management Plan (October 2012)

The Imperial IRWMP serves as the governing document for regional water planning to meet present and future water resource needs and demands by addressing such issues as additional water supply options,

demand management and determination and prioritization of uses and classes of service provided. In November 2012, the Imperial County Board of Supervisors approved the Imperial IRWMP, and the City of Imperial City Council and the IID Board of Directors approved it in December 2012. Approval by these three (3) stakeholders met the basic requirement of California Department of Water Resources (CDWR) for an IRWMP at that time. IID presented to the region stakeholders options in the event long-term water supply augmentation is needed, such as water storage and banking, recycling of municipal wastewater, and desalination of brackish water.⁷ As discussed herein, long term water supply augmentation is not anticipated to be necessary to meet proposed Project demands.

Chapter 5 of the 2012 Imperial IRWMP addresses water supplies (Colorado River and groundwater), demand, baseline and forecasted through 2050; and IID water budget. Chapter 12 addresses projects, programs and policies, and funding alternatives. Chapter 12 of the IRWMP lists, and Appendix N details, a set of capital projects that IID might pursue, including the amount of water that might result (AFY) and cost (\$/AF) if necessary. These also highlight potential capital improvement projects that could be implemented in the future.

Table 5. Non-Agricultural Water Demand within IID Water Service Area, 2015-2055 (KAFY)

	2015	2020	2025	2030	2035	2040	2045	2050	2055
Municipal	30.0	30.9	36.8	39.8	41.5	46.3	51.7	57.8	61.9
Industrial	26.4	28.7	39.8	46.5	53.2	59.9	66.6	73.3	80.0
Other	5.5	5.5	5.5	5.5	5.5	5.5	5.5	5.5	5.5
Feedlots/Dairies	17.8	19.0	20.0	20.0	20.0	20.0	20.0	20.0	20.0
Envr. Resources	8.3	9.5	12.0	12.0	12.0	12.0	12.0	12.0	12.0
Recreation	7.4	9.5	10.0	10.0	10.0	10.0	10.0	10.0	10.0
Service Pipes	12.0	12.0	12.0	12.0	12.0	12.0	12.0	12.0	12.0
Total NonAg	107.4	115.1	136.1	145.8	154.2	165.7	177.8	190.6	201.4

Notes: 2015 non-agricultural water demands are from IID 2015 Provisional Water Balance rerun 01/25/2021 2020-2055 demands are modified from 2012 Imperial IRWMP Chapter 5, Table 5-22 p 5-50 based on IID 2015 Provisional Water Balance. 2020 non-agricultural water demands are from IID 2020 Provisional Water Balance rerun on 01/31/2022. 2025-2055 demands are modified from 2012 Imperial IRWMP Chapter 5, Table 5-22 p 5-50 based on IID 2020 Provisional Water Balance. Industrial Demand includes geothermal, but not solar, energy production.

Imperial Valley historic 2015 and 2020 and the forecasted future for 2025 to 2055 non-agricultural water demand, are provided in **Table 5** in five-year increments. Total water demand for non-agricultural uses is projected to be 201.4 KAF in the year 2055. This is a forecasted increase in the use of non-agricultural water of 94 KAF from 107.4 KAF for the period of 2015 to 2055. These values were modified from Chapter 5 of the Imperial IRWMP to reflect updated conditions from the IID Provisional Water Balance for calendar year 2015 and 2020. Due to the recession in 2009, state policies affecting municipal water use in relation to the drought and other factors, non-agricultural growth projections have lessened since the 2012 Imperial IRWMP. Projections in **Table 5** have been adjusted (reduced by 3% for Municipal and Industrial uses and applied a flat 0.5 AF increase for Recreation use) to reflect IID 2015 and 2020 delivery

⁷ October 2012 [Imperial Integrated Regional Water Management Plan](#), Chapter 12.

data adjustments. Even with these adjustments, the Table 5 projections for non-agricultural water demand within the IID water service area continue to reflect an unlikely aggressive growth.

Agricultural evapotranspiration (ET) demand of approximately 1,476.4 KAF in 2015, decreased in 2020 to approximately 1,442.2 KAF. The termination of fallowing programs provided 103.5 KAF of water for Salton Sea mitigation in 2017. Forecasted agricultural ET remains constant, as reductions in water use are to come from efficiency conservation not reduction in agricultural production. Market forces and other factors may impact forecasted future water demand.

Table 6 provides the 2015 and 2020 historic and 2025-2055 forecasted agricultural consumptive use and delivery demand within the IID water service area. When accounting for agriculture ET, tailwater and tilewater, total agricultural consumptive use (CU) demand ranges from 2,157.9 KAF in 2015 to 2,208.5 KAF in 2055. Forecasted total agricultural delivery demand is around 1 KAFY higher than the CU demand, ranging from 2,158.9 KAF in 2015 to 2,209.5 KAF in 2055.

Table 6. Historic and forecasted Agricultural Water Consumptive Use and Delivery Demand within IID Water Service Area, 2015-2055 (KAFY)

	2015	2020	2025	2030	2035	2040	2045	2050	2055
Ag ET from Delivered & Stored Soil Water	1,476.4	1,442.2	1,567.5	1,567.5	1,567.5	1,567.5	1,567.5	1,567.5	1,567.5
Ag Tailwater to Salton Sea	282.9	312.9	268.0	218.0	218.0	218.0	218.0	218.0	218.0
Ag Tilewater to Salton Sea	398.6	410.2	423.0	423.0	423.0	423.0	423.0	423.0	423.0
Total Ag CU Demand	2,157.9	2,165.4	2,258.5	2,208.5	2,208.5	2,208.5	2,208.5	2,208.5	2,208.5
<i>Subsurface Flow to Salton Sea</i>	<i>1.0</i>	<i>1.0</i>	<i>1.0</i>	<i>1.0</i>	<i>1.0</i>	<i>1.0</i>	<i>1.0</i>	<i>1.0</i>	<i>1.0</i>
Total Ag Delivery Demand	2,158.9	2,166.4	2,259.5	2,209.5	2,209.5	2,209.5	2,209.5	2,209.5	2,209.5

Notes: 2015 record from IID 2015 Provisional Water Balance rerun 06/28/2019; 2020 record from IID 2020 Provisional Water Balance rerun 01/25/2021; 2020-2055 forecasts from spreadsheet used to develop Figure 19, et seq. in Imperial IRWMP Chapter 5 (Data provided by IID staff).

In addition to agricultural and non-agricultural water demands, system operation demand must be included to account for operational discharge, main and lateral canal seepage, including seepage along the All-American Canal (AAC); and for AAC seepage, river evaporation and phreatophyte ET from Imperial Dam to IID's measurement site at AAC Mesa Lateral 5. These system operation demands are shown in **Table 7** for 2021. IID measures system operational uses and at All-American Canal Station 2900 just upstream of Mesa Lateral 5 Heading. Total system operational use for 2020 was 167.8 KAF, including 10 KAF of LCWSP input, 39 KAF of seepage interception input, and 40 KAF of unaccounted canal water input.

Table 7. IID System Operations Consumptive Use within IID Water Service Area and from AAC at Mesa Lateral 5 to Imperial Dam, (KAF), 2020

Delivery System Evaporation	24.4
Canal Seepage	90.8
Main Canal Spill	10.1
Lateral Spill	121.5
QSA & IID Seepage Interception	-39.0
Unaccounted Canal Water	-40.0
Total System Operational Use, In valley	167.8
Imperial Dam to AAC @ Mesa Lat 5	9.2
LCWSP	-10
Total System Operational Use in 2020	167.0

Source: 2020 IID Water Balance rerun 01/25/2021

IID Interim Water Supply Policy for Non-Agricultural Projects (September 2009)

The IID IWSP provides a mechanism to address water supply requests for new non-agricultural projects being developed within the IID service area. The IWSP designates up to 25,000 AFY of water to be conserved from IID’s annual Colorado River water supply, consumptive use cap, for new non-agricultural projects. The IWSP provides a mechanism and process to develop a water supply agreement for any appropriately permitted project, and establishes a framework and set of fees to ensure the supplies used to meet new demands do not adversely affect existing users by funding water conservation or augmentation projects as needed to offset the new demand.⁸

The environmental impacts of conserving up to the 25,000 acre-feet of IWSP water were analyzed in the *Imperial Irrigation District Interim Water Supply Policy for Non-Agricultural Projects* Negative Declaration, State Clearinghouse No. 2009061103 dated June 25, 2009. The IID Board adopted this Negative Declaration on September 29, 2009.

Depending on the nature, complexity and water demands of the proposed project, new projects may be charged a one-time Reservation Fee and annual Water Supply Development Fees for the contracted water volume used solely to assist in funding new water supply projects. The applicability of the fee to certain projects will be determined by IID on a case-by-case basis, depending on the proportion of types of land uses and water demand proposed for a project. The 2023 IWSP fee schedule is shown in Table 8.

IID customers with new projects receiving water under the IWSP will be charged the appropriate water delivery rate based on measured deliveries, see [IID Water Rate Schedules](#). As of November 2023, IID has issued two water supply agreements and one “will-serve letter” under the IWSP for 6,380 AFY, leaving a balance of 18,620 AFY of potential water supply available for additional conservation and contracting under the IWSP.

⁸ IID website: [Municipal, Industrial and Commercial Customers](#).

Table 8. Interim Water Supply Policy 2023 Annual Non-Agricultural Water Supply Development Fee Schedule

Annual Demand (AF)	Reservation Fee (\$/AF)*	Development Fee (\$/AF)*
0-500	\$85.26	\$341.03
501-1000	\$120.04	\$480.17
1001-2500	\$150.74	\$602.94
2501-5000	\$186.20	\$744.81

Adjusted annually in accordance with the Consumer Price Index (CPI).

IID Temporary Land Conversion Fallowing Policy (May 2012)

Imperial County planning officials determined that renewable energy facilities were consistent with the county’s agricultural zoning designation and began issuing conditional use permits (CUPs) for these projects with 30-year terms with a 10-year extension (40 years in total). These longer-term, but temporary, land use designations were not conducive to a coordinated land use/water supply policy as envisioned in the Imperial IRWMP, because temporary water supply assignments during a conditional use permit (CUP) term were not sufficient to meet the water supply verification requirements for new project approvals. Agricultural landowners also sought long-term assurances from IID that, at project termination, irrigation service would be available for them to resume their farming operations.

Based on these conditions, IID determined it had to develop a water supply policy that conformed to the local land use decision-making in order to facilitate new development and economic diversity in Imperial County which resulted in the IID Temporary Land Conversion Fallowing Policy (TLCFP).⁹ IID concluded that certain lower water use projects could still provide benefits to local water users. The resulting benefits; however, may not be to the same categories of use (e.g., municipal, commercial, and industrial) but to the district as a whole.

At the general manager’s direction, IID staff developed a framework for a fallowing program that could be used to supplement the IWSP and meet the multiple policy objectives envisioned for the coordinated land use/water supply strategy. Certain private projects that, if implemented, will temporarily remove land from agricultural production within the district’s water service area include renewable solar energy and other non-agricultural projects. Such projects may need a short-term water supply for construction and decommissioning activities and longer-term water service for facility operation and maintenance or for treating to potable water standards. Conserved water will be credited to the extent that water use for the new project is less than the historic water use for the project site’s footprint as determined by the ten-year water use history.¹⁰

⁹ IID website: [Temporary Land Conversion Fallowing Policy \(TLCFP\)](#), and [The TLCFP](#) are the sources of the text for this section.

¹⁰ For details of how water conservation yield attributable to land removed from agricultural production and temporarily fallowed is computed, see [TLCFP for Water Conservation Yield](#).

Water demands for certain non-agricultural projects are typically less than that required for agricultural production; this reduced demand allows conserved water to be made available for other users under IID's annual consumptive use cap. This allows the district to avail itself of the ability during the term of the QSA/Transfer Agreements under CWC Section 1013 to create conserved water through projects such as temporary land fallowing conservation measures. This conserved water can then be used to satisfy the district's conserved water transfer obligation and for environmental mitigation purposes.

Under the terms of the legislation adopted to facilitate the QSA/Transfer Agreements and enacted in CWC Section 1013, the TLCFP was adopted by the IID board on May 8, 2012 and revised on March 29, 2016 to update the fee schedule for 2016. This policy provides a framework for a temporary, long-term fallowing program to work in concert with the IWSP. While conserved water generated from the TLCFP is limited by law for use for water transfer or environmental purposes, by satisfying multiple district objectives the TLCFP serves to reduce efficiency conservation and water use reduction demands on IID water users, thus providing district wide benefits.

IMPERIAL IRRIGATION DISTRICT'S WATER RIGHTS

The laws and regulations that influence IID's water supply are noted in this section. The Law of the River (as described below), along with the 2003 Quantification Settlement Agreement and Related Agreements serve as the laws, regulations and agreements that primarily influence the findings of this WSA. These agreements grant California the most senior water rights along the Colorado River and specify that IID has access to 3.1 MAF per year. These two components will influence future decisions in terms of water supply availability during periods of shortages.

California Law

IID has a longstanding right to divert Colorado River water, and IID holds legal titles to all of its water and water rights in trust for landowners within the district (CWC §20529 and §22437; *Bryant v. Yellen*, 447 U.S. 352, 371 (1980), fn.23.). Beginning in 1885, a number of individuals, as well as the California Development Company, made a series of appropriations of Colorado River water under California law for use in the Imperial Valley. The rights to these appropriations were among the properties acquired by IID from the California Development Company.

Law of the River

Colorado River water rights are governed by numerous compacts, state and federal laws, court decisions and decrees, contracts, and regulatory guidelines collectively known as the "Law of the River." Together, these documents form the basis for allocation of the water, regulation of land use, and management of the Colorado River water supply among the seven basin states and Mexico.

Of all regulatory literature that governs Colorado River water rights, the following are the specifics that impact IID:

- Colorado River Compact (1922)
- Boulder Canyon Project Act (1928)
- California Seven-Party Agreement (1931)
- Arizona v. California US Supreme Court Decision (1964, 1979)
- Colorado River Basin Project Act (1968)
- Quantification Settlement Agreement and Related Agreements (2003)
- 2003 Colorado River Water Delivery Agreement: Federal QSA for purposes of Section 5(b) Interim Surplus Guidelines (CRWDA)
- 1970 Criteria for Coordinated Long-Range Operation of Colorado River Reservoirs
- Annual Operating Plan (AOP) for Colorado River Reservoirs
- 2007 Colorado River Interim Guidelines for Lower Basin Shortages and Coordinated Operations for Lakes Powell and Mead (2007 Interim Guidelines)

Colorado River Compact (1922)

With authorization of their legislatures and urging of the federal government, representatives from the seven Colorado River basin states began negotiations regarding distribution of water from the Colorado River in 1921. In November 1922, an interstate agreement called the “Colorado River Compact” was signed by the representatives giving the Lower Basin perpetual rights to annual apportionments of 7.5 million acre-feet (MAF) of Colorado River water (75 MAF over ten years). The Upper Basin was to receive the remainder, which based on the available hydrological record was also expected to be 7.5 MAF annually, with enough left over to provide 1.5 MAF annually to Mexico.

Boulder Canyon Project Act (1928)

Provisions in the 1928 Boulder Canyon Project Act made the compact effective and authorized construction of Hoover Dam and the All-American Canal, and served as the United States’ consent to accept the Compact. Through a Presidential Proclamation on June 25, 1929, this act resulted in ratification of the Compact by six of the basin states and required California to limit its annual consumptive use to 4.4 MAF of the lower basin’s apportionment plus not less than half of any excess or surplus water unapportioned by the Compact. A lawsuit was filed by the State of Arizona after its refusal to sign. Through the implementation of its 1929 Limitation Act, California abided by this federal mandate. The Boulder Canyon Act authorized the Secretary of the Interior (Secretary) to “contract for the storage of water... and for the delivery thereof... for irrigation and domestic uses,” and additionally defined the lower basin’s 7.5 MAF apportionment split, with an annual allocation 0.3 MAF to Nevada, 2.8 MAF to Arizona, and 4.4 MAF to California. Even though the three states never formally settled or agreed to these terms, a 1964 Supreme Court decision (*Arizona v. California*, 373 U.S. 546) declared the three states’ consent to be insignificant since the Boulder Canyon Project Act was authorized by the Secretary.

California Seven-Party-Agreement (1931)

Following implementation of the Boulder Canyon Project Act, the Secretary requested that California make recommendations regarding distribution of its apportionment of Colorado River water. In August 1931, under chairmanship of the State Engineer, the California Seven-Party Agreement was developed and authorized by the affected parties to prioritize California water rights. The Secretary accepted this agreement and established these priorities through General Regulations issued in September of 1931. The first four (4) priority allocations account for California's annual apportionment of 4.4 MAF, with agricultural entities using 3.85 MAF of that total. Additional priorities are defined for years in which the Secretary declares that excess waters are available.

Arizona v. California U.S. Supreme Court Decision (1964, 1979)

The 1964 Supreme Court decision settled a 25-year disagreement between Arizona and California that stemmed from Arizona's desire to build the Central Arizona Project to enable use of its full apportionment. California's argument was that as Arizona used water from the Gila River, which is a Colorado River tributary, it was using a portion of its annual Colorado River apportionment. An additional argument from California was that it had developed a historical use of some of Arizona's apportionment, which, under the doctrine of prior appropriation, precluded Arizona from developing the project. California's arguments were rejected by the U.S. Supreme Court. Under direction of the Supreme Court, the Secretary was restricted from delivering water outside of the framework of apportionments defined by law. Preparation of annual reports documenting consumptive use of water in the three lower basin states was also mandated by the Supreme Court. In 1979, present perfected water rights (PPRs) referred to in the Colorado River Compact and in the Boulder Canyon Project Act were addressed by the Supreme Court in the form of a Supplemental Decree.

In March of 2006, a Consolidated Decree was issued by the Supreme Court to provide a single reference to the conditions of the original 1964 decrees and several additional decrees in 1966, 1979, 1984 and 2000 that stemmed from the original ruling. The Consolidated Decree also reflects the settlements of the federal reserved water rights claim for the Fort Yuma Indian Reservation.

Colorado River Basin Project Act (1968)

In 1968, various water development projects in both the upper and lower basins, including the Central Arizona Project (CAP) were authorized by Congress. Under the Colorado River Basin Project Act, priority was given to California's apportionment over (before) the CAP water supply in times of shortage. Also under the act, the Secretary was directed to prepare long-range criteria for the Colorado River reservoir system in consultation with the Colorado River Basin States.

Quantification Settlement Agreement and Related Agreements (2003)

With completion of a large portion of the CAP infrastructure in 1994, creation of the Arizona Water Banking Authority in 1995, and the growth of Las Vegas in the 1990s, California encountered increasing pressure to live within its rights under the Law of the River. After years of negotiating among Colorado

River Compact States and affected California water delivery agencies, a Quantification Settlement Agreement and Related Agreements and documents were signed on October 10, 2003, by the Secretary of Interior, IID, Coachella Valley Water District (CVWD), Metropolitan Water District of Southern California (MWD), San Diego County Water Authority (SDCWA), and other affected parties.

The Quantification Settlement Agreement and Related Agreements (QSA/Transfer Agreements) are a set of interrelated contracts that resolve certain disputes among the United States, the State of California, IID, MWD, CVWD and SDCWA, for a period of 35 to 75 years, regarding the reasonable and beneficial use of Colorado River water; the ability to conserve, transfer and acquire conserved Colorado River water; the quantification and priority of Priorities 3(a) and 6(a)¹¹ within California for use of Colorado River water; and the obligation to implement and fund environmental impact mitigation.

Conserved water transfer agreements between IID and SDCWA, IID and CVWD, and IID and MWD are all part of the QSA/Transfer Agreements. For IID, these contracts identify conserved water volumes and establish transfer schedules along with price and payment terms. As specified in the agreements, IID will transfer nearly 415,000 AF annually over a 35-year period (or longer), as follows:

- to MWD 110,000 AF [modified to 105,000 AF in 2007],
- to SDCWA 205,000 AF,
- to CVWD and MWD combined 103,000 AF, and
- to certain San Luis Rey Indian Tribes up to 11,500 AFY of water.

All the conserved water will ultimately come from IID system and on-farm efficiency conservation improvements. In the interim, IID has implemented a Fallowing Program to generate water associated with Salton Sea mitigation related to the impacts of the IID/SDCWA water transfer, as required by the State Water Resources Control Board, which is to run from 2003 through 2017. In return for its QSA/Transfer Agreements programs and deliveries, IID will receive payments totaling billions of dollars to fund needed efficiency conservation measures and to pay growers for conserved on-farm water, so IID can transfer nearly 14.5 MAF of water without impacting local productivity. In addition, IID will transfer to SDCWA 67,700 AFY annually of water conserved from the lining of the AAC in exchange for payment of lining project costs and a grant to IID of certain rights to use the conserved water. In addition to the 105,000 acre-feet of water currently being conserved under the 1988 IID/MWD Conservation Program, these more recent agreements define an additional 303,000 AFY to be conserved by IID from on-farm and distribution system conservation projects for transferred to SDCWA, CVWD, and MWD.

¹¹ Priorities 1, 2, 3(b), 6(b), and 7 of current Section 5 Contracts for the delivery of Colorado River water in the State of California and Indian and miscellaneous Present Perfected Rights within the State of California and other existing surplus water contracts are not affected by the QSA Agreement.

Colorado River Water Delivery Agreement (2003)¹²

As part of QSA/Transfer Agreements among California and federal agencies, the Colorado River Water Delivery Agreement: Federal QSA for purposes of Section 5(b) Interim Surplus Guidelines (CRWDA) was entered into by the Secretary of the Interior, IID, CVWD, MWD and SDCWA. This agreement involves the federal government because of the change in place of diversion from Imperial Dam into the All-American Canal to Parker Dam into MWD’s Colorado River Aqueduct.

The CRWDA assists California to meet its “4.4 Plan” goals by quantifying deliveries for a specific number of years for certain Colorado River entitlements so transfers may occur. In particular, for the term of the CRWDA, quantification of Priority 3(a) was effected through caps on water deliveries to IID (consumptive use of 3.1 MAF per year) and CVWD (consumptive use of 330 KAF per year). In addition, California’s Priority 3(a) apportionment between IID and CVWD, with provisions for transfer of supplies involving IID, CVWD, MWD and SDCWA are quantified in the CRWDA for a period of 35 years or 45 years (assumes SDCWA does not terminate in year 35) or 75 years (assumes SDCWA and IID mutually consent to renewal term of 30 years).

Allocations for consumptive use of Colorado River water by IID, CVWD and MWD that will enable California to stay within its basic annual apportionment (4.4 MAF plus not less than half of any declared surplus) are defined by the terms of the QSA/Transfer Agreements (**Table 9**). As specified in the QSA/Transfer Agreements, by 2026, IID annual use within (Imperial Valley) is to be reduced to just over 2.6 MAF of its 3.1 MAF quantified annual apportionment. The remaining nearly 500,000 AF (which includes the 67,000 AF from AAC lining) are to be transferred annually to urban water users outside of the Imperial Valley.

Table 9. CRWDA Annual 4.4 MAF Apportionment (Priorities 1 to 4) for California Agencies (AFY)

User	Apportionment (AFY)
Palo Verde Irrigation District and Yuma Project*	420,000
Imperial Irrigation District	3,100,000
Coachella Valley Water District	330,000
Metropolitan Water District of Southern California*	550,000
Total:	4,400,000

* PVID and Yuma Project did not agree to a cap; value represents a contractual obligation by MWD to assume responsibility for any overages or be credited with any volume below this value.

Notes: All values are consumptive use at point of Colorado River diversion: Palo Verde Diversion Dam (PVID), Imperial Dam (IID and CVWD), and Parker Dam (MWD). Source: IID Annual Water Report

Quantification of Priority 6(a) was effected through quantifying annual consumptive use amounts to be made available in order of priority to MWD (38 KAF), IID (63 KAF), and CVWD (119 KAF) with the provision that any additional water available to Priority 6(a) be delivered under IID’s and CVWD’s existing water delivery contract with the Secretary¹³. The CRWDA provides that the underlying water

¹² CRWDA: Federal QSA accessed 7 June 2017.

¹³ When water levels in the Colorado River reservoirs are low, Priority 5, 6 and 7 apportionments are not available for diversion.

delivery contract with the Secretary remain in full force and effect. (*Colorado River Documents 2008*, Chapter 6, pages 6-12 and 6-13). The CRWDA also provides a source of water to effect a San Luis Rey Indian Water Rights settlement. Additionally, the CRWDA satisfies the requirement of the 2001 Interim Surplus Guidelines (ISG) that a QSA be adopted as a prerequisite to the interim surplus determination by the Secretary in the ISG.

Inadvertent Overrun Payback Policy (2003)

The CRWDA Inadvertent Overrun Payback Policy (IOPP), adopted by the Secretary contemporaneously with the execution of the CRWDA, provides additional flexibility to Colorado River management and applies to entitlement holders in the Lower Division States (Arizona, California and Nevada)¹⁴ The IOPP defines inadvertent overruns as “Colorado River water diverted, pumped, or received by an entitlement holder of the Lower Division States that is in excess of the water users’ entitlement for the year.” An entitlement holder is allowed a maximum overrun of 10 percent (10%) of its Colorado River water entitlement when operating under normal conditions.

In the event of an overrun, the IOPP provides a mechanism to payback the overrun. When the Secretary has declared a normal year for Colorado River diversions, a contractor has from one to three years to pay back its obligation, with a minimum annual payback equal to 20 percent of the entitlement holder’s maximum allowable cumulative overrun account or 33.3 percent of the total account balance, whichever is greater. However, when Lake Mead is below 1,125 feet on January 1, the terms of the IOPP require that the payment of the inadvertent overrun obligation be made in the calendar year after the overrun is reported in the USBR Lower Colorado Region Colorado River Accounting and Water Use Report [for] Arizona, California, and Nevada (Decree Accounting Report).¹⁵

1970 Criteria for Coordinated Long-Range Operation of Colorado River Reservoirs

The 1970 Operating Criteria control operation of the Colorado River reservoirs in compliance with requirements set forth in the Colorado River Compact of 1922, the United States-Mexico Water Treaty of 1944, the Colorado River Storage Project Act of 1956, the Boulder Canyon Projects Act (Lake Mead) and the Colorado River Basin Project Act (Upper Basin Reservoirs) of 1968, and other applicable federal laws. Under these Operating Criteria, the Secretary makes annual determinations published in the USBR Annual Operating Plan for Colorado River Reservoirs (discussed below) regarding the release of Colorado River water for deliveries to the lower basin states. A requirement to equalize active storage between Lake Powell and Lake Mead when there is sufficient storage in the Upper Basin is included in these operating criteria. **Figure 5** identifies the major storage facilities at the upper and lower basin boundaries.

¹⁴ USBR, *2003 CRWDA ROD Implementation Agreement, IOPP and Related Federal Actions Final EIS. Section IX. Implementing the Decision A. Inadvertent Overrun and Payback Policy. Pages 16-19 of 34.*

¹⁵ *2003 CRWDA ROD. Section IX. A.6.c, page 18 of 34.*

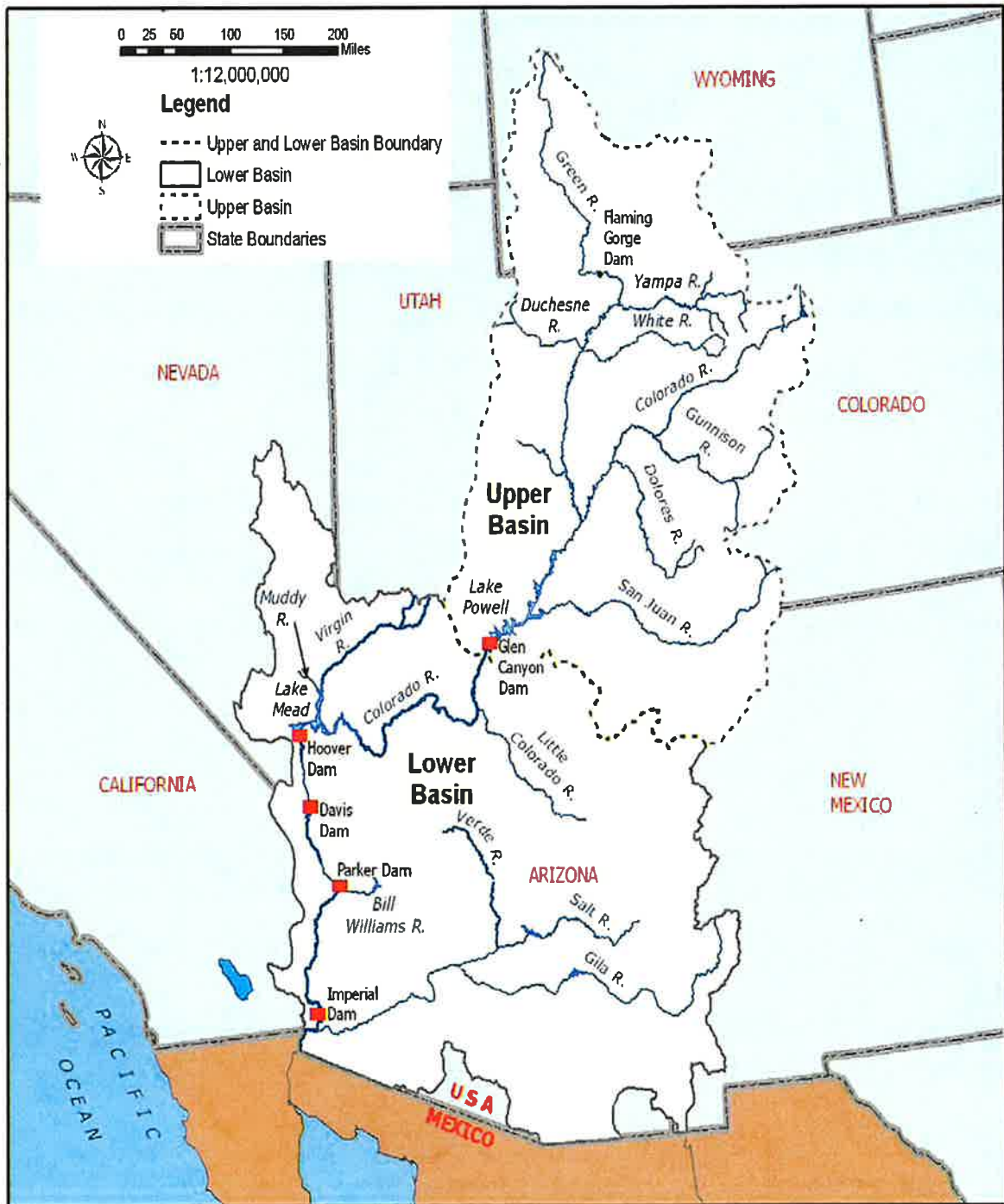


Figure 5. Major Colorado River Reservoir Storage Facilities and Basin Location Map

Source: Final EIS – Colorado River Interim Guidelines for Lower Basin Shortages and Coordinated Operations for Lake Powell and Lake Mead, Volume 1 Chapter 1 Purpose and Need , p I-10.

Annual Operating Plan for Colorado River Reservoirs (Applicable when Lake Mead Surplus/Shortage)

The AOP is developed in accordance with Section 602 of the Colorado River Basin Project Act (Public Law 90-537); the Criteria for Coordinated Long-Range Operations of Colorado River Reservoirs Pursuant to the Colorado River Basin Project Act of 1968, as amended, promulgated by the Secretary of the Interior; and Section 1804(c)(3) of the Grand Canyon Protection Act (Public Law 102-575). As part of the AOP process, the Secretary makes determinations regarding the availability of Colorado River water for deliveries to the lower basin states, including whether normal, surplus, and shortage conditions are in effect on the lower portion of the Colorado River.

2007 Colorado River Interim Guidelines for Lower Basin Shortages (2007 Interim Guidelines)

A multi-year drought in the Colorado River Upper Basin triggered the need for the 2007 Interim Shortage Guidelines. In the summer of 1999, Lake Powell was essentially full with reservoir storage at 97 percent of capacity. However, precipitation fell off starting in October 1999 and 2002 inflow was the lowest recorded since Lake Powell began filling in 1963.¹⁶ By August 2011, inflow was 279 percent (279%) of average; however, drought resumed in 2012 and continued through calendar year 2022. Using the record in **Table 10**, average unregulated inflow to Lake Powell for water years 2000-2022 is 70 percent (69.96%); or if 2011 is excluded, 67 percent (66.95%) of the historic average, see **Table 10**.

Table 10. Unregulated Inflow to Lake Powell, Percent of Historic Average, 2000-2022

2000	2001	2002	2003	2004	2005	2006	2007	2008	2009	2010
62%	59%	25%	51%	49%	105%	73%	68%	102%	88%	73%
2011	2012	2013	2014	2015	2016	2017	2018	2019	2020	2021
136%	35%	49%	90%	83%	80%	101%	36%	120%	54%	36%
2022										
34%										

Source: UCR Water Operations: Historic Data (2000-2022)

In the midst of the drought period, USBR developed 2007 Interim Guidelines with consensus from the seven basin states, which selected the Draft EIS Preferred Alternative as the basis for USBR's final determination. The basin states found the Preferred Alternative best met all aspects of the purpose and need for the federal action.¹⁷

The 2007 Interim Guidelines Preferred Alternative highlights the following:

1. The need for the Interim Guidelines to remain in place for an extended period of time.
2. The desirability of the Preferred Alternative based on the facilitated consensus recommendation from the basin states.
3. The likely durability of the mechanisms adopted in the Preferred Alternative in light of the extraordinary efforts that the basin states and water users have undertaken to develop

¹⁶ Water Year: October 1 through September 30 of following year, so water year ending September 30, 1999

¹⁷ USBR *Colorado River Interim Guidelines for Lower Basin Shortages and Coordinated Operations for Lake Powell and Lake Mead* <<http://www.usbr.gov/lc/region/programs/strategies.html>>

implementing agreements that will facilitate the water management tools (shortage sharing, forbearance, and conservation efforts) identified in the Preferred Alternative

4. That the range of elements in the Preferred Alternative will enhance the Secretary's ability to manage the Colorado River reservoirs in a manner that recognizes the inherent tradeoffs between water delivery and water storage.

In June 2007, USBR announced that a preferred alternative for Colorado River Interim Guidelines for Lower Basin Shortages and Coordinated Operations of Lake Powell and Lake Mead (Final Preferred Alternative) had been determined. The Final Preferred Alternative, based on the basin states' consensus alternative and an alternative submitted by the environmental interests called "Conservation Before Shortage," is comprised of four key operational elements which are to guide operations of Lake Powell and Lake Mead through 2026 are:

1. Shortage strategy for Lake Mead and Lower Division states: The Preferred Alternative proposed discrete levels of shortage volumes associated with Lake Mead elevations to conserve reservoir storage and provide water users and managers in the Lower Basin with greater certainty to know when, and by how much, water deliveries will be reduced during low reservoir conditions.
2. Coordinated operations of Lake Powell and Lake Mead: The Preferred Alternative proposed a fully coordinated operation of the reservoirs to minimize shortages in the Lower Basin and to avoid risk of curtailments of water use in the Upper Basin.
3. Mechanism for storage and delivery of conserved water in Lake Mead: The Preferred Alternative proposed the Intentionally Created Surplus (ICS) mechanism to provide for the creation, accounting, and delivery of conserved system and non-system water thereby promoting water conservation in the Lower Basin. Credits for Colorado River or non-Colorado River water that has been conserved by users in the Lower Basin creating an ICS would be made available for release from Lake Mead at a later time. The total amount of credits would be 2.1 MAF, but this amount could be increased up to 4.2 MAF in future years.
4. Modifying and extending elements of the Interim Surplus Guidelines (ISG). The ISG determines conditions under which surplus water is made available for use within the Lower Division states. These modifications eliminate the most liberal surplus conditions thereby leaving more water in storage to reduce the severity of future shortages.

With respect to the various interests, positions, and views of the seven basin states, this provision adds an important element to the evolution of the legal framework for prudent management of the Colorado River. Furthermore, the coordinated operation element allows for adjustment of Lake Powell releases to respond to low reservoir storage conditions in either Lake Powell or Lake Mead. States found the Preferred Alternative best met all aspects of the purpose and need for the federal action.¹⁸ The 2007

¹⁸ USBR Colorado River Interim Guidelines for Lower Basin Shortages and Coordinated Operations for Lake Powell and Lake Mead.

Interim Guidelines are in place from 2008 through December 31, 2025 (through preparation of the 2026 Annual Operating Plan).

Lower Colorado Region Water Shortage Operations

The Colorado River Basin is experiencing a prolonged period of drought and record-low runoff conditions that have resulted in historically low reservoir levels in both Lake Powell (upper Basin) and Lake Mead (lower Basin). The period from 2000 through 2022 was the lowest 23-year inflow into Lake Powell in the historical record and has strained the Colorado River system. The drought in the Colorado River watershed has continued through 2022. Despite an increase in observed runoff in August 2011 when unregulated inflow to Lake Powell was 279 percent of the average. Since 2000, Lake Mead has been below the “average” level of lake elevations (see Figure 6). Such conditions have caused the activation of shortage plans for waters users in Arizona and Nevada, and in Mexico. By May of 2022 Lake Meads elevation had declined to 1,048 feet. These conditions resulted in the U.S. Secretary of the Interior declaring the first-ever Tier 2a Shortage on the Colorado River. The drought in the Colorado River watershed had lessened by mid 2023 after a winter of record-breaking rain and snow but not enough to take out of a Tier 1 Shortage for 2024 operations

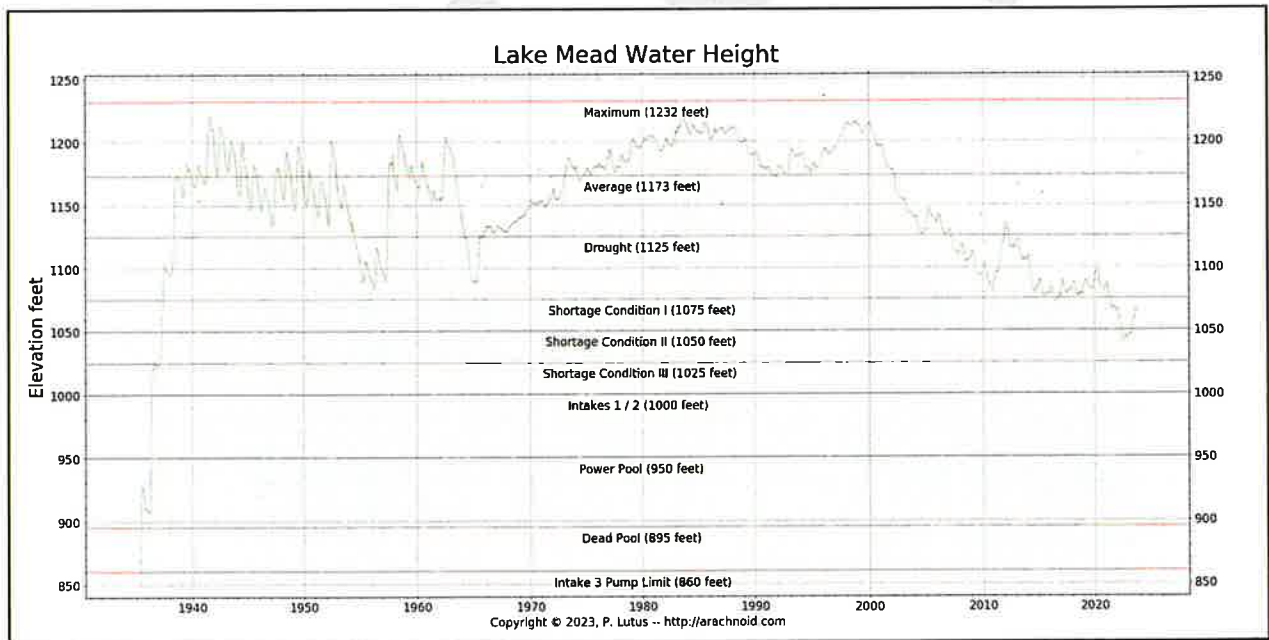


Figure 6. Lake Mead Water Elevation Levels November 2023

Source: <<http://www.arachnoid.com/NaturalResources/index.html>>

According to guidelines put in place in 2007, Arizona and Nevada begin to take shortages when the water elevation in Lake Mead falls below 1,075 feet. The volumes of shortages increase as water levels fall to 1,050 feet and again at 1,025 feet. In 2012, Mexico agreed to participate in a 5-year pilot agreement to share specific volumes of shortages at the same elevations. The 2007 interim shortage guidelines contain no reductions for California, which has senior water rights to the Central Arizona

Project water supply, through 2025 when the guidelines expire. If Lake Mead's elevation drops to 1,025 feet, a re-consultation process would be triggered among the basin states to address next steps. Consultation would start out within each state, then move to the three lower basin states, followed by all seven states and the USBR. Mexico will then be brought into the process unless they choose to participate earlier. In total, 721,000 acre-feet of reductions will be implemented in the Lower Basin and Mexico in 2023 consistent with various agreements that dictate the operation of the Colorado River.

California has no stipulated reduction to its water supplies under a Tier 2a Shortage declaration. While not directly affected by the shortage reductions announced by Reclamation, the Shortage condition does prevent IID from overrunning its approved water order and, as stated earlier, contributions to address Lake Mead water elevation are anticipated by IID. IID has offered voluntary water conservation for the benefit of Lake Mead, up to 250,000 AFY, as long as there are no obligatory reductions.

IMPERIAL IRRIGATION DISTRICT WATER SUPPLY AND DEMAND

SB 610 requires an analysis of a normal, single dry, and multiple dry water years to show that adequate water is available for the proposed Project in various climate scenarios. Water availability for this Project in a normal year is no different from water availability during a single-dry and multiple-dry year scenarios. This is due to the small effect rainfall has on water availability in IID's arid environment along with IID's strong entitlements to the Colorado River water supply. Local rainfall does have some impact on how much water is consumed (i.e., if rain falls on agricultural lands, those lands will not demand as much irrigation), but does not impact the definition of a normal year, a single-dry year, or a multiple-dry year scenario.

WATER AVAILABILITY – NORMAL YEAR

IID is entitled to annual net consumptive use of 3.1 MAF of Colorado River, less its QSA/Transfer Agreement obligations. Imperial Dam, located north of Yuma, Arizona, serves as a diversion structure for water deliveries throughout southeastern California, Arizona, and Mexico. Water is transported to the IID water service area through the AAC for use throughout the Imperial Valley. IID historic and forecast net consumptive use volumes at Imperial Dam from CRWDA Exhibit B are shown in Table 11. Volumes 2003-2022 are adjusted for USBR Decree Accounting historic records. Volumes for 2023-2077 are from CRWDA Exhibit B modified to reflect 2014 Letter Agreement changes to the 1988 IID/MWD Water Conservation Agreement.¹⁹

¹⁹ [2014 Imperial Irrigation District Letter Agreement](#) for Substitution and Conservation Modifications to the IID/MWD Water Conservation Agreement - December 17, 2014.

Due to limits on annual consumptive use of Colorado River water under the QSA/Transfer Agreements, IID's water supply during a normal year is best represented by the CRWDA Exhibit B Net Available for Consumptive Use (**Table 11**, Column 11). The annual volume is IID Priority 3(a) Quantified Amount of 3.1 million acre-feet (MAF) (**Table 11**, Column 2) less the IID transfer program reductions for each year (**Table 11**, Columns 3-9). IID suggests **Table 11**, which assumes full use of IID's quantified water supply, be used in determining base normal year water availability.

DRAFT

Table 11. IID Historic and Forecast Net Consumptive Use for Normal Year, Single-Dry Year and Multiple-Dry Year Water Supply, 2003-2037, et seq. (CRWDA Exhibit B)

IID Quantification and Transfers, Volumes in KAF at Imperial Dam ¹											
Col 1	2	3	4	5	6	7	8	9	10	11	
Year	IID Priority 3(a)										
	IID 3(a) Quantified Amount	IID Reductions								IID Total Reduction (Σ Cols 3-9) ⁵	IID Net [Available for] Consumptive Use (Col 2 - 10)
		1988 MWD Transfer ²	SDCWA Transfer	AAC Lining	Salton Sea Mitigation SDCWA Transfer ³	Intra- Priority 3 CVWD Transfer	MWD Transfer w\ Salton Sea Restoration ⁴	Misc. PPRs			
2003	3,100	105.1	10.0	0.0	0.0	0.0	0.0	11.5	126.6	2978.2	
2004	3,100	101.9	20.0	0.0	15.0	0.0	0.0	11.5	148.4	2743.9	
2005	3,100	101.9	30.0	0.0	15.0	0.0	0.0	11.5	158.4	2756.8	
2006	3,100	101.2	40.0	0.0	20.0	0.0	0.0	11.5	172.7	2909.7	
2007	3,100	105.0	50.0	0.0	25.0	0.0	0.0	11.5	191.5	2872.8	
2008	3,100	105.0	50.0	8.9	26.0	4.0	0.0	11.5	205.4	2825.1	
2009	3,100	105.0	60.0	65.5	30.1	8.0	0.0	11.5	280.1	2566.7	
2010	3,100	105.0	70.0	67.7	33.8	12.0	0.0	11.5	294.8	2540.5	
2011	3,100	103.9	63.3	67.7	0.0	16.0	0.0	11.5	262.4	2915.8	
2012	3,100	104.1	106.7	67.7	15.2	21.0	0.0	11.5	326.2	2,903.2	
2013	3,100	105.0	100.0	67.7	71.4	26.0	0.0	11.5	381.6	2,554.9	
2014	3,100	104.1	100.0	67.7	89.2	31.0	0.0	11.5	403.5	2,533.4	
2015	3,100	107.82	100.0	67.7	153.3	36.0	0.0	11.5	476.3	2,480.9	
2016	3,100	105.0	100.0	67.7	130.8	41.0	0.0	11.5	456.0	2,504.3	
2017	3,100	105.0	100.0	67.7	105.3	45.0	0.0	9.9	432.9	2,667.1	
2018	3,100	105	130	67.7	0.1	63	0.0	9.7	375.5	2,724.5	
2019 ⁶	3,100	105	160	67.7	46.55	68	0.0	6.9	454.2	2,645.8	
2020	3,100	105	192.5	67.7	0.0	73	0.0	9.1	448.0	2,652.0	
2021	3,100	105	205	67.7	0.0	78	0.0	9.3	465.0	2,635.0	
2022	3,100	105	202.5	67.7	0	83	0.0	9.8	468.0	2,632.0	
2023	3,100	105	200	67.7	0	88	0.0	11.5	472.2	2,627.8	
2024	3,100	105	200	67.7	0	93	0.0	11.5	477.2	2,622.8	
2025	3,100	105	200	67.7	0	98	0.0	11.5	482.2	2,617.8	
2026	3,100	105	200	67.7	0	103	0.0	11.5	487.2	2,612.8	
2027	3,100	105	200	67.7	0	103	0.0	11.5	487.2	2,612.8	
2028	3,100	105	200	67.7	0	103	0.0	11.5	487.2	2,612.8	
2029-37	3,100	105	200	67.7	0	103	0.0	11.5	487.2	2,612.8	
2038-47 ⁷	3,100	105	200	67.7	0	103	0.0	11.5	487.2	2,612.8	
2048-77 ⁸	3,100	105	200	67.7	0	50	0.0	11.5	434.2	2,665.8	

1. 2003 through 2022, volumes are adjusted for actual USBR Decree Accounting values; IID Total Reduction and Net Available for Consumptive Use may not equal Col 2 minus Col 10, if IID conservation/use was not included in Exhibit B.
2. 2014 Letter of Agreement provides that, effective January 2016 total amount of conserved water available is 105 KAFY
3. Salton Sea Mitigation volumes may vary based on conservation volumes and method of conservation.
4. *This transfer is not likely given lack of progress on Salton Sea restoration as of 2018; shaded entries represent volumes that may vary.*
5. Reductions include conservation for 1988 IID/MWD Transfer, IID/SDCWA Transfer, AAC Lining; SDCWA Transfer Mitigation, MWD Transfer w/Salton Sea Restoration (if any); Misc. PPRs. Amounts are independent of increases and reductions as allowed by the IOPP.
6. In order to resolve the outstanding 2010 Salton Sea mitigation water pre-delivery issue, IID left 46,546 AF of extraordinary conservation in Lake Mead. See IID's December 19, 2019, revised 2019 water order and Reclamation's March 10, 2020, approval letter.
7. Assumes SDCWA does not elect termination in year 35.
8. Assumes SDCWA and IID mutually consent to renewal term of 30 years.
9. Modified from 100 KAFY in CRWDA Exhibit B; stating in 2018 MWD will provide CVWD 50 KAFY of the 100 KAFY.

Source: CRWDA: Federal QSA Exhibit B, p 13; updated values from 2022 Annual Water & QSA Implementation Report

CRWDA Exhibit B Net Available for Consumptive Use volumes less system operation demand represents the amount of water available for delivery by IID Water Department to its customers each year. In a normal year, perhaps 50,000 to 100,000 AF of effective rainfall would fall in the IID water service area. However, rainfall is not evenly distributed throughout the IID water service area and is not taken into account by IID in the submittal of its Estimate of Diversion (annual water order) to the USBR.

EXPECTED WATER AVAILABILITY – SINGLE DRY AND MULTIPLE DRY YEARS

Historically, when drought conditions exist within the IID water service area, as has been the case for the past two decades, the water supply available to meet agricultural and non-agricultural water demands remains the same as normal year water supply because IID historically relied solely on its entitlement for Colorado River water. Due to the priority of IID water rights and other agreements, drought conditions affecting Colorado River water supplies cause shortages for Arizona, Nevada, and Mexico, before impacting California and IID. Accordingly, the Net Available for Consumptive Use volumes in Table 11, Column 11 represents the water supply at Imperial Dam available for diversion by IID in single-dry year and multiple-dry year scenarios, consistent with IID’s senior water rights. The runoff declines in the upper basin and prolonged drought conditions throughout the west have resulted, for the first time, in the Colorado River operating under a Tier 2a Shortage Condition in 2023, creating long-term water supply uncertainties throughout the Basin states.

Water Management under a Suspended Inadvertent Overrun Payback Policy (IOPP)

Under normal operating conditions, the CRWDA Inadvertent Overrun Payback Policy (IOPP), provided IID with some flexibility to manage its water use. When the water level in Lake Mead is above 1,125 feet, an overrun of its USBR approved annual water order was permissible, and IID had up to three years to pay water use above the annual water order. When Lake Mead’s water level is at or below 1,125 feet on January 1 in the calendar year after the overrun is reported in the USBR Lower Colorado Region Decree Accounting Report, the IOPP prohibits additional overruns and requires that outstanding overruns be paid back in the subsequent calendar year rather than in three years as allowed under normal conditions; that is, the payback is to be made in the calendar year following publication of the overrun in the USBR Decree Accounting Report. The IOPP is suspended during shortage conditions. For historic IID annual rainfall, net consumptive use, transfers and IID underrun/overrun amounts, see **Table 12**.

Table 12. IID Annual Rainfall (In), Net Consumptive Use and Underrun/Overrun Amounts (AF), 1988-2022

Year	IID Total Annual Rainfall	IID Water Users	IID/MWD Transfer	IID/SDCWA Transfer	SDCWA Transfer Salton Sea Mitigation	IID Underrun / Overrun	IID/CVWD Transfer	AAC Lining
1988		2,947,581						
1989		3,009,451						
1990	91,104	3,054,188	6,110					
1991	192,671	2,898,963	26,700					
1992	375,955	2,575,659	33,929					
1993	288,081	2,772,148	54,830					
1994	137,226	3,048,076	72,870					
1995	159,189	3,070,582	74,570					
1996	78,507	3,159,609	90,880					
1997	64,407	3,158,486	97,740					
1998	100,092	3,101,548	107,160					
1999	67,854	3,088,980	108,500					
2000	29,642	3,112,770	109,460					
2001	12,850	3,089,911	106,880					
2002	12,850	3,152,984	104,940					
2003	116,232	2,978,223	105,130	10,000	0	6,555		
2004	199,358	2,743,909	101,900	20,000	15,000	-166,408		
2005	202,983	2,756,846	101,940	30,000	15,000	-159,881		
2006	19,893	2,909,680	101,160	40,000	20,000	12,414		
2007	64,580	2,872,754	105,000	50,000	25,021	6,358		
2008	63,124	2,825,116	105,000	50,000	26,085	-47,999	4,000	8,898
2009	30,0354	2,566,713	105,000	60,000	30,158	-237,767	8,000	65,577
2010	189,566	2,545,593	105,000	70,000	33,736	-207,925	12,000	67,700
2011	109,703	2,915,784	103,940	63,278	0	82,662	16,000	67,700
2012	133,526	2,903,216	104,140	106,722	15,182	134,076	21,000	67,700
2013	134,497	2,554,845	105,000	100,000	71,398	-64,981	26,000	67,700
2014	53,517	2,533,414	104,100	100,000	89,168	-797	31,000	67,700
2015	97,039	2,480,933	107,820	100,000	153,327	-90,025	36,000	67,700
2016	90,586	2,504,258	105,000	100,000	130,796	-62,497	41,000	67,700
2017	105,919	2,548,171	105,000	100,000	105,311	-30,591	45,000	67,700
2018	63,318	2,625,422	105,000	130,000	0	0	63,000	67,700
2019	146,384	2,558,136	105,000	160,000	46,555	-34,215	68,000	67,700
2020	130,275	2,493,623	105,000	192,500	0	-98,073	73,000	67,700
2021	81,901	2,552,674	105,000	205,000	0	-37,737	78,000	67,700
2022	61,377	2,577,164	105,000	202,500	0	-6,470	83,000	67,700

Notes: Volumes in acre-feet and except Total Annual Rainfall are USBR Decree Accounting Report record at Imperial Dam.

IID Total Annual Rainfall from IID Provisional Water Balance, first available calculations are for 1990.

Not all IID QSA programs are shown on this table.

Source: [USBR Decree Accounting reports](#), except IID Total Rainfall and IID Overrun/Underrun is a separate calculation

Source: [2022 IID Annual Water & QSA Implementation Report](#) and [2022 IID SWRCB Report](#); IID Total Rainfall and IID Overrun/Underrun is a separate calculation

On August 16, 2021, the water level in Lake Mead was 1,060 feet and for the first time since the IOPP came into effect, the Secretary of the Interior declared the first-ever, Tier 1 shortage condition for Colorado River operations, elevations reaching 1,045 as of mid-2022 (Figure 7). For IID, this meant that no overruns would be allowed to IID’s approved water order and continues in effect through 2024.

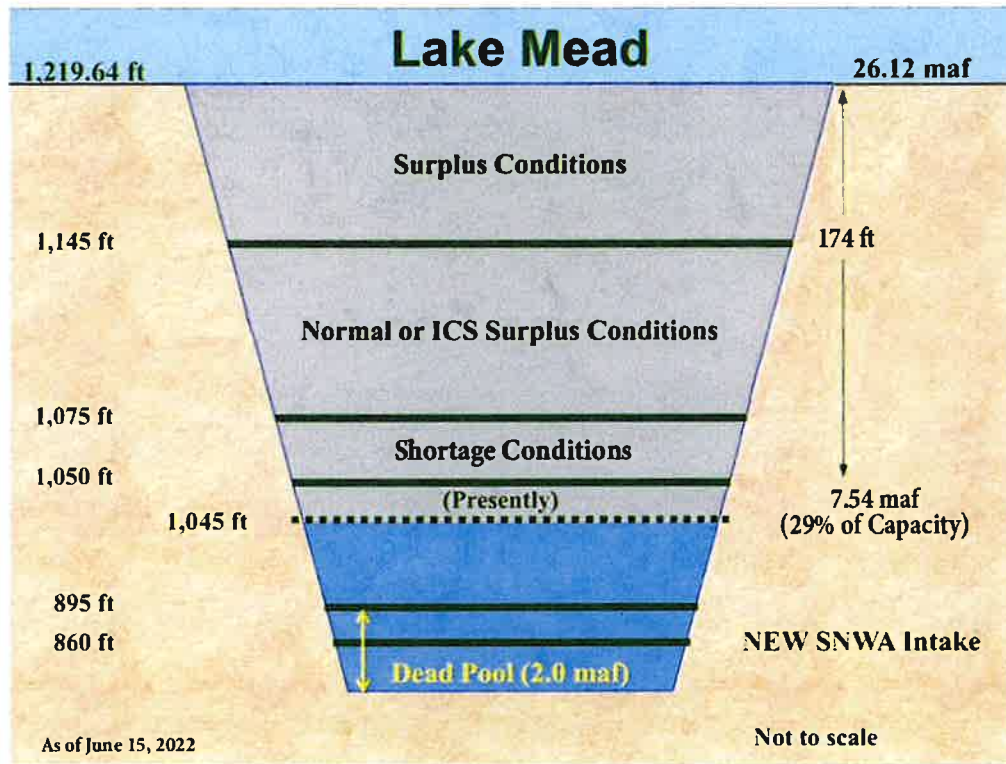


Figure 7. Lake Mead Schematic (June 15, 2022)

The flexibility that IID was allowed in 2013 and 2014 is no longer available to the district. Under the terms of the IOPP, no overruns are allowed in a year when payback is required. IID has not experienced any overrun pay back since 2014 as noted in **Table 13**. Under shortage conditions, IID would use any conserved water stored in a non-System reservoir, if available, to prevent any overrun.

Table 13. IID Inadvertent Overrun Payback to the Colorado River under the IOPP, 2012-2022

Calendar Year of Payback	2011 Overrun Payback (AF)	2012 Overrun Payback (AF)	Payback Total for Calendar Year (AF)
2013	55,710	-	55,710
2014	20,662	134,076	154,738
Total Payback	76,372	134,076	210,448

Notes: All values are consumptive use volumes at Imperial Dam (AF).

2013 Payback Total was 62 KAF, but in 2012 IID had 6,290 AF of early payback, reducing volume to 55,710 AF

The 2013 IOPP payback obligation, prohibition on overruns in payback years, and suspension of this flexibility during shortage conditions led the IID Board to implement an apportionment program pursuant to the 2007 EDP, which has been subsequently revised and modified over the years. The Revised 2023 EDP is a version approved and adopted by the IID Board on July 26, 2023 (see Attachment B). The Revised 2022 EDP also establishes a water exchange clearinghouse to facilitate the movement of water supply between all water users and water user categories. The established water user categories are 1) agricultural water users, 2) industrial/commercial water users and 3) potable water users. As designed, the clearinghouse will allow IID and its water customers to balance water demands with the water supplies that are available to all users.

Generally, the EDP Apportionment, as discussed in the proceeding section, is not expected to impact industrial/commercial uses. However, given the certainty of continuing drought on the Colorado River through 2026 and other stressors, provisions such as the 2012 IWSP Water Agreement sections 3.7 and 3.8 as well for dry and multiple dry year water assessment may come into effect. IID has agreed to work with Project proponents to ensure to the extent possible that the IWSP Water Supply Agreement terms will not adversely impact Project operation. For purposes of this WSA, years with a shortage condition that impacts non-agricultural projects such as an IOPP payback obligation constitute "dry" years for IID. For single-dry year and multiple-dry water year assessments, IID's EDP shall govern.

Equitable Distribution Plan (EDP) History

A 2006 study by Hanemann and Brookes suggested that overrun conditions were likely to occur 40-50 percent of the years during the decade following the report. Under such conditions a supply/demand imbalance would occur resulting in a need to apportion water consistent with state law. Under California state law, water must be distributed equitably as determined by the IID Board of Directors.

On November 28, 2006, the IID Board of Directors adopted Resolution No 22-2006 approving development and implementation of an Equitable Distribution Plan to address times when customers' demand would exceed IID's Colorado River supply. The EDP, adopted in 2007 allowed the IID Board to institute an apportionment program. As part of this resolution, the IID Board directed the General Manager to prepare the rules and regulations necessary or appropriate to implement the plan within the district. The EDP Regulations were created to enable IID to implement a water management tool (apportionment) to address years in which water demand is expected to exceed supply.

It was expected that an annual EDP Apportionment would be established for each of the next several years, if not for the duration of the QSA. However, the implementation of the EDP apportionment was legally challenged in 2013 with litigation ensuing through 2017 when a statement of decision was issued by the trial court, followed by a writ of mandate and a declaratory judgment later that year. The writ of mandate directed IID to repeal the EDP. On February 6, 2018, the IID board approved a resolution repealing the EDP while the case was on appeal. On July 16, 2020, the appellate court reversed the writ of mandate and declaratory judgment on almost all grounds, including declaratory relief on the water rights issue and IID's discretion to determine the method of apportionment except for a provision as to how

water was prioritized among water user categories. The court ruled that the district is required to distribute water equitably for all categories of users.

On June 21, 2022, IID adopted a revised EDP to address the single outstanding legal issue with respect to prioritization of apportionments among categories of water users. The revised EDP also updated certain operational provisions and most importantly, to the extent feasible, provides for a defined quantity of available, annual water supply apportioned to each water user to prevent cumulative demands from exceeding IID's available, authorized annual Colorado River supply (Appendix B-Equitable Distribution Plan). Implementation of the EDP will resume January 1, 2023, and continue annually thereafter consistent with the adopted EDP. In July 2023 the EDP was revised again to allow for direct transfer of water through the IID Clearinghouse and among the respective water user categories. For details regarding the EDP and its implementation, including related forms, please visit IID's website at [Equitable Distribution | Imperial Irrigation District \(iid.com\)](https://www.iid.com).

Projected Water Supplies

The projected and continued decline in runoff and prolonged drought conditions in the West are expected to contribute to even lower water elevation levels at Lakes Powell and Mead. The Department of the Interior made the decision in early 2022 to protect critical Lake Powell elevations above Glen Canyon Dam by adding 500,000 AF of water from Flaming Gorge reservoir and temporarily reducing the 2022 annual operational release to Lake Mead by 480,000 AF. These conditions resulted in a reduced water apportionment to most of the Lower Division States and Mexico for 2022 and 2023, but did not affect IID's water supply for consumptive use.

Despite the Department's extraordinary actions, the hydrological forecasts and reservoir elevations have continued to decline. Basin states have been asked to develop a plan in 2022 to reduce demands by 2-4 million acre-feet per year through 2026 or the Secretary of the Interior would take regulatory action to force these reductions in order to protect the Colorado River system from the prolonged drought conditions and climate change impacts. California reductions, or the potential for regulatory reductions by the Secretary of the Interior remain undefined as of the date of this water supply assessment for the Hell's Kitchen PowerCo 1 and LithiumCo 1 Project.

IID is working diligently with federal agencies and Colorado River contractors to minimize impacts to the local community. In this vein, IID recognizes the need for significant response actions to protect the long-term water supply certainty for the Imperial Valley as the Colorado River operates under these unprecedented conditions. On October 5, 2022 the Colorado River Board of California, in partnership with representatives of the four primary California Section 5 contractors (IID, Palo Verde Irrigation District, Coachella Valley Water District and Metropolitan Water District of Southern California) submitted a letter to the Department of Interior proposing for California to conserve up to an additional 400,000 AF of water in Lake Mead each year, beginning in 2023 and extending through 2026, to assist with stabilizing Colorado River reservoir elevations. IID has gone on record that its share of the

California proposal would not exceed 250,000 AFY. IID proposes to conserve its contribution to Lake Mead via system and on-farm efficiency conservation and temporary fallowing.

PROJECT WATER AVAILABILITY FOR A 20-YEAR PERIOD TO MEET PROJECTED DEMANDS

The primary source of fresh water for the facility is anticipated to be irrigation water made available under a supply agreement and purchased through IID. Water will be obtained from the "Q" and "R" laterals adjacent to the Project site. Water will be transferred to a water storage pond, with a capacity of approximately 18 acre-feet (AF), located adjacent to the Q Drain. The water would then be transferred to 100,000-gallon aboveground water storage tank via an aboveground fresh-water pipeline. Additional pipelines will be constructed to transport the water from the water storage tank to HKP1 and HKL1 facilities. The water will be used for steam wash water, purged water for pump seals, and the RO potable water system, process wash water, and, at times, cooling water makeup. The project is designed to minimize reliance on external sources of water supply for process needs as well by using condensed steam from the geothermal steam condensate to the greatest extent practical. A filtration-based or RO potable water system will be used to process IID fresh water for the non-drinking potable water needs at the site. A Nontransient-Noncommunity Water System Permit will be obtained from ICPHD for the onsite potable water system. Bottled drinking water will be purchased for consumption.

Untreated Colorado River water will be supplied to the project via the adjacent "Q" and "R" laterals under a(n) Industrial Water Supply Agreement with IID. The Project is located on vacant land that is generally undeveloped. On June 14, 2017, the County authorized Geothermal CUP #16-0001, which allowed construction of up to four well pads as well as drilling and maintenance of up to six separate geothermal exploratory wells on the Project site. A well pad, Well Pad 1, north of Alcott Road and west of Davis Road, and two geothermal wells were constructed on the site in 2021. Rough grading for Well Pad 3, south of Noffsinger Road and east of Davis Road began in November 2021. The remaining Project site is undeveloped. Areas to the north and south of the Project site consist of undeveloped open space. Area to the west is open space followed by the Salton Sea. The State of California manages a wildlife management area, including waterfowl ponds to the east of the Project site. The Project is not currently receiving water from IID but will receive water from gates Q-28 and R-24 which are currently in working condition. As the Project site is largely undeveloped at this time, water use will increase with implementation of proposed project.

As noted previously, under the terms of California legislation adopted to facilitate the QSA/Transfer Agreements and enacted in CWC Section 1013, the IID board adopted the TLCFP to address how to deal with any such temporary reduction of water use by projects such as solar projects that are developed under a CUP. This Project is not subject to the TLCFP.

While conserved water generated from the TLCFP is limited by law for use for water transfer or environmental purposes, by satisfying multiple district objectives the TLCFP serves to reduce the need

for efficiency conservation and other water use reduction practices on the part of IID and its water users providing the district with wide benefits. One of the considerations in developing the TLCFP was to provide agricultural landowners with long-term assurances from IID that, at Project termination, irrigation service would be available for them to resume farming operations.

IWSP Water

At the present time, IID is providing water delivery service for use by solar energy generation projects under Water Rate Schedule 7 General Industrial Use. If IID determines that the proposed Project should obtain water under IID's Interim Water Supply Policy (IWSP) for non-agricultural projects in addition to delivery rates under Schedule 7 General Industrial Use, the Applicant may need to initiate the process to secure a water supply agreement. IID will determine whether the Project should obtain water under IID's Interim Water Supply Policy (IWSP) for non-agricultural projects in addition to Schedule 7 General Industrial Water.

The IWSP, provided herein as Attachment A, designates up to 25,000 AFY of water for potential conservation for Non-Agricultural Projects within IID's water service area. As of November 2023, IID has up to 18,620 AF that it may make available under the IWSP for new projects such as the proposed project. The IWSP establishes a schedule for Processing Fees, Reservation Fees, and Development Fees that change each year for all non-agricultural projects, and annual Water Supply Development fees for some non-agricultural projects. The proposed Project's water use will be subject to the annual Water Supply Development fee if IID determines that water for the Project is to be supplied under the IWSP.

Given the Colorado River conditions, the likelihood that IID will not receive its annual 3.1 MAF apportionment less QSA/Transfer Agreement obligations of Colorado River water is no longer low despite the high priority of the IID entitlement relative to other Colorado River contractors, see IID's Water Rights section on page 37 and projected water supplies. Given the prolonged drought conditions and recent communication from the Department of the Interior, reductions to all basin contractors, including IID, are increasingly likely. If such obligatory reductions were to come into effect within the 30-year Project life, the Applicants are to work with IID to ensure any anticipated reduction can be managed.

The County of Imperial as the lead agency has a responsibility to determine if the current and projected demands and water supply conditions, including projected uncertainties of Colorado River hydrology are sufficient to enable the County to make the findings necessary to approve this WSA. IID, like any water provider, has jurisdiction to manage the water supply within its service area and impose conservation measures during a period of temporary water shortage, such as the one we are experiencing now.

Water for construction (primarily for dust control) would be obtained from IID canals or laterals in conformance with IID rules and regulations for MCI temporary water use.²⁰ Water would be picked up from a nearby lateral and delivered to the construction location by a water truck capable of carrying approximately 4,000 gallons per load. To obtain water delivery service, the Project proponent will complete an IID-410 Certificate of Ownership and Authorization (Water Card), which allows the Water Department to provide the district with information needed to manage the district apportioned water supply. Water cards are used for Agriculture, Municipal, Industrial and Service Pipe accounts. If water is to be provided under IWSP in addition to Schedule 7, General Industrial Use, the Applicant may also need to enter into a IWSP Water Supply Agreement.

²⁰ Complete the Application for Temporary Water Use and submit to Division office. Complete encroachment permit through Real Estate – non-refundable application fee of \$250, se. IID website: Real Estate / Encroachments, Permissions, and Other Permitting. Fee for temporary service water: Schedule No. 7 General Industrial Use / Temporary Service Minimum charge for up to 5 AF, pay full flat fee for 5 AF at General Industrial Use rate (\$425); use more than 5 AF, pay fee for actual use at General Industrial Rate (\$85/AF).

EXPECTED WATER DEMANDS FOR THE PROPOSED PROJECT

Water for the proposed Project will be needed on-site for steam wash water, purged water for pump seals, and the RO potable water system, process wash water, and cooling water makeup. use. Untreated Colorado River water will be supplied to the project via the adjacent “Q” and “R” laterals under a(n) Industrial Water Supply Agreement with IID. The Project is located on vacant land that is generally undeveloped. On June 14, 2017, the County authorized Geothermal CUP #16-0001, which allowed construction of up to four well pads as well as drilling and maintenance of up to six separate geothermal exploratory wells on the Project site. A well pad, Well Pad 1, north of Alcott Road and west of Davis Road, and two geothermal wells were constructed on the site in 2021. Rough grading for Well Pad 3, south of Noffsinger Road and east of Davis Road began in November 2021. The remaining Project site is undeveloped. Areas to the north and south of the Project site consist of undeveloped open space. The area to the west is open space followed by the Salton Sea. The State of California manages a wildlife management area, including waterfowl ponds to the east of the Project site. The Project is not currently receiving water from IID but will receive water from gates Q-28 and R-24 which are currently in working condition. As the Project site is largely undeveloped at this time, water use will increase with implementation of proposed project.

Project raw water uses are summarized in **Table 14**.

Table 14. Project Operational Water Uses (AFY)

Use	Acre-Feet per Year
Raw Water for Dust Control*	0
Raw Water for HKP1 Operations (30 years @ 200 AFY)	200
Raw Water for HKL1 Operations (30 years @ 6,300 AFY)	6,300
Raw Water for Fire Suppression (water for system testing is recycled to storage tank)	0
TOTAL RAW WATER USAGE	6,500

*Water for dust control while in operation is required to be separated.

IID delivers raw Colorado River water to the proposed Project site through the following gates and laterals for agricultural purposes. The 10-year record for 2013-2022 of water delivery accounting is shown in **Table 15**. The data documents a 10-year average of 119.9 AFY.

Table 15. Ten-Year Historic Delivery (AFY), 2013-2022

Canal/Gate	2013	2014	2015	2016	2017	2018	2019	2020	2021	2022
Q-28	188.3	83.1	119.3	111.9	95.2	102	148.4	120	122.3	94.3
R-24-003	14.3	0	0	0	0	0	0	0	0.00	0.00
TOTAL	202.6	83.1	119.3	111.9	95.2	102	148.4	120	122.3	94.3

Source: IID Staff, February 31, 2023 (Contact Justina Gamboa-Arce)

The proposed Project has an estimated total operational water demand (of 6,500 AFY or 195,000 AF amortized over a 30 year term (for all delivery gates for Project). Thus, the proposed Project demand is

an increase of 6,380.1 AFY from the historical 10-year average or 5,321- percent (5,321 %) more than the historic 10-year average annual delivery for agricultural uses at the proposed Project site. The proposed Project's estimated operational water demand represents only 34.9 percent (34.9%) of the 18,620 AFY balance of water supply that may be available for contracting under the IWSP.

IID’S ABILITY TO MEET DEMANDS WITH WATER SUPPLY

Under normal operating conditions, non-agricultural water demands for the IID water service area are projected for 2025-2055 in **Table 5**, and IID agricultural demands including system operation are projected for 2025-2055 in **Table 6**, all volumes within the IID water service area. IID water supplies available for consumptive use after accounting for mandatory transfers are projected to 2077 in **Table 11** (Column 11), volumes at Imperial Dam.

To assess IID’s ability to meet future water demands, IID historic and forecasted demands are compared with CRWDA Exhibit B net availability under its water supply entitlement, volumes at Imperial Dam **Table 11** (Column 11). The analysis requires accounting for system operation consumptive use within the IID water service area, from AAC at Mesa Lateral 5 to Imperial Dam, and for water pumped for use by the USBR Lower Colorado Water Supply Project (LCRWSP), an IID consumptive use component in the USBR Decree Accounting Report. IID system operation consumptive use for 2021 is provided in **Table 16** to show the components to be included in the calculation of 2022 volumes in comparison to 2020.

Table 16. IID System Operations Consumptive Use within IID Water Service Area and from AAC at Mesa Lateral 5 to Imperial Dam, (KAF), 2022

	2020 Operational Consumptive Use (KAF)	2022 Operational Consumptive Use (KAF)
IID Delivery System Evaporation	24.4	24.8
IID Canal Seepage	90.8	89.4
IID Main Canal Spill	10.1	10.6
IID Lateral Canal Spill	121.5	122.4
IID Seepage Interception	-39.0	-33.8
IID Unaccounted Canal Water	-40.0	-161.4
Total IID System Operational Use, within water service area	167.8	52.0
“Losses” from AAC @ Mesa Lat 5 to Imperial Dam	9.2	38.3
LCWSP pumpage	-10	-10
Total System Operational Use in 2020 and 2022	167.0	80.3

Sources: 2022 IID Water Balance Rerun 03/28/2023

Notwithstanding any regulatory water supply cuts from the Secretary of Interior, IID’s ability to meet customer water demands through 2055 as shown in **Table 17** is based on the following:

- Non-agricultural use from **Table 5**.
- Agricultural and Salton Sea mitigation uses from **Table 6**.
- CRWDA Exhibit B net available for IID consumptive use from **Table 11**.
- System operation consumptive use from **Table 16** for 2020.

Table 17. IID Historic and Forecasted Consumptive Use vs CRWDA Exhibit B IID Net Available Consumptive Use, volumes at Imperial Dam (KAFY), 2015-2055

	2015	2020	2025	2030	2035	2040	2045	2050	2055
Non-Ag Delivery	107.4	113.2	133.1	142.9	151.4	163.2	175.4	188.4	199.3
Ag Delivery	2,158.9	2,165.4	2,259.5	2,209.5	2,209.5	2,209.5	2,209.5	2,209.5	2,209.5
QSA SS Mitigation Delivery	153.3	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
System Op CU in IID & to Imperial Dam	61.3	167.0	230.5	225.4	225.4	225.4	225.4	225.4	225.4
IID CU at Imperial Dam	2,488.2	2,503.6	2,623.1	2,577.8	2,586.3	2,598.1	2,610.3	2,623.3	2,634.2
Conservation in Excess of Exhibit B	45.5	51.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Total IID CU	2,533.6	2,554.6	2,623.1	2,577.8	2,586.3	2,598.1	2,610.3	2,623.3	2,634.2
Exhibit B IID Net Available for CU at Imperial Dam	2,623.7	2,652.7	2,617.8	2,612.8	2,612.8	2,612.8	2,612.8	2,665.8	2,665.8
IID Underrun/Overrun at Imperial Dam	-90.02	-98.07	5.30	-35.00	-26.50	-14.70	-2.50	-42.50	-31.60

Notes: 2015 and 2020 have been updated to reflect actual consumptive use with respective USBR decree accounting adjustments

Non-Ag Delivery CI 15.0%, Ag Delivery CI 3.0%, QSA SS mitigation CI 15%

QSA Salton Sea Mitigation Delivery terminated on 12/31/2017.

Underrun /Overrun = IID CU at Imperial Dam minus CRWDA Exhibit B Net Available

Notes: Ag Delivery for 2025 to 2055 does not take into account land conversion for solar use nor reduction in agricultural land area due to urban expansion.

As shown above, IID forecasted demand has the potential to exceed CRWDA Exhibit B Net Consumptive Use volumes during several time intervals through the lifespan projection for the Project. However, due to temporary land conversion for solar use and urban land expansion that will reduce agricultural acres in the future, a water savings of approximately 217,000 AFY will likely be generated into the future and for the lifetime of the proposed Project, assuming no regulatory cutbacks are enforced upon IID.

In addition, as show on Table 18, USBR 2020 Decree Accounting Report states that IID Consumptive Use was 2,493.7 KAF (excludes 1,579 AF of ICS for storage in Lake Mead and an additional 49,444 AF of conserved water left on the Colorado River system) with an underrun of -98.1 KAF, as reported by IID in 2020 Annual SWRCB Report per WRO 2002-2013; that is, IID used less than the amount in its approved Water Order (2,615,300 AF).

Table 18. 2020 Approved Water Order, Actual CU (Decree Accounting Report) and IID Underrun, KAF at Imperial Dam

IID Approved Water Order	2,625.3 less 10 supplied by LCWSP and less 26 of additional conserved water
IID Consumptive Use	2,493.7
IID Underrun /Overrun	-98.1
<i>Sources:</i> 2020 IID Revised Water Order, approved on March 10, 2020, <u>2020 Decree Accounting Report</u> , and 2020 Annual Report of IID Pursuant to SWRCB Revised Order WRO 2002-2013	

As reported in the 2022 Annual Water & QSA Implementation Report and 2022 SWRCB Report and presented in **Table 12**, from 2013 to 2022 IID consumptive use (CU) resulted in underruns; i.e., annual CU was less than the district’s QSA Entitlement of 3.1 MAFY minus QSA/Transfer Agreements obligations. This would indicate that even though **Table 17** shows IID Overrun/Underrun at Imperial Dam exceeding CRWDA Exhibit B Net Available for CU, for the 30-year life of the proposed Project, IID consumptive use may be less than forecasted.

Meanwhile, forecasted Ag Delivery reductions presented in **Table 6** are premised on implementation of on-farm practices that will result in efficiency conservation. These reductions do not take into account land conversion for solar projects nor reduction in agricultural land area due to urban expansion; that is to say, the forecasted Ag Delivery is for acreage in 2003 with reduction for projected on-farm conservation efficiency. Thus, Ag Delivery demand may well be less than forecasted in **Table 6**. In any case, the proposed Project will use less water than the historical agricultural demand of proposed Project site, so the proposed Project will ease rather than exacerbate overall IID water demands.

In the event that IID has issued water supply agreements that exhaust the 25 KAFY IWSP set aside for conservation, and it becomes apparent that IID delivery demands due to non-agriculture use are going to cause the district to exceed its quantified 3.1 MAFY entitlement less QSA/Transfer Agreements obligations, IID has identified options to meet these new non-agricultural demands. These options include (1) tracking water yield from temporary land conversion from agricultural to non-agricultural land uses (renewable solar energy); and (2) only if necessary, developing conservation projects to expand the size of the district’s water supply portfolio.

These factors will be discussed in the next two sections, Tracking Water Savings from Growth of Non-Agricultural Land Uses and Expanding Water Supply Portfolio.

Tracking Water savings from Growth of Non-Agricultural Land Uses

The Imperial County Board of Supervisors has targeted up to 25,000 acres of agricultural lands, about 5 percent (5%) of the farmable acreage served by IID, for temporary conversion to solar farms; because

the board found that this level of reduction would not adversely affect agricultural production. As reported for IID's Temporary Land Conversion Fallowing Program, existing solar developments at the end of 2022 have converted 13,177 acres of farmland. These projects had a yield at-river of 69,898 AF of water in 2022. The balance of the 25,000-acre agriculture-to-solar policy is 11,823 acres. On average, each agricultural acre converted reduces agricultural demand by 5.1 AFY, which results in a total at-river yield (reduction in consumptive use) of 127,500 AFY.

However, due to the nature of the conditional use permits under which solar farms are developed, IID cannot rely on this supply being permanently available. In fact, should a solar project decommission early, that land may go immediately back to agricultural use (it remains zoned an agricultural land). Nevertheless, during their operation, the solar farms do ameliorate pressure on IID to implement projects to meet demand from new non-agricultural projects.

Unlike the impact of solar projects, other non-agricultural uses are projected to grow, as reflected in the nearly 87.5 percent (87.5%) increase in non-agricultural water demand from 107.4 KAF in 2015 to 201.4 KAF in 2055 reflected herein in **Table 5**. This increase in demand of 94 KAFY is likely to be offset by reductions in agricultural lands; however, as the land remains zoned as agricultural land, that source is not reliable to be permanently available to IID.

The amount of land developed for residential, commercial, and industrial purposes is projected to grow by 55,733 acres from 2015 to 2050²¹ within the sphere of influence of the incorporated cities and specific plan areas in Imperial County. A conservative estimate is that such development will displace at least another 24,500 acres of farmland based on the Imperial Local Agency Formation Commission (LAFCO) sphere of influence maps and existing zoning and land use in Imperial County. At 5.13 AFY yield at-river, there would be a 125,000 AFY reduction IID net consumptive use. However, the total acreage from actual annexations that have resulted in reductions to agricultural acreage between 2015 and 2021 has been 2,224 acres, according to IID's annual inventory of total farmable land which is consistent with the acreage gain to non-agricultural land uses (2,224 acres) and based on annexation records obtained through the Imperial County Local Agency Formation Commission. This shift in acreage documents a growth rate of approximately 50 percent of the originally projected rate.

The total foreseeable solar project temporary yield at-river (91,800 AFY) and municipal development permanent yield at-river, conservatively adjusted (65,000 AFY) is to reduce forecasted IID net consumptive use at-river 156,800 AFY, which is more than enough to meet the forecast Demand minus Exhibit B Net Available volumes shown in **Table 17**. This Yield at-river is sufficient to meet the forecasted excess of non-agricultural use over Net Available supply within the IID service area for the next 20 years, as is required for SB 610 analysis (assuming there are no regulatory cuts to IID's full entitlement).

²¹ IRWMP, Chapter 5, Table 5-14.

Farmland retirement associated with municipal development would reduce IID agricultural delivery requirements beyond the efficiency conservation projections shown in **Table 6** and **Table 17**. Therefore, in the event that Schedule 7 General Industrial Use water has exhausted its apportioned amount, the Applicants will rely on IID IWSP water to supply the Project, as discussed above in the Projected Water Availability section.

Expanding Water Supply Portfolio

While forecasted long-term annual yield-at-river from the reduction in agricultural acreage due to municipal development in the IID service area is sufficient to meet the forecasted excess of non-agricultural use over CRWDA Net Available supply (Table 17) without regulatory cuts and without expanding IID's Water Supply Portfolio, IID has also evaluated the feasibility of a number of capital projects to increase its water supply portfolio.

As reported in 2012 Imperial IRWMP Chapter 12, IID contracted with GEI Consultants, Inc. to identify a range of capital project alternatives that the district could implement. Qualitative and quantitative screening criteria and assumptions were developed in consultation with IID staff. Locations within the IID water service area with physical, geographical, and environmental characteristics most suited to implementing short- and long-term alternatives were identified. Technical project evaluation criteria included volumes of water that could be delivered and/or stored by each project, regulatory and permitting complexity, preliminary engineering components, land use requirements, and costs.

After preliminary evaluation, a total of 27 projects were configured:

- 17 groundwater or drain water desalination
- 2 groundwater blending
- 6 recycled water
- 1 groundwater banking
- 1 IID system conservation (concrete lining)

Projects were assessed at a reconnaissance level to allow for comparison of project costs. IID staff and the board identified key factors to categorize project alternatives and establish priorities. Lower priority projects were less feasible due to technical, political, or financial constraints. Preferential criteria were features that increased the relative benefits of a project and grant it a higher priority. Four criteria were used to prioritize the IID capital projects:

1. **Financial Feasibility.** Projects whose unit cost was more than \$600/AF were eliminated from further consideration.
2. **Annual Yield.** Project alternatives generating 5,000 AF or less of total annual yield were determined not to be cost-effective and lacking necessary economies of scale.

3. **Groundwater Banking.** Groundwater banking to capture and store underruns is recognized as a beneficial use of Colorado River water. Project alternatives without groundwater banking were given a lower priority.
4. **Partnering.** Project alternatives in which IID was dependent on others (private and/or public agencies) for implementation were considered to have a lower priority in the IID review; this criterion was reserved for the IRWMP process, where partnering is a desirable attribute.

Table 19. Based on these criteria, the top ten included six desalination, two groundwater blending, one system conservation, and one groundwater storage capital projects. These capital projects are listed in Table 19 which follows.IID Capital Project Alternatives and Cost (May 2009 price levels \$)

Name	Description	Capital Cost	O&M Cost	Equivalent Annual Cost	Unit Cost (\$/AF)	In-Valley Yield (AF)
GW 18	Groundwater Blending E. Mesa Well Field Pumping to AAC	\$39,501,517	\$198,000	\$2,482,000	\$99	25,000
GW 19	Groundwater Blending: E. Mesa Well Field Pumping to AAC w/Percolation Ponds	\$48,605,551	\$243,000	\$3,054,000	\$122	25,000
WB 1	Coachella Valley Groundwater Storage	\$92,200,000	\$7,544,000	\$5,736,746	\$266	50,000
DES 8	E. Brawley Desalination with Well Field and Groundwater Recharge	\$100,991,177	\$6,166,000	\$12,006,000	\$480	25,000
AWC 1	IID System Conservation Projects	\$56,225,000	N/A	\$4,068,000	\$504	8,000
DES 12	East Mesa Desalination with Well Field and Groundwater Recharge	\$112,318,224	\$6,336,000	\$12,831,000	\$513	25,000
DES 4	Keystone Desalination with IID Drainwater/ Alamo River	\$147,437,743	\$15,323,901	\$23,849,901	\$477	50,000
DES 14	So. Salton Sea Desalination with Alamo River Water and Industrial Distribution	\$158,619,378	\$15,491,901	\$24,664,901	\$493	50,000
DES 15	So. Salton Sea Desalination with Alamo River Water and MCI Distribution	\$182,975,327	\$15,857,901	\$26,438,901	\$529	50,000
DES 2	Keystone Desalination with Well Field and Groundwater Recharge	\$282,399,468	\$13,158,000	\$29,489,000	\$590	50,000

Source: Imperial IRWMP, Chapter 12; see also Imperial IRWMP Appendix N, IID Capital Projects

IID Near Term Water Supply Projections

As mentioned above, IID's quantified Priority 3(a) water right under the QSA/Transfer Agreements secures 3.1 MAF per year, less transfer obligations of water for IID's use from the Colorado River, without relying on rainfall in the IID service area. Even with this strong entitlement to water, IID actively promotes on-farm efficiency conservation and is implementing system efficiency conservation measures including seepage recovery from IID canals and the All-American Canal (ACC) and measures to reduce operational discharge. As the IID website [Water Department](#) states:

Through the implementation of extraordinary conservation projects, the development of innovative efficiency measures and the utilization of progressive management tools, the IID Water Department is working to ensure both the long-term viability of agriculture and the continued protection of water resources within its service area.

Overall, agricultural water demand in the Imperial Valley will decrease due to IID system and grower on-farm efficiency conservation measures that are designed to maintain agricultural productivity at pre-QSA levels while producing sufficient yield-at-river to meet IID's QSA/Transfer Agreements obligations. These efficiencies combined with the conversion of some agricultural land uses to non-agricultural land uses (both solar and municipal), ensure that IID can continue to meet the water delivery demand of its existing and future agricultural and non-agricultural water users, including this Project for the next 20 years and for the life of the proposed Project under a water supply consistent with the district's full entitlement.

IMPERIAL COUNTY PLANNING AND DEVELOPMENT SERVICES (LEAD AGENCY) FINDINGS

IID serves as the regional wholesale water supplier, importing raw Colorado River water and delivering it, untreated, to agricultural, municipal, industrial, environmental, and recreational water users within its water service area. Imperial County Planning and Development Services serves as the responsible agency with land use authority over the proposed project. Imperial County Planning and Development Services Water Assessment findings are summarized as follows, based on the information contained herein and as supported by IID water supply data:

1. IID's annual entitlement to consumptive use of Colorado River water is capped at 3.1 MAF less water transfer obligations, pursuant to the QSA and Related Agreements. Under the terms of the CRWDA, IID is implementing efficiency conservation measure to reduce net consumptive use of Colorado River water needed to meet its QSA/Transfer Agreements obligations while retaining historical levels of agricultural productivity.
2. In 2022 IID consumptively used 2,577,164 AF of Colorado River water (volume at Imperial Dam); 2,486,061 AF were delivered to customers (including recreational and environmental water deliveries) of which 2,368,642 AF or 95 percent went to agricultural users as per IID's Water Balance run on 3/30/2023.
3. Reduction of IID's net consumptive use of Colorado River water under the terms of the Colorado River Water Delivery Agreement is to be the result of efficiency conservation measures. Crop water use in the Imperial Valley will not decline under these conditions, however IID operational spill and tailwater from field runoff will decline as efficiency conservation measures are implemented, impacting the Salton Sea.
4. The dependability of IID's water rights, Colorado River flows, and Colorado River storage facilities for Colorado River water alone are not sufficient to assure water availability for the Project. The prolonged drought conditions on the Colorado River Basin have made it increasingly likely that the water supply of IID may be disrupted, in dry years or/and under shortage conditions. Mexico, Arizona, and Nevada, which have lower priority than IID, have already experienced Tier 1 and Tier 2a reductions in 2022 as a result of the declared Colorado River water shortage.
5. Due to ongoing Colorado River drought conditions, Lake Mead's declining elevation, reduced inflows from Lake Powell, and the suspension of the federal Inadvertent Overrun and Payback Policy, which eliminates IID's ability to overrun its 3.1 MAF annual entitlement during water shortage conditions, the IID Board has implemented an annual apportionment program (otherwise known as the Equitable Distribution Plan or EDP).

6. IID's EDP apportions the available water supply among all its water users equitably and among three water user categories, based on historical use: 1) agricultural water users, 2) commercial/industrial water users, and 3) potable water users. Apportionment into these categories as a whole is initiated after deducting from the available water supply water for operational system needs, system conservation yields, environmental mitigation requirements, recreational uses, and similar unmeasured small pipe account water uses. See Attachment B - Equitable Distribution Plan.
7. Historically, IID has never been denied the right to use the annual volume of water it has available for its consumptive uses under its entitlement. Nevertheless, IID is participating in discussions for possible actions in response to continued extreme drought on the Colorado River.
8. The proposed Project has an estimated total water demand of 195,000 AF and 6,500 AFY amortized over a 30-year term (for all delivery gates for Project). Thus, the proposed Project demand is an increase of 6,380.1 AFY from the historical 10-year average of 119.9 AFY, a 5,321percent (5,321%), increase from the historic 10-year average annual delivery for agricultural uses at the proposed Project site.
9. The Project's water delivery will be covered under the Schedule 7 General Industrial Use. In the event that IID determines that the proposed Project is to utilize IWSP for Non-Agricultural Projects water, the Applicant will also need to enter into an IWSP Water Supply Agreement with IID. In which case, the proposed Project would use 34.9 percent (34.9%) of the 18,620 AFY of IWSP water.
10. Based on the Environmental Impact Report (EIR) prepared for this proposed Project pursuant to the CEQA, California Public Resources Code sections 21000, *et seq.* (SCH No. 2022030704), Imperial County Planning and Development Services hereby finds that the IID projected water supply is sufficient to satisfy the demands of this proposed Project in addition to existing and planned future uses, including agricultural and non-agricultural uses for a 20-year Water Supply Assessment period and for the 30-year proposed Project life.

ASSESSMENT CONCLUSION

This Water Supply Assessment has determined that IID water supply is adequate for the Hell's Kitchen PowerCo 1 and LithiumCo 1 Project (proposed Project). The Imperial Irrigation District's IWSP for Non-Agricultural Projects may dedicate up to 25,000 AF of IID's annual conserved water supply to serve new projects. As of November 2023, a total of 18,620 AF per year remain available for conservation for new projects providing reasonably sufficient supplies for new non-agricultural water users that enter into a Water Supply Agreement with IID over the next 5-year planning period, at minimum. Imperial County Planning and Development Services estimates a cumulative, non-agricultural project water supply demand increase of up to 40,000 AFY within the foreseeable 20-year planning period, however, all new non-agricultural projects, including Hell's Kitchen LLC, are required to mitigate their respective water supply demand via conservation programs or conservation projects in order to receive future water apportionments.

New, non-agricultural projects may be susceptible to delivery cutbacks when an EDP Apportionment is exhausted, thus all approved projects require best management practices and water use efficiency at all times. Given the prolonged drought conditions and recent communication to IID from the Department of the Interior, reductions to all basin contractors, including IID and its water customers, are increasingly likely. If such reductions were to come into effect within an approved project's 30-year life, the Applicants are to work with IID to ensure any anticipated reduction can be managed via the means identified herein or other equivalent measures.

Under an authorized water supply agreement, the Hell's Kitchen PowerCo 1 and LithiumCo 1 Project will be required to acknowledge and accept as a condition of water service that to the extent that IID receives an order or directive from a governmental authority, having appropriate jurisdiction, that reduces the total volume of water available to IID from the Colorado River during all or any part of their water service agreement, IID may reduce the water service agreement amount, as directed by the IID Board, as a proportionate reduction of the total volume of water available to IID. This reduction is separate from and in addition to any allocation authorized pursuant to the EDP.

The Project's operational water demand of approximately 195,000 AF and 6,500 AFY amortized over 30 years represents 34.9 % of the unallocated supply that may be set aside under the IWSP for non-agricultural projects, and approximately 3.2 percent (3.2 %) of forecasted future non-agricultural water demands planned in the Imperial IRWMP by 2055 (201.4 KAFY). The water demand for the proposed Project represents a 5,321% increase from the 10-year average historic average agricultural water use for 2013-2022 at the proposed Project site, an increase in water use 6,380.1 AFY at full build-out.

For all the reasons described herein, the historical stability of the IID water supply, the amount of foreseeable water available, along with on-farm and system efficiency conservation and other measures being undertaken by IID and its customers suggest that the Hell's Kitchen PowerCo 1 and LithiumCo 1

Project's water needs will be reasonably met for the next 20 years as assessed for compliance under SB-610.

DRAFT

RESOURCES AND REFERENCES

1. California Department of Water Resources. (2003). Guidebook for Implementation of Senate Bill 610 and Senate Bill 221 of 2001 to assist water suppliers, cities, and counties in integrating water and land use planning.
2. Imperial County Planning and Development Services. (2008). Imperial County General Plan 2008 Update. El Centro, CA. General Plan | Imperial County Planning & Development Services (icpds.com), retrieved, 2021
3. Imperial Irrigation District. Website: Equitable Distribution Plan.
4. Imperial Irrigation District Website: 2021 Water Conservation Plan. (2021). Imperial Irrigation District 2021 Water Conservation Plan. Imperial, CA.
5. Imperial Irrigation District. (2022). IID Interactive GIS Water Service Area Map. Imperial, CA.
6. Imperial Irrigation District. (2009). Interim Water Supply Policy for Non-Agricultural Projects. Imperial, CA
7. Imperial Irrigation District. (2012). Temporary Land Conversion Fallowing Policy (TLFCP) for Water Conservation Yield Water conservation yield attributable to land removed from agricultural production and temporarily fallowed. Updated March 27, 2018.
8. Imperial Irrigation District Water Department. (2013). Colorado River Water Accounting and Conservation Commitments Update. Tina Anderholt Shields, PE. Colorado River Resources Manager Imperial, CA.
9. Imperial Irrigation District. (2022). 2022 Water & QSA Implementation Report, Imperial, CA
10. Imperial Irrigation District. (2021). Imperial, CA.
11. Imperial Irrigation District. (2022). Temporary Land Fallowing Conversion Policy. (TLFCP).
12. Imperial Irrigation District. (2023). 2022 IID SWRCB Report.
13. United States Bureau of Reclamation Lower Colorado Region Website: Boulder Canyon Operations Office – Programs and Activities, Lower Colorado River Water Accounting, Water Accounting Reports (1964 - 2015). Compilation of Records in Accordance with Article V of the Decree of the Supreme Court of the United States in Arizona v. California Dated March 9, 1964: Calendar Years 1964 - 2015 Boulder City, NV.

ATTACHMENTS

DRAFT

Attachments

Attachment A: IID Interim Water Supply Policy for Non-Agricultural Projects

Attachment B: IID 2023 Equitable Distribution Plan, revised July, 2023

(This page intentionally left blank)

DRAFT

ATTACHMENT A: IID INTERIM WATER SUPPLY POLICY FOR NON-AGRICULTURAL PROJECTS²²

1.0 Purpose.

Imperial Irrigation District (the District) is developing an Integrated Water Resources Management Plan (IWRMP) ²³ that will identify and recommend potential programs and projects to develop new water supplies and new storage, enhance the reliability of existing supplies, and provide more flexibility for District water department operations, all in order to maintain service levels within the District's existing water service area. The first phase of the IWRMP is scheduled to be completed by the end of 2009 and will identify potential projects, implementation strategies and funding sources. Pending development of the IWRMP, the District is adopting this Interim Water Supply Policy (IWSP) for Non-Agricultural Projects, as defined below, in order to address proposed projects that will rely upon a water supply from the District during the time that the IWRMP is still under development. It is anticipated that this IWSP will be modified and/or superseded to take into consideration policies and data developed by the IWRMP.

2.0 Background.

The IWRMP will enable the District to more effectively manage existing water supplies and to maximize the District's ability to store or create water when the available water supplies exceed the demand for such water. The stored water can be made available for later use when there is a higher water demand. Based upon known pending requests to the District for water supply assessments/verifications and pending applications to the County of Imperial for various Non-Agricultural Projects, the District currently estimates that up to 50,000 acre feet per year (AFY) of water could potentially be requested for Non-Agricultural Projects over the next ten to twenty years. Under the IWRMP the District shall evaluate the projected water demand of such projects and the potential means of supplying that amount of water. This IWSP currently designates up to 25,000 AFY of water for potential Non-Agricultural Projects within IID's water service area. Proposed Non-Agricultural projects may be required to pay a Reservation Fee, further described below. The reserved water shall be available for other users until such Non-Agricultural projects are implemented and require the reserved water supply. This IWSP shall remain in effect pending the approval of further policies that will be adopted in association with the IWRMP.

3.0 Terms and Definitions.

3.1 Agricultural Use. Uses of water for irrigation, crop production and leaching.

²² IID Board Resolution 31-2009. Interim Water Supply Policy for New Non-Agricultural Projects. September 29, 2009. <IID [Interim Water Supply Policy for Non-Agricultural Projects](#)>

²³ The 2009 Draft IID IWRMP has been superseded by the October 2012 Imperial IRWMP, which incorporates the conditions of the IWSP by reference.

3.2 Connection Fee. A fee established by the District to physically connect a new Water User to the District water system.

3.3 Industrial Use. Uses of water that are not Agricultural or Municipal, as defined herein, such as manufacturing, mining, cooling water supply, energy generation, hydraulic conveyance, gravel washing, fire protection, oil well re-pressurization and industrial process water.

3.4 Municipal Use. Uses of water for commercial, institutional, community, military, or public water systems, whether in municipalities or in unincorporated areas of Imperial County.

3.5 Mixed Use. Uses of water that involve a combination of Municipal Use and Industrial Use.

3.6 Non-Agricultural Project. Any project which has a water use other than Agricultural Use, as defined herein.

3.7 Processing Fee. A fee charged by the District Water Department to reimburse the District for staff time required to process a request for water supply for a Non-Agricultural Project.

3.8 Reservation Fee. A non-refundable fee charged by the District when an application for water supply for a Non-Agricultural Project is deemed complete and approved. This fee is intended to offset the cost of setting aside the projected water supply for the project during the period commencing from the completion of the application to start-up of construction of the proposed project and/or execution of a water supply agreement. The initial payment of the Reservation Fee will reserve the projected water supply for up to two years. The Reservations Fee is renewable for up to two additional two-year periods upon payment of an additional fee for each renewal.

3.9 Water Supply Development Fee. An annual fee charged to some Non-Agricultural Projects by the District, as further described in Section 5.2 herein. Such fees shall assist in funding IWRMP or related water supply projects,

3.10 Water User. A person or entity that orders or receives water service from the District.

4.0. CEQA Compliance.

4.1 The responsibility for CEQA compliance for new development projects within the unincorporated area of the County of Imperial attaches to the County of Imperial or, if the project is within the boundaries of a municipality, the particular municipality, or if the project is subject to the jurisdiction of another agency, such as the California Energy Commission, the particular agency. The District will coordinate with the County of Imperial, relevant municipality, or other agency to help ensure that the water supply component of their respective general plans is comprehensive and based upon current information. Among other things, the general plans should assess the direct, indirect, and cumulative potential impacts on the environment of using currently available water supplies for new industrial, municipal, commercial and/or institutional uses instead of the historical use of that water for agriculture. Such a change in land use, and the associated water use, could potentially impact land uses,

various aquatic and terrestrial species, water quality, air quality and the conditions of drains, rivers, and the Salton Sea.

4.2 When determining whether to approve a water supply agreement for any Non-Agricultural Project pursuant to this IWSP, the District will consider whether potential environmental and water supply impacts of such proposed projects have been adequately assessed, appropriate mitigation has been developed and appropriate conditions have been adopted by the relevant land use permitting/approving agencies, before the District approves any water supply agreement for such project.

5.0. Applicability of Fees for Non-Agricultural Projects.²⁴

5.1 Pursuant to this Interim Water Supply Policy, applicants for water supply for a Non-Agricultural Project shall be required to pay a Processing Fee and may be required to pay a Reservation Fee as shown in Table A. All Water Users shall also pay the applicable Connection Fee, if necessary, and regular water service fees according to the District water rate schedules, as modified from time to time.

5.2 A Non-Agricultural Project may also be subject to an annual Water Supply Development Fee, depending upon the nature, complexity, and water demands of the proposed project. The District will determine whether a proposed Non-Agricultural Project is subject to the Water Supply Development Fee for water supplied pursuant to this IWSP as follows:

5.2.1. A proposed project that will require water for a Municipal Use shall be subject to an annual Water Supply Development Fee as set forth in Table B if the projected water demand for the project is in excess of the project's estimated population multiplied by the District-wide per capita usage. Municipal Use projects without an appreciable residential component will be analyzed under sub-section 5.2.3.

5.2.2. A proposed project that will require water for an Industrial Use located in an unincorporated area of the County of Imperial shall be subject to an annual Water Supply Development Fee as set forth in Table B.

5.2.3. The applicability of the Water Supply Development Fee set forth in Table B to Mixed Use projects, Industrial Use projects located within a municipality, or Municipal Use projects without an appreciable residential component, will be determined by the District on a case-by-case basis, depending upon the proportion of types of land uses and the water demand proposed for the project.

5.3. A proposed Water User for a Non-Agricultural Projects may elect to provide some or all of the required water supply by paying for and implementing some other means of providing water in a manner approved by the District, such as conservation projects, water storage projects and/or use of an alternative source of supply, such as recycled water or some source of water other than from the

²⁴ The most recent fee schedules can be found in a link at IID/Water/ Municipal, Industrial and Commercial Customers; or visit by URL at [Imperial Irrigation District : Water Rate Schedules](#)

District water supply. Such election shall require consultation with the District regarding the details of such alternatives and a determination by the District, in its reasonable discretion, concerning how much credit, if any, should be given for such alternative water supply as against the project's water demand for purposes of determining the annual Water Supply Development Fee for such project.

5.4 The District Board shall have the right to modify the fees shown on Tables A and B from time to time.

6. Water Supply Development Fees collected by the District under this IWSP shall be accounted for independently, including reasonable accrued interest, and such fees shall only be used to help fund IWRMP or related District water supply projects.

7. Any request for water service for a proposed Non-Agricultural Project that meets the criteria for a water supply assessment pursuant to Water Code Sections 10910-10915 or a water supply verification pursuant to Government Code Section 66473.7 shall include all information required by Water Code Sections 10910 –10915 or Government Code Section 66473.7 to enable the District to prepare the water supply assessment or verification. All submittals should include sufficient detail and analysis regarding the project's water demands, including types of land use and per capita water usage, necessary to make the determinations outlined in Section 5.2.

8. Any request for water service for a proposed Non-Agricultural Project that does not meet the criteria for a water supply assessment pursuant to Water Code Section 10910-10915 or water supply verification pursuant to Government Code Section 66473.7 shall include a complete project description with a detailed map or diagram depicting the footprint of the proposed project, the size of the footprint, projected water demand at full implementation of the project and a schedule for implementing water service. All submittals should include sufficient detail and analysis regarding the project's water demands, including types of land use and per capita water usage, necessary to make the determinations outlined in Section 5.2.

9. All other District rules and policies regarding a project applicant or Water User's responsibility for paying connection fees, costs of capital improvements and reimbursing the District for costs of staff and consultant's time, engineering studies and administrative overhead required to process and implement projects remain in effect.

10. Municipal Use customers shall be required to follow appropriate water use efficiency best management practices (BMPs), including, but not limited to those established by the California Urban Water Conservation Council BMP's (see <http://www.cuwcc.org/mou/exhibit-1-bmp-definitions-schedules-requirements.aspx>), or other water use efficiency standards, adopted by the District or local government agencies.

11. Industrial Use customers shall be required to follow appropriate water use efficiency BMP's, including but not limited to those established by the California Urban Water Conservation Council and

California Energy Commission, as well as other water use efficiency standards, adopted by the District or local government agencies.

12. The District may prescribe additional or different BMPs for certain categories of Municipal and Industrial Water Users.

(This page intentionally left blank)

ATTACHMENT B: IID EQUITABLE DISTRIBUTION PLAN²⁵

Adopted December 11, 2007

Revised November 18, 2008

Revised April 07, 2009

Revised April 23, 2013

Revised May 14, 2013

Revised October 28, 2013

Revised June 21, 2022

Revised July 26, 2023

²⁵ Equitable Distribution Plan documents. July 26, 2023, <https://www.iid.com/water/rules-and-regulations/equitable-distribution>

Equitable Distribution Plan

Adopted December 11, 2007

Revised November 18, 2008

Revised April 07, 2009

Revised April 23, 2013

Revised May 14, 2013

Revised October 28, 2013

Revised June 21, 2022

Revised July 26, 2023



1.0 Purpose.

1.1 Purpose. The Imperial Irrigation District ("District" or "IID") is authorized by the Irrigation District Law, specifically California Water Code Section 22252, to adopt rules and regulations for the equitable distribution of water within the District. The IID Board of Directors has approved this plan for the equitable distribution of the available water supply (the "Equitable Distribution Plan"). This Equitable Distribution Plan is for the management of the District's available water supply and does not transfer water and/or water rights outside the IID service area, but does allow for an intra-district clearinghouse for the movement of water within the IID water service area. Pursuant to Resolution No. 31-2022, the IID Board of Directors has adopted this revised Equitable Distribution Plan.

2.0 Terms and Definitions.

2.1 Agricultural Water. Water used for irrigation, related to agricultural purposes, duck ponds, and algae farming. Pipe and small parcel water service as identified by the District's *Rules and Regulations Governing the Distribution and Use of Water* is not included in this definition pursuant to Section 2.22.

2.2 Agricultural Water User(s). A District Water User that uses Agricultural Water.

2.3 Agricultural Water Users Category. A category of District Water Users comprised of Agricultural Water Users.

2.4 Apportionment. The amount of water equitably apportioned among District Water Users within each Water User Category pursuant to Sections 3.2, 3.3, and 3.4.

2.5 Available Water Supply. Water available each Calendar Year for Apportionment, which shall not include Operational and System Water and may be subject to a Water Management Reduction.

2.6 Calendar Year. Each 12-month period that begins on January 1 and ends on December 31.

2.7 Category Apportionment. The amount of water equitably apportioned to each Water User Category as a category, which is calculated by the Calendar Year average of the historical water use for that Water User Category as a whole during the years 2003 to 2012, eliminating the highest Calendar Year and lowest Calendar Year of water use history.

2.8 Clearinghouse. A mechanism administered by the District or other entity authorized by the IID Board of Directors to provide a means by which qualified

District Water Users can transfer water within the IID water service area during a Calendar Year pursuant to Section 6.0.

2.9 Cropland. Irrigable acreage within the District service area divided into fields based on the [proprietary] District Geospatial Data Base compiled from IID records, inspections and U.S. Consolidated Farm Service Agency (CFSA) Common Land Unit (CLU) standards, or other defined acreage database such as the assessor's parcel records.

2.10 District or IID. The Imperial Irrigation District.

2.11 District Conservation Assignment. Apportionment contractually or automatically assigned to IID for water conservation purposes from lands participating in or designated for participation in any District On-Farm Efficiency Conservation Program, District Fallowing Program or other District conservation programs, or subject to the Temporary Land Conversion Fallowing Policy or Interim Water Supply Policy per the terms and conditions set forth in those program agreements and/or IID policies.

2.12 District Fallowing Program. Any program administered by the District to create conserved water by fallowing agricultural lands per the terms and conditions set forth in those program agreements and/or IID policies, including the Temporary Land Conversion Fallowing Policy.

2.13 District On-Farm Efficiency Conservation Program. Any program administered by the District to create conserved water by on-farm efficiency conservation measures and/or projects per the terms and conditions set forth in those program agreements and/or IID policies.

2.14 District System Conservation Program/Projects. An integrated package of system improvements to existing infrastructure and construction of new facilities designed to conserve water.

2.15 District Water User. Any user of water supplied by the District receiving an Apportionment.

2.16 Eligible Agricultural Acre(s). Acreage that is subject to the Temporary Land Conversion Fallowing Policy or meets all the following:

- a. Cropland greater than 5 acres;
- b. Used for crop production, duck ponds or algae farming;
- c. Current with water availability charges and water bills; and
- d. Connected to District water distribution system.

2.17 Farm Unit. A grouping of two or more Agricultural Water accounts of one or more fields leased or owned by the same Agricultural Water User; a single Agricultural Water account is automatically a Farm Unit.

2.18 Hybrid Apportionment. A Method of Apportionment used to calculate the Apportionment per Eligible Agricultural Acre within the Agricultural Water Users Category as set forth in Section 3.2.

2.19 Industrial/Commercial Water User(s). District Water Users receiving water directly from the District, and not from a Potable Water User, for industrial and commercial uses.

2.20 Industrial/Commercial Water Users Category. A category of District Water Users comprised of Industrial/Commercial Water Users.

2.21 Method of Apportionment. The method of apportionment used to calculate the Apportionment for District Water Users within each Water User Category during a Calendar Year.

2.22 Operational and System Water. Water not available for Apportionment because it is: (i) required by law, contract, and/or regulatory order or permit to be delivered or used for another use or user and failure to do so would impact the District's operations, maintenance and/or Available Water Supply; (ii) required for the District's operations and maintenance, including operational carriage and discharge water, system losses, seepage (excluding water from seepage interception conservation projects), evaporation or other losses in the District's distribution system, such as unmetered uses which cannot otherwise be calculated, including small parcel and pipe water service, recreation/lakes, and feedlots, adjusted for calculated losses from the District's point of diversion; or (iii) created by District System Conservation Program/Projects and absent the District System Conservation Program/Projects the water would not have been available for Apportionment because it would have been otherwise lost, such as through seepage or discharge.

2.23 Other District Conservation Program. Any program administered by the District to create conserved water by any means identified by the District per the terms and conditions set forth in program agreements and/or IID policies.

2.24 Overrun Payback Program. A program consistent with the federal Inadvertent Overrun and Payback Policy or other federal policies or programs to which the District may be subject, by which the cost of and/or responsibility for any District payback obligation will be borne by those District Water Users responsible for exceeding the Apportionment in a Calendar Year (adjusted for any Clearinghouse water transferred) should a District overrun occur in that Calendar Year; provided that this Overrun Payback Program shall not be available to District Water Users in any Calendar Year the federal

Inadvertent Overrun and Payback Policy is suspended and/or the District is not allowed to overrun pursuant to a federal law, rule, or regulation.

2.25 Potable Water User(s). District Water Users receiving water from the District and treating that water through a water treatment system to deliver potable water to its water users, including but not limited to municipalities and special districts.

2.26 Potable Water Users Category. A category of District Water Users comprised of Potable Water Users.

2.27 Take-or-Pay Basis. An obligation that District Water Users pay, pursuant to the District's Water Rate Schedules and *Rules and Regulations Governing the Distribution and Use of Water*, for all of the Apportionment accepted by the District Water User and not used during the Calendar Year.

2.28 Three-Year Average Apportionment. A Method of Apportionment used to calculate the Apportionment for each District Water User within the Potable Water Users Category and the Industrial/Commercial Water Users Category as set forth in Sections 3.3 and 3.4.

2.29 Water Card. The common term for the "Certificate of Ownership and Authorization of Owner Designee or Tenant" described in Regulation No. 3 of the District's *Rules and Regulations Governing the Distribution and Use of Water*. The Water Card provides information i.e., Cropland, name and address of owner and any lessees, APN, gate and canal providing water service, identity of person authorized to order water/receive notices from the District, who is obligated to pay, and similar information.

2.30 Water Management Reduction. A reduction in Available Water Supply for Apportionment, or a percentage reduction in each Category Apportionment, because of a District-wide overrun payback requirement mandatory program, or regulatory limitation of or reduction in the District's Colorado River water supply.

2.31 Water Users Category(ies). The Agricultural Water Users Category, the Potable Water Users Category, and the Industrial/Commercial Water Users Category.

3.0 Equitable Distribution.

3.1 Category Apportionment and District Water User Apportionment. Each Water User Category shall receive a Category Apportionment from the Available Water Supply to be distributed to the District Water Users within that Water User Category. Once the Category Apportionment is calculated for each Water User Category, each District Water User within each Water User Category will be apportioned water in accordance with Sections 3.2, 3.3, and 3.4, provided that the aggregate apportioned water to District Water Users within each Water User Category shall not exceed the Category Apportionment for that Water User Category.

3.2 Agricultural Water User Apportionment. Apportionment models understood and discussed to date are historical, straight line, soil type and hybrids of a combination of these methods. The default Method of Apportionment for Agricultural Water Users is the Hybrid Apportionment, which may be changed for any Calendar Year prior to the notification period set forth in Section 4.1 at the discretion of the IID Board of Directors. The Hybrid Apportionment is comprised of a historical use component and a straight line component and is calculated for each Eligible Agricultural Acre as the sum of:

a. One-half of the average amount of water used each Calendar Year between 2003 to 2012, excluding the highest and lowest Calendar Years, up to a maximum of 10 acre-feet (i.e., 5 acre-feet will be maximum 1/2 of 10 acre-feet limit); and

b. After the historical use component is calculated for every Eligible Agricultural Acre within the Agricultural Water User Category and that amount is subtracted from the Category Apportionment, the remaining amount of Category Apportionment for the Agricultural Water User Category is divided by the Eligible Agricultural Acres resulting in a flat amount for each Eligible Agricultural Acre.

3.3 Potable Water User Apportionment. The default Method of Apportionment for Potable Water Users is the Three-Year Average Apportionment, which may be changed for any Calendar Year prior to the notification period set forth in Section 4.1 at the discretion of the IID Board of Directors. The Three-Year Average Apportionment is calculated as up to the average amount of water used each of the most recent three Calendar Years that such data is available for each District Water User within the Potable Water User Category.

3.4 Industrial/Commercial Water User Apportionment. The default Method of Apportionment for Industrial/Commercial Water Users is the Three-Year Average Apportionment, which may be changed for any Calendar Year prior to the notification period set forth in Section 4.1 at the discretion of the IID Board of Directors. The Three-Year Average Apportionment is calculated as up to the average amount of water used each of the most recent three Calendar Years that such data is available for each District Water User within the Industrial/Commercial Water User Category.

4.0 Apportionment Acceptance on Take-Or-Pay Basis.

4.1 A written notice of the Apportionment for each District Water User shall be sent no later than October 31 prior to the beginning of the next Calendar Year. For Agricultural Water Users, the written notice of the Apportionment will be identified per Eligible Agricultural Acre and the number of Eligible Agricultural Acres per landowner, which shall be sent to the landowner, lessee and the authorized representative.

4.2 Prior to the start of the Calendar Year, the District Water User and/or, as applicable, the landowner or authorized representative (of Eligible Agricultural Acres

for the Agricultural Water Users Category), with written consent of the lessee (if any), must, using a District form:

- a. Accept some, all or none of the Apportionment on a Take-or-Pay Basis.
- b. Reserve some or all of the Apportionment on a Take-or-Pay Basis for the use of a future lessee, if applicable. The landowner remains responsible for payment on a Take-or-Pay Basis for the amount reserved for the future lessee, if applicable, unless and until payment is made by the future lessee.
- c. Designate the person or entity responsible for payment of accepted and unused Apportionment on the Take-or-Pay Basis.

For Agricultural Water Users only, approve or disapprove the use of the Apportionment on other fields within the Farm Unit.

- a. Allow or disallow a lessee to offer accepted and unused Apportionment to the Clearinghouse.

4.3 The District Water User and/or landowner will only be responsible for payment on a Take-or-Pay Basis for Apportionment that is accepted and remains unused in the water account at the end of the Calendar Year. On December 31 of the Calendar Year, payment for any remaining amount of the unused Apportionment will be included in the year end invoice.

4.4 Apportionment not affirmatively rejected is considered accepted. In the event a District form accepting Apportionment is not received for a field, IID will provide water delivery service to an owner or lessee with a valid Water Card in an amount not to exceed the Apportionment.

5.0 **Farm Units.**

5.1 The Farm Unit allows for the creation of a master Agricultural Water account under which individual Agricultural Water accounts are aggregated. The District will continue to bill for delivered water by individual Agricultural Water account and not by the Farm Unit or “master water account.”

5.2 The primary purpose of a Farm Unit is to allow an Agricultural Water User to order water on any field within the Farm Unit as long as there is a remaining water balance for the Farm Unit greater than the water order. If water is not available within the Farm Unit, the water order will not be accepted, unless and until procedures are developed and implemented under this Equitable Distribution Plan, including procedures for the Overrun Payback Program, that allow for the acceptance of the water order.

5.3 The District will account for water and track a water balance for each field. Fields can move between Agricultural Water accounts when there is a change to the Water Card and the water balance for the field will move with the field.

5.4 Agricultural Water Users must complete and keep current the Water Card and any Farm Unit designations to receive an Apportionment and delivery of water. It is the Agricultural Water User's responsibility to keep Farm Unit designations current.

5.5 An Agricultural Water account may only be associated with a single Farm Unit at any one time. Any Agricultural Water account not designated as part of a Farm Unit will be tracked and identified as an individual Farm Unit comprised solely of that Agricultural Water account.

5.6 The amount of Apportionment available to an Agricultural Water User on leased fields included in a Farm Unit must be approved by the landowner and lessee of those fields.

5.7 Water can be added to a Farm Unit by transferring water through the Clearinghouse, but the transfer must be made to individual fields within the Farm Unit. If no particular fields are specified, the District will select a field within the Farm Unit to initially receive the water or (as closely as possible) equally divide the water among all Eligible Agricultural Acres within the Farm Unit.

5.8 An Agricultural Water User may designate multiple Farm Units. Apportionment may only be transferred between Farm Units via the Clearinghouse.

5.9 The priority of water use within a Farm Unit is (a) accepted Apportionment authorized for use on the field, (b) water from other fields authorized for transfer within the Farm Unit, and (c) water from the Clearinghouse; or as otherwise provided in procedures developed and implemented under and pursuant to this Equitable Distribution Plan. Water from a higher-priority category must be fully-used before water from a lower-priority category may be used within a Farm Unit.

6.0 **Clearinghouse.**

6.1 **Purpose.** The Clearinghouse is a mechanism to facilitate the movement of water between District Water Users and/or between Farm Units. Administration of the Clearinghouse may be delegated by the District to an entity authorized by the IID Board of Directors on a non-profit basis under rules approved by the IID Board of Directors, however all final transactions must be reported to the District for implementation.

6.2 **Eligibility.** Any District Water User may be a transferee. Any District Water User may be a transferor. All transferees and transferors must be current on their District water accounts and billings, including water availability charges.

6.3 Transfers. Water made available to the Clearinghouse for transfer will be assigned to Clearinghouse accounts and water shall be transferred through the Clearinghouse pursuant to procedures developed and implemented under and pursuant to this Equitable Distribution Plan. Water available for transfer will be made on a first-come, first-serve basis for those District Water Users that have submitted an offer to transfer water or submitted a request for additional water; except that a District Water User may direct the transfer of their offered water to a designated requesting District Water User within the same Water User Category.

6.4 Clearinghouse Transfer Form. The transfer form will be the Clearinghouse form used to document all transfers of water including the relevant transactional information to execute the transaction between the transferor and transferee.

6.5 Water Transferred Through the Clearinghouse. The transferee shall be billed and shall pay the District for the transferred water when ordered for delivery in the same manner, time and amount as any other water ordered pursuant to the District's Water Rate Schedules and *Rules and Regulations Governing the Distribution and Use of Water*. After the District processes the Clearinghouse transfer form, the transferor shall have no further obligation for payment of that water on a Take-or-Pay Basis. Any supplemental transactional information or fees associated with the transfer of the water between the transferor and transferee but not relevant to the implementation of the transaction are a private matter and shall not be reported to the District. Any transfers of water, whether within the Farm Unit or via the Clearinghouse, are only for the Calendar Year in which they occur and do not constitute a permanent transfer of water, or create a right to be apportioned water in future years.

6.6 Offers Remaining at Calendar Year End. Any offers for water to be transferred through the Clearinghouse not transferred by the end of the Calendar Year may be used by the District to meet the needs of other District Water Users, fulfilling conservation responsibilities, or for other District purposes. Use by the District in this manner will not relieve the District Water Users of payment required on the Take-or-Pay Basis.

7.0 On-Farm Conservation and Land Fallowing Programs.

7.1 An Agricultural Water User that participates in the District On-Farm Efficiency Conservation Program, District Fallowing Program, or Other District Conservation Program is subject to a District Conservation Assignment of the Agricultural Water User's accepted Apportionment for the Farm Unit equal to the amount of water conserved for which the Agricultural Water User is contracted.

7.2 If the Agricultural Water User's Apportionment is less than the District On-Farm Efficiency Conservation Program, District Fallowing Program, or Other District Conservation Program contracted amount, the Agricultural Water User must procure this

difference from either: the Agricultural Water User's accepted Apportionment on other Eligible Agricultural Acres within the Farm Unit, or the Clearinghouse.

7.3 If the Agricultural Water User's Apportionment is more than the District Following Program contracted amount, the Agricultural Water User may use the difference on other Eligible Agricultural Acres within the Farm Unit not participating in a District Following Program, on the fallowed field after the term of the District Following Program, or offer it to the Clearinghouse.

8.0 **Miscellaneous.**

8.1 The IID Board of Directors, at its sole discretion, which may include consideration of recommendations by the Agricultural Water Advisory Committee, may declare a 15-day period in which all offers of water received by the Clearinghouse, of up to 7% (seven percent) of the District Water User's Apportionment, shall be accepted by the District thereby relieving the District Water Users of payment of that water on the Take-or-Pay Basis. This water accepted by the District will be offered back for transfer to other District Water Users via the Clearinghouse.

8.2 The General Manager is authorized and directed to do any and all things necessary to implement and effectuate these Regulations in a manner consistent with this policy, including the temporary modification of any dates necessary to facilitate implementation.

8.3 In the event of a Water Management Reduction, the IID Board of Directors, at its sole discretion, may take any actions it determines and finds are necessary to protect the public health and safety.

8.4 The IID Board of Directors may terminate the implementation of an annual Apportionment at any time at its discretion or upon recommendation of the Agricultural Water Advisory Committee. The District shall track actual water demands during the Calendar Year.

Attachment C
Appeal Request by Comite Civico de Valle

LAW OFFICE OF JORDAN R. SISSON

LAND USE, ENVIRONMENTAL & MUNICIPAL LAW

3993 Orange Street, Suite 201
Riverside, CA 92501

Office: (951) 405-8127
Direct: (951) 542-2735

jordan@jrsissonlaw.com
www.jrsissonlaw.com

December 22, 2023

VIA EMAIL & HAND-DELIVERED:

Jim Minnick, Planning & Development Services Director (jimminnick@co.imperial.ca.us)
c/o David Black, Senior Planner (davidblack@co.imperial.ca.us)
Imperial County Planning & Development Services Department, Imperial County
801 Main Street
El Centro, CA 92243

RECEIVED

DEC 22 2023

IMPERIAL COUNTY
PLANNING & DEVELOPMENT SERVICES

**RE: APPEAL OF HELL'S KITCHEN POWERCO I AND LITHIUM CO I PROJECT;
CONDITIONAL USE PERMIT NOS. CUP #21-0020 & CUP #21-002;
VARIANCES NOS. V #21-0004 & V #21-0005;
WATER SUPPLY ASSESSMENT
ENVIRONMENTAL IMPACT REPORT (SCH No. 2022030704)**

Dear Mr. Minnick and:

On behalf of Comité Civico del Valle (“**Comité**” or “**Appellant**”), this office respectfully appeals (“**Appeal**”) the proposed construction of a geothermal power plant that will produce up to 49.9 megawatts net of geothermal green energy (“**HKPI**”) and construction of a related mineral extraction and processing facilities capable of producing lithium hydroxide, silica, bulk sulfide, and polymetallic products for commercial sale (“**HKLI**”) (collectively “**Project**”) located within the Salton Sea geothermal field near adjacent to Davis Road and south of Noffsinger Road in Imperial County, California (“**Site**”). In furtherance of the Project, Controlled Thermal Resources (US) Inc., via its subsidiary Hell’s Kitchen Geothermal, LLC (collectively “**Applicant**”) seeks approval from the County of Imperial (“**County**”) for multiple land use approvals under the Imperial County Code (“**ICC**” or “**Code**”), including two Conditional Use Permits (i.e., Nos. 21-0020 & 21-002) to allow the geothermal energy and mineral extraction use, and two Variances (i.e., Nos. 21-0004 & 21-0005) to increase some of the heights of proposed structures from the allowed 35 feet to up to 110 feet tall (collectively “**Entitlements**”). Additionally, for environmental review under the California Environmental Quality Act (“**CEQA**”), the Applicant seeks approval for an Environmental Impact Report (SCH # 2022030704) (“**EIR**”) and Mitigation Monitoring and Reporting Program (“**MMRP**”). Furthermore, as part of the CEQA review, the Applicant seeks approval of Water Supply Assessment (“**WSA**”) to assess the Project’s water demand for up to a 50-year period as well as evaluate reasonably foreseeable planned future water demands to be served by the Imperial Irrigation District (“**IID**”).

On December 13, 2023, the County Planning Commission (“**CPC**”) granted the requested Entitlements, certified the EIR, and approved the MMRP and WSA (collectively “**Project Approvals**”).¹ Subject to a ten-day appeal deadline, CPC’s action on the Project Approvals may be appealed to the Board of Supervisors (“**BOS**”). (ICC § 90104.05.B.1.) *Comité hereby appeals* and provides the following information requested pursuant to ICC § 90104.05 subdivision B.4.

¹ CPC (12/13/23) Agenda, pp. 4-6 (Item 8(a) through (g)), <https://www.icpds.com/assets/hearings/12-13-23-PC-Agenda-REG-1701361250.pdf>; see also CPC (12/13/23) “**Project Report**” for Item 8 (inclusive of attachments “**ATTM**” thereto), <https://www.icpds.com/assets/hearings/8.-CUP21-0020-CUP21-0021-Hell's-Kitchen-PC-Hearing-Pkg-12-13-23-1702404597.pdf>.

In short, while Comité is not opposed to lithium development near the Salton Sea (as a general matter), it is very concerned about the proposed Project that is relying on a fatally flawed EIR that does not address the full range of impacts of the Project that includes the novel operation of direct lithium extraction ("DLE") (as well as other minerals). Of particular concern are the potential impacts on freshwater usage, air quality related to hydrochloric acid ("HCl") and exacerbating Salton Sea degradation, exposure to various hazards, the potential for increased seismic activity caused by drilling and brine extraction/reinjection, consistency with County General Plan goals and programs, and greenhouse gas ("GHG") emissions. Additionally, we are concerned with the EIR's lack of a stable project description, potential project piecemealing, and the EIR's response to Draft EIR comments. The errors ultimately prevent the consideration of additional mitigation measures, project alternatives, and the adequacy of overriding consideration. So too, these errors infect the Code-required findings for the Project Approvals (including the WSA and Entitlements).

For the reasons discussed herein this Appeal (and Exhibits A through N attached hereto), Comité respectfully requests the BOS grant the Appeal and stay action on the Project Approvals until a CEQA-compliant Draft EIR is recirculated that addresses the concerns raised by Comité and other commenters. Such a revised CEQA analysis includes additional enforceable mitigation measures, with an adequate range of project alternatives and enforceable conditions that continue to monitor changing developments to this entirely novel operation proposed by the Applicant. This could potentially be achieved through the use of a development agreement that provides the County flexibility to monitor changing conditions, implement developing best practices, and codify genuine community benefits.

A. Name of Person(s) Filing Appeal, Contact Information & Standing.

This Appeal is being filed on behalf of Comité Civico del Valle and its members, including but not limited to Christian A. Torres. All notices and correspondence concerning this Appeal should be sent directly to the following:

Jordan R. Sisson
Law Office of Jordan R. Sisson
3993 Orange St., Ste. 201
Riverside, CA 92501
Office: 951-405-8127
jordan@jrsissonlaw.com

Christian A. Torres
Comite Civico del Valle, Inc
235 Main Street
Brawley, CA 92227
760-790-6112
christian@ccvhealth.org

Comité Civico del Valle is a California non-profit organization with an extensive background and accomplishments that date back to its grassroots origins in 1987. Founded in Imperial County, Comité's mission is to improve the lives of disadvantaged communities, informing, educating, and engaging the community's civic participation. The organization has grown to serve children, students, community residents, and professionals throughout Imperial County (and other areas of California) through a variety of programs: Promotoras, Community Outreach Events, Educator Training, Health Education, Environmental Health Research, and our Annual Environmental Health Leadership Summit. With over three decades of serving the communities of Imperial Valley, Comité now serves various California communities through collaborative efforts with other established Environmental Justice organizations and in partnership with researchers, academia, and government agencies. It has members who live, work, and play in Imperial County and in communities near the Project Site and have a direct interest in seeing the Project's compliance with state and local land use and environmental laws. As such, Comité has both association and public interest standing to challenge the Project Approvals. (See e.g., *Save the Plastic Bag Coalition v. City of Manhattan Beach* (2011) 52 Cal.4th 155, 166; *Weiss v. City of Los Angeles* (2016) 2 Cal.App.5th 194, 205-206; *Bhd. of Teamsters & Auto Truck Drivers v. Unemployment Ins. Appeals*

Bd. (1987) 190 Cal.App.3d 1515, 1522; *Simons v. City of Los Angeles* (1979) 100 Cal.App.3d 496, 500-501; *Residents of Beverly Glen, Inc. v. Los Angeles* (1973) 34 Cal.App.3d 117; *Rialto Citizens for Responsible Growth v. City of Rialto* (2012) 208 Cal.App.4th 899, 914-916, n6; *La Mirada Avenue Neighborhood Assn. of Hollywood v. City of Los Angeles* (2018) 22 Cal.App.5th 1149, 1158-1159.)

B. Project/Decision Being Appealed.

As described further in the CPC Project Report dated December 13, 2023,² the Project being appealed is the geothermal green energy (i.e., **HKPI**) and related mineral extraction/processing facilities (i.e., **HKLI**) located adjacent to Davis Road and south of Noffsinger Road in Imperial County, California. (See Project Report, pp. 1-2 & ATTM-A.) On December 13, 2023, the County Planning Commission approved various resolutions to grant, certify, or otherwise approve multiple Project Approval, including: (i) WSA for the Hell's Kitchen PowerCo I and LithiumCoI Project dated November 2023 (id., at ATTM-B); (ii) the EIR (State Clearinghouse # 2022030704) and associated MMRP (id., at ATTM-C & ATTM-D); (iii) CUP No. CUP #21-0020 (id., at ATTM-E); (iv) CUP No. CUP #21-002 (id., at ATTM-F); (v) Variances No. V #21-0004 (id., at ATTM-G); (vi) Variances No. V #21-0005 (id., at ATTM-H).

C. Reason For Filing Appeal, Including Facts, Condition(S), Information, Error, Or Other Specifics To Warrant Appeal.

Based on the review of the record and other relevant documents, the CPC's granting of the Project Approvals violates CEQA and the ICC. The specific facts, conditions, information, and basis are explained in oral and written testimony already submitted to the County, including but not limited to written comments attached hereto (Exhibits A through N) and the oral comments made at the December 13, 2023 CPC meeting, such as those made by Jared Naimark, James Blair, and Christian Torres.³ For sake of brevity, this appeal summarizes the following reasons.

As a threshold matter, under CEQA, courts review an EIR using an 'abuse of discretion' standard, that standard does not permit a court to "'uncritically rely on every study or analysis presented by a project proponent in support of its position ... [.] [a] clearly inadequate or unsupported study is entitled to no judicial deference.'" (*Berkeley Keep Jets Over the Bay v. Bd. of Port Comm'rs.* (2001) 91 Cal.App.4th 1344, 1355.) A prejudicial abuse of discretion occurs "if the failure to include relevant information precludes informed decisionmaking and informed public participation, thereby thwarting the statutory goals of the EIR process." (*San Joaquin Raptor/Wildlife Rescue Center v. County of Stanislaus* (1994) 27 Cal.App.4th 713, 722; see also *Galante Vineyards v. Monterey Peninsula Water Management Dist.* (1997) 60 Cal.App.4th 1109, 1117; *County of Amador v. El Dorado County Water Agency* (1999) 76 Cal.App.4th 931, 946.) Here, CPC abused its discretion by relying on a seriously flawed Project EIR.

1. *The Project EIR fails to use an accurate, stable and finite project description is the sine qua non of an informative and legally sufficient EIR.* (See *San Joaquin Raptor Rescue Ctr. v. Cnty. of Merced* (2007) 149 Cal.App.4th 645, 654-655.) Here, multiple commenters raised various issues with the lack of information about the Project operations details about the brine pond, clarifiers, filter cake presses, brine composition, and the proprietary information about the extraction and reinjection process. (See e.g., Exh. A, PDF p. 3; Exh. B, pp. 1-2; Exh. E, pp. 1-2; Exh. M, p. 8; Exh. K, p. 2.) Additionally, there is a lack of detail or recognition about the novelty of DLE not yet proven at a commercial scale, as well as the substantial use of acids and other propriety information involving lithium extraction. (Exh. B, pp. 1-2.) So too, multiple commenters raised concerns about the lack of substantial evidence to justify purported

² Supra fn. 1.

³ See CPC (12/13/23) Video, approximate hh:mm:ss 00:20:00-01:05:00, https://imperial.granicus.com/player/clip/2479?view_id=2&redirect=true&h=5d42f0fba9b3b04c6db9f37c1463c80e.

efficiencies the Project would achieve (e.g., 95% capacity factor compared to 78% national average). (Exh. C, p. 4; Final EIR, p. ES-123.) So, too, the EIR considers the potential impacts of not adequately managing the Salton Sea region's lithium/mineral resources, as mentioned by Hudson Ranch Power I LLC. (See Final EIR, pp. ES-122 – ES-123.) The EIR fails to consider potential impacts from rapid mineral extraction, such as the long delay to recharge the reinjected brine with concentrated lithium—likely taking “centuries” to achieve.⁴ Furthermore, the EIR considers other project components, such as directional drilling and dewatering activities. (See Exh. K, p. 2; Exh. L, pp. 2-3; Exh. M, pp. 3-7.) In sum, the lack of a sufficient project description amounts to an abuse of discretion.

2. The FEIR also potentially engages in improper piecemealing. (See CEQA Guidelines § 15378; *City of Santee v. County of San Diego* (1989) 214 Cal.App.3d at 1454; *San Joaquin Raptor/Wildlife Rescue Center v. Cnty. of Stanislaus* (1994) 27 Cal.App.4th 713, 730 [held use of “truncated project concept” violated CEQA where EIR was otherwise adequate].) Here, as discussed above, the Project fails to address directional drilling (see Exh. K, p. 2; Exh. L, pp. 2-3), which the EIR claims will be subject to future environmental review and CEQA compliance. (Final EIR, p. ES-66.) This may lead to the improper chopping of project impacts, that CEQA prohibits.

3. The Project EIR lacks substantial evidence to support many of its each of its conclusions in its impact analysis, such as the following areas that suffer various flaws.

a. **Water:** For example, the EIR has numerous conflicting information about how much water supply is required, as noted by numerous commenters. (See Exh. A, PDF p. 5; Exh. B, pp. 4-5; Exh. F, p. 3; Exh. G, p. 2; Exh. M, pp. 8, 12-14.) Even assuming the Project requires purportedly 6,500 acre-feet of water per year (“AFY”), that must be put into context of IID’s 25,000 AFY reserves for non-industrial uses, which have already been reduced to around 19,620 AFY based on previously approved projects, and the three geothermal plants proposed by BHE Renewables that estimates over 13,000 AFY between just these three geothermal projects. (See Exh. B, pp. 4-5; Exh. M, pp. 9, 11-13.) Hence, the Project, in the context of these three other foreseeable geothermal developments, would entirely exhaust IID’s available non-industrial reserves, notwithstanding the very likelihood that IID will have to make further water cuts from its Colorado River allotment, as explained by IID and other commenters and detailed in the recent Earthworks lithium extraction study. (See e.g., Exh. A, PDF p. 5; Exh. C, p. 2; Exh. N, pp. 25-27.)

b. **Air Impacts:** The EIR’s air quality fails to consider various potential impacts related to HCl vapor emissions or impacts caused by exacerbating Salton Sea degradation due to the Project’s consumption of additional freshwater that may otherwise flow into the Salton Sea. (Exh. C, p. 1; Exh. M, pp. 11-14; Exh. N, pp. 23-24) The EIR makes no effort to address this latter point, despite being raised by Comité and IID and being a known area of controversy. (See e.g., Exh. K, p. 2; Exh. M, pp. 11-14; Exh. N, pp. 27-28.)

c. **Hazards & Waste:** The Final EIR fails to provide sufficient details about the Project’s byproduct after mineral extraction and adequately discuss their disposal and potential cleanups from spills, which is foreseeable based on past experience with Cal Energy/BHE Renewable’s nearly \$1.0 million penalty/soil remediation agreement. (See Exh. B, p. 2-3; Exh. C, p. 5; Exh. D, Exh. F, pp. 3; Exh. N, pp. 29-30.)

///

⁴ California Council on Science and (Dec. 2022) Lithium Extraction from Geothermal Brine, hh:mm:ss 00:40:00 – 00:41:50, <https://www.youtube.com/watch?v=YPLtReh7NzY>.

d. **Increase Seismic Activity:** The EIR does not address concerns that geothermal drilling and mineral extraction/reinjection may lead to increase seismic activity. (See Exh. B, p. 2; Exh. N, p. 31.)

e. **Land Use Inconsistencies:** The EIR fails to identify inconsistencies with County General Plan goals and programs, such as those identified by IID (e.g., Conservation & Open Space Element Goal 1, 6, 6.3 and the first and last program under the Water Element). (See Exh. M, pp. 10-11.)

f. **GHG:** The EIR fails to substantiate that 37,000+ MTCO₂e emissions would be entirely avoided or adequately consider the operational truck emissions resulting from the shipment of minerals in the event that the truck fleet is not entirely electric. (Exh. A, PDF p. 3.)

4. The EIR fails to consider relevant past, current, and reasonable probable future projects related to renewable energy, including geothermal power and lithium extraction, which ultimately infects the EIR's cumulative impacts analysis. (See *San Joaquin Raptor/Wildlife Rescue Center v. County of Stanislaus* (1994) 27 Cal.App.4th 713, 740 [cumulative impacts discussion was inadequate where other development projects were not listed and adequately discussed]; *Kings County Farm Bureau v. City of Hanford* (1990) 221 Cal.App.3d 692, 723-724.) Here, as discussed above, multiple commenters raised various concerns about projects not considered in the EIR's related projects, such as BHE Renewables proposed three geothermal plants (Morton Bay Geothermal, Black Rock Geothermal, Elmore North Geothermal). (See Exh. A, PDF p. 3 Exh. B, pp. 4-5; Exh. C, p. 2; Exh. M, p. 9, 11-14.) This flaw is particularly fatal to the EIR's cumulative impact analysis on water usage. As mentioned above, the Project's purported 6,500 AFY plus the three foreseeable geothermal projects (estimated to require over 13,000 AFY) would roughly equal IID's remaining 19,620 AFY of reserves.

5. The EIR fails to use mitigation measures that are based on enforceable performance criteria and/or relies on deferred mitigation. (See CEQA Guidelines § 15126.4(a)(1)(B); *City of Maywood v. Los Angeles Unified School Dist.* (2012) 208 Cal.App.4th 362, 407; *Communities for a Better Environment v. City of Richmond* (2010) 184 Cal.App.4th 70, 92-93; *Oro Fino Gold Mining Corp. v. County of El Dorado* (1990) 225 Cal.App.3d 872, 884.) Here, multiple commenters raised various concerns about inadequate mitigation measures, such as details regarding the transportation plan during operations of the Project, Tier 4 final engines for offroad construction equipment, additional NOX mitigations, deferred biological mitigation for various species (e.g., Yuma Ridgway's rail habitat, Burrowing Owl, pupfish habitat), the number of EV parking stalls for auto and trucks, future hazardous soil sampling, and others. (See e.g., Exh. A, PDF pp. 4-5; Exh. C, pp 1-5; Exh. G, p. 1; Exh. M, pp. 2-7, 9.) Of particular concern is the non-specific mitigation for freshwater usage that the Applicant will work with IID in the future (i.e., mitigation measure UTIL-1), which was objected to by even IID (as well as others). (See e.g., Exh. D, pp. 1-2; Exh. M, pp. 11.) Other mitigation measures/conditions are improperly deferred and/or lacking meaningful performance measures a (see Project Report, ATTM D [e.g., AQ-2, BIO-1 through BIO-3, BIO-9 - BIO-11, BIO-13 - BIO-14, BIO-19, GEO-1 - GEO2] & ATTM E [Site Specific Conditions S-22, S-23].) Ultimately, the EIR could have considered additional feasible mitigation measures and safeguard if a proper CEQA analysis was performed in the first instances.

6. The Project EIR fails to consider a reasonable range of alternatives and mitigation measures meaningfully. (See *Mountain Lion Foundation v. Fish & Game Com.* (1997) 16 Cal.4th 105, 134.) Here, the flawed analysis avoided significant impact determination that skewed the alternative analysis. (See Exh. A, PDF p. 6.)

///

7. The EIR's skewed analysis infected the EIR's statement of overriding considerations. When approving a project that will have significant environmental impacts that are not fully mitigated, a lead agency must adopt a "statement of overriding considerations," finding that the project's benefits outweigh its environmental harm. (See CEQA Guidelines § 15043; Pub. Res. Code § 21081(b); *Sierra Club v. Contra Costa County* (1992) 10 Cal.App.4th 1212, 1222.) An overriding statement expresses the "larger, more general reasons for approving the project, such as the need to create new jobs, provide housing, generate taxes and the like." (*Concerned Citizens of S. Central LA v. Los Angeles Unif. Sch. Dist.* (1994) 24 Cal.App.4th 826, 847.) It must fully inform and disclose the specific benefits expected to outweigh environmental impacts, supported by substantial evidence. (CEQA Guidelines §§ 15043(b), 15093(b); *Sierra Club*, 10 Cal.App.4th at 1223.) Here, the EIR's flawed analysis skewed this analysis by understating impacts that could be mitigated or avoided. The County cannot assume the purported benefits of the Project outweigh the impacts the EIR failed to fully disclose. Additional public benefits could be developed in a future CEQA-compliant EIR and codified in an enforceable development agreement.

8. The Final EIR's response to comments is legally inadequate because it fails to provide a good faith, reasoned analysis of numerous expert comments. (See Pub. Res. Code § 21091(d)(2)(B); CEQA Guidelines § 15088(c); *City of Long Beach v. Los Angeles Unified School Dist.* (2009) 176 Cal.App.4th 889, 904 [the requirement of a detailed written response to comments ensures well-informed decisionmaking by agencies, full consideration of environmental consequences, with meaningful public participation].) Here, the Final EIR provided only cursory generic responses to numerous detailed Draft EIR comments submitted by multiple commenters, such as those submitted on behalf of Comité, the State Lands Commission, and IID. (*Compare* Final EIR, pp. ES-66 – ES-67, ES-99 – ES-100, ES-177 – ES-180 with Exh. A through G, L & M.) This is a departure from the EIR prepare's past practice of responding to individual comments, such as the case it did for the recent Energy Source Mineral ATLiS project. (See Exh. I.) Furthermore, it seems the Final EIR failed to include any response to Draft EIR comments submitted by the Pacific Institute. (See Exh. J.)

9. The EIR's flawed water analysis infects the WSA in violation of CEQA and the State Water Code. As discussed above, the WSA is fundamentally flawed, and the conclusion that water supplies will not be impacted is not supported by substantial evidence. The WSA's flawed analysis avoids the determination that supplies may be insufficient and the need to describe plans for acquiring additional water supplies. (See Water Code § 10911(c); CEQA Guidelines § 15155(e).) Here, the WSA cannot rely on a narrow analysis that ignores relevant information showing future water supplies are uncertain about the water needs of this novel operation. (See e.g., *Madera Oversight Coalition, Inc. v County of Madera* (2011) 199 CA4th 48, 104 [overruled on other grounds in *Neighbors for Smart Rail v Exposition Metro Line Constr. Auth.* (2013) 57 C4th 439]; *Preserve Wild Santee v City of Santee* (2012) 210 CA4th 260, 282.)

10. The flawed EIR and WSA analysis, infect the Code-required findings for many of the Project Approvals. For instance, the above-mentioned issues infects the findings for the adequacy of the Project EIR and MMRP. (Project Report, ATTM-C & D.) Also, the EIR's failure to adequately address the Project-level and cumulative impacts on water usage infects all WSA findings made by CPC. (Project Report, ATTM-B [Sections 1 & 2].) Furthermore, the EIR's flawed analysis run counter to Code-required findings for the Entitlements, such as those related to General Plan consistency, compliance with applicable state/local laws (like CEQA), and that the Project would not detrimental to public safety or welfare. (See ICC § 90203.09 subds. A, D, E, F [CUP findings]; 90202.08.A(2) [Variance finding].) Here, these findings are not supported by substantial evidence and, therefore, should not have been granted. (See e.g., *Topanga Assn. for a Scenic Community v. County of Los Angeles* (1974) 11 Cal.3d 506, 517; *West Chandler Boulevard Neighborhood Assn. v. City of Los Angeles* (2011) 198 Cal.App.4th 1506,

1522 (city abused its discretion when acting on “evidence not in the record ... [where] conclusory findings did not show how the city council traveled from evidence to action.”)

By this reference, Appellant incorporates all prior comments attached hereto (Exhibits A through N) into this Appeal and reserves the right to supplement these comments and specific appeal points in the future. (See *Galante Vineyards v. Monterey Peninsula Water Management Dist.* (1997) 60 Cal.App.4th 1109, 1120 [CEQA litigation not limited only to claims made during the EIR comment period].)

D. Prior Effort(S) Made To Arrive At Acceptable Solution If Any.

Comité previously raised its objections in written comment letters to the Imperial County Planning Department sent in October and December 2023. (See e.g., Exh. A-H, K) as well as in oral testimony given during the December 13, 2023 CPC hearing, including those statements made by experts from Earthworks, James Blair, and Christian Torres.⁵

E. Action Being Requested.

While Comité is not opposed to lithium development near the Salton Sea (as a general matter), it is very concerned about the proposed Project that is relying on a fatally flawed EIR. Thus, Comité respectfully requests the BOS grant the Appeal and stay action on the Project Approvals until a CEQA-compliant Draft EIR is recirculated that addresses the concerns raised by Comité and other commenters. Such a revised CEQA analysis should include enforceable mitigation measures, with an adequate range of project alternatives, and enforceable conditions that continue to monitor changing developments to this entirely novel operation proposed by the Applicant. This could potentially be achieved through the use of a development agreement that provides the County flexibility to monitor changing conditions, implement developing best practices, and codify genuine community benefits.


F. Signature of Appellant & Conclusion.

Thank you for considering this Appeal.

Sincerely,



Jordan R. Sisson
Attorney for Comité Civico del Valle



Christian A. Torres
On behalf of Comité Civico del Valle, Inc

ATTACHMENTS:

Exh. A – N

⁵ Sura fn. 3.

EXHIBIT A

LAW OFFICE OF JORDAN R. SISSON

LAND USE, ENVIRONMENTAL & MUNICIPAL LAW

3993 Orange Street, Suite 201
Riverside, CA 92501

Office: (951) 405-8127
Direct: (951) 542-2735

jordan@jrsissonlaw.com
www.jrsissonlaw.com

October 23, 2023

VIA EMAIL:

David Black, Senior Planner
Imperial County Planning & Development Services Department
davidblack@co.imperial.ca.us
icpdscommentletters@co.imperial.ca.us

RE: DRAFT EIR COMMENTS REGARDING HELL'S KITCHEN POWERCO I AND LITHIUM CO I PROJECT (SCH No. 2022030704)

Dear Mr. Black and Imperial County Planning & Development Services Department (“ICPDS”):

On behalf of Comité Civico del Valle (“**Comité**”), this office respectfully submits the following comments to the County of Imperial (“**County**”) on the Draft Environmental Impact Report (“**EIR**”) for the construction of a geothermal power plant that will produce up to 49.9 megawatts net of geothermal green energy (“**HKPI**”), and construction of a related commercial lithium hydroxide production plant via a geothermal brine process facility or (“**HKLI**”). Controlled Thermal Resources (US) Inc., via its subsidiary Hell’s Kitchen Geothermal, LLC, (collectively “**Applicant**”) is proposing the HKPI and HKLI facilities that includes a 2.3--mile gen-tie line (collectively “**Project**”) located within Salton Sea geothermal field near adjacent to Davis Road and south of Noffsinger Road in Imperial County, California (“**Site**”).

Comité incorporates by this reference all DEIR comments made by this office (attached hereto as “**Attachment A**”) and the six academic/experts in their respective fields (attached hereto “**Exhibit A**” through “**Exhibit F**”). In short, Comité is concerned with multiple areas of the Draft EIR’s analysis. For example, the Project’s operations lack sufficient information about processes, water usage, power needs, and the full operations of the HKLI off-site shipment.¹ Additionally, the DEIR fails to provide any real analysis of Project water impacts caused by the almost certainty of reduced Colorado River water allocations to the Imperial Irrigation District (“**IID**”). So too, the Draft EIR fails to consider cumulative impacts caused by related existing and proposed related projects that are demanding significant amounts of non-agricultural, industrial uses. Furthermore, many of the claimed project design features and mitigation measures lack performance standards and unlikely to be actually implemented.² Moreover, the various lack and/or flawed analysis skewed the Draft EIR’s alternative analysis that should have considered more than just a no-project alternative.³

///

¹ Under CEQA, an accurate, stable and finite project description is the sine qua non of an informative and legally sufficient EIR. (See *San Joaquin Raptor Rescue Ctr. v. Cnty. of Merced* (2007) 149 Cal.App.4th 645, 654-655.)

² CEQA requires lead agencies to craft mitigation measures that would be based on enforceable performance criteria. (See *City of Maywood v. Los Angeles Unified School Dist.* (2012) 208 Cal.App.4th 362, 407.)

³ It is the County’s affirmative duty to consider approval of the Project only after “meaningful consideration of alternatives and mitigation measures.” (*Mountain Lion Foundation v. Fish & Game Com.* (1997) 16 Cal.4th 105, 134.)

As fully discussed in the attached, the Draft EIR is fundamentally flawed that lacks critical information, analysis, and meaningful/enforceable mitigation. For this reason, Comité respectfully requests that the County recirculate the Draft EIR that address the issues discussed in the various attachments and exhibits, that considers a range of mitigation measures and project alternatives, including one with enhanced mitigation measures during operations. Furthermore, given the novelty of the lithium extraction operations by this applicant, the County should consider instituting some form of mandatory reporting and project approval renewal process (akin to a Conditional Use Permit renewal).

Thank you for your consideration. Comité may supplement these comments in the future.

Sincerely,



Jordan R. Sisson
Attorney for Comité Civico del Valle

LAW OFFICE OF JORDAN R. SISSON

LAND USE, ENVIRONMENTAL & MUNICIPAL LAW

3993 Orange Street, Suite 201
Riverside, CA 92501

Office: (951) 405-8127
Direct: (951) 542-2735

jordan@jrssonlaw.com
www.jrssonlaw.com

RE: DRAFT EIR COMMENTS REGARDING HELL'S KITCHEN POWERCO I AND LITHIUM CO I PROJECT (SCH NO. 2022030704)

This office respectfully provides the following comments¹ to the County regarding the original Draft EIR (“DEIR”) initially circulated on or around September 8, 2023 (according to DEIR metadata):

I. Project Description

- a. The DEIR lacks sufficient details about the brine pond, brine clarifiers and filter presses, lithium product handling and shipment, and brine processing facility (p. 2.0-8). For example, there is no discussion of the potential impacts of the expected brine composition being re-injected (pp. 2.0-10 – 2.0-11, 2.0-19), such as risks from residue additives and/or the altered composition of the spent fluid/wastewater being reinjected into the reservoir. Nor is there a discussion of whether the spent fluid would alter potentially impact the geothermal reservoir in a manner that would deplete or make more difficult the future extraction of lithium from said brine.
- b. The DEIR does not sufficiently describe what constitutes “sufficient storage capacity” or what shall be considered foreseeable periodic interruptions in IID canal water availability (p. 2.0-14).
- c. DEIR mentions but does not describe end locations for offsite product shipment (p. 2.0-17).
- d. DEIR mentions potential mineral extracted from approximately 5.9 million lbs/hr at full operation (p. 2.0-17 – 2.0-18). However, the DEIR does not provide any substantiation or comparable reviews of such rates. Given the novelty of the operation and this Applicant, this should be better substantiated with relevant comparable.
- e. Much of the operation is masked behind terms like proprietary technology (see e.g., p. 2.0-18). Like claims of mineral extraction rates (discussed supra), the DEIR should provide sufficient facts and/or comparable operations to substantiate the inputs and outputs from any propriety processes used.
- f. The Transportation Plan should be made more specific and tied to a specific performance metric with adequate monitoring to ensure compliance (p. 2.0-23).
- g. Claims that 100 percent electrical vehicles for mineral hauling is unclear (p. 2.0-24). The DEIR should clarify whether this is just for internal movement between the facilities (p. 2.0-18) or for off-site shipment of material. However, the DEIR fails to provide any meaningful details about what type of truck vehicles subject to “pending availability” (p. 2.0-18). Nor does the EIR consider possibility of more than just 73 daily trucks for shipment. The DEIR should analyze the impact if shipment exceeds 73 daily trucks and emissions caused by electric trucks not being available.
- h. The DEIR notes various project approvals (e.g., CUP, variance, development agreement, etc.) (p. 2.0-24) but provides no details.
- i. The DEIR notes several related projects (p. 3.0-3 – 3.0-4) but does not cite other non-agricultural industrial projects in and around the area, such as the various other geothermal/lithium extraction operations proposed in and around the County.

¹ Herein, page citations are either the stated pagination (i.e., “p. #”) or PDF-page location (i.e., “PDF p. #”)

2. Air Quality

- a. DEIR proposes mitigation for air quality impacts during construction by using Tier 3 engines or better when commercially feasible (p. ES-8). There is no explanation why Tier 4 final engines is not appropriate here and/or what constitutes “commercially available” and who would make that determination.
- b. DEIR proposes limited VOC architectural coatings (p. ES-9). However, there is no explanation why “super compliant” coatings are not appropriate here as proposed in other air districts.²
- c. DEIR claims no receptors within 2 miles of the proposed project (p. 4.2-4), which is inconsistent with other areas of the DEIR that identifies sensitive receptor 0.5 miles from the Site (p. 4.1-10). Other sensitive receptor may be near intended and unintended truck routes that should also be considered.
- d. The DEIR cites “proven abatement systems” to control hydrogen sulfide (p. 2.0-12) but provides little to now information about said systems. The DEIR should substantiate claims of 95% reduction of said systems (p. 2.0-23) as well as ensure a routine monitoring/reporting program to ensure compliance.
- e. DEIR does not consider alternative mitigations than utilizing NOX mitigation fees (pp. 2.0-23, 4.2-8). Alternative mitigation measures including changed operations should be identified and clearly demonstrated to be not feasible before utilizing mitigation fees.
- f. The DEIR states start up emissions would exceed relevant CEQA thresholds but does not discuss whether said operations could be altered in order to reduce emissions on-site prior to seeking offsets under ICAPCD Rule 207 (p. 4.2-13). Onsite reductions should be prioritized prior to seeking offsets elsewhere.
- g. As discussed below, daily truck trips are not adequately discussed, limited, nor ensured to be electric. This means that the Project could be accessed by heavy-duty diesel equipment that must be considered in the EIR and human health risk assessment (“HRA”).

3. Greenhouse Gas Emissions

- a. DEIR utilizes a 20,000 MTCO₂e threshold (pp. ES-32, 4.7-11). However, this conflicts with County’s prior practice of utilizing much lower thresholds.³
- b. The claim of 37,103 MTCO₂e (avoided) is not fully justified (PDF pp. 203 [DEIR Tbl. 4.7-3] & 487 [Technical Report]). Here, this 37,103 of avoided emissions suggest the project is removing emissions that are currently existing—which is not the case for this vacant Site.
- c. Again, the use of Tier 4 engines is illusory given there is no meaningful distinction of what “commercially available” or other vague commitment that reference “appropriately available” means (DEIR, Tbl. 4.7-4).
- d. The DEIR should also consider the Project’s consistency with CARB’s 2022 Scoping Plan (p. 4.7-18 [only considering 2017 Scoping Plan]).

² See e.g., South Coast AQMD, <https://www.aqmd.gov/home/rules-compliance/compliance/vocs/architectural-coatings/super-compliant-coatings>.

³ See e.g., Hudson Ranch Power Project Report, PDF p. 47 (utilizing 900 MTCO₂e/yr), <https://www.icpds.com/assets/hearings/CUP22-0020-IS22-0034-Hudson-Ranch-Power-I-EEC-ORIGINAL-Packet-04-13-23--1681833882.pdf>;

4. Traffic & Vehicle Miles Traveled (“VMT(s)”)

- a. Claims up to 500 workers per day during construction of the project (p. 2.0-16).
- b. During operations of both facilities, DEIR estimates roughly 112 full-time employees and 113 truck trips per day (p. 2.0-18). Yet, the VMT analyzed 40 trucks of product shipment (p. 4.11-7). This inconsistency needs to be addressed.
- c. The DEIR claims 20.84 VMTs per employee below the 15 percent below the 25.25 Countywide average (pp. ES-37, 4.11-4). Yet, this considers only VMTs generated by 112 employees (id., at Tbl. 4.11-2). This does not consider the VMTs travel by the 113 or 40 truck trips noted above. Even if these vehicles are entirely electric—which there is no meaningful requirement under current DEIR language—these vehicles will still produce VMTs, dust from unpaved roads, and toxic brake dust from breaking along truck routes that must be accounted for in this DEIR.
- d. The DEIR utilized ITE trip rates despite it not including any samples of geothermal power plants or lithium extraction facilities (p. 4.11-8). The assumption of ITE 170 rate is thus inappropriate. The DEIR should consider comparable projects to determine a reasonable assumption of trips.
- e. DEIR assumes Site being accessed via Davis Road via McDonald Road (Highway 111) (p. 4.11-3). This includes areas that are unpaved and produced substantial dust that should be adequately considered and mitigated. So too, the DEIR should consider the likelihood that the Site could be accessed from alternative routes.

5. Water Supply

- a. The DEIR admits potential impacts on water supply if IID does not receive its annual appropriation but claims that Applicant will work with IID in the event to ensure water availability (p. ES-41).
- b. DEIR claims the Project will minimize reliance on external water sources to the “greatest extent practical” but fails to provide any meaningful details or performance standards to this measure (p. 2.0-19).

6. Energy


- a. DEIR seems to include artifacts of EIR prepare notes states “these numbers are confusing, and unclear what the point is” (p. 4.5-10). This begs the question, if confusing to the EIR preparers, how can the EIR serve as an information document to the public and decisionmakers?
- b. DEIR claims operation of the HKLI would be offset by energy generated by HKPI (i.e., difference of 9.9 MW) (p. 20-19). However, the DEIR does not provide sufficient information to confirm that HKPI will consistency operate at level that off-sets HKLI’s normal and peak power demands. Nor does the DEIR consider the prospect of HKLI operating during extended periods where HKPI is underperforming or even shut down for extended periods of times.
- c. The DEIR’s surplus energy claim relies on various assumptions (p. 4.5-10 [operations-related electricity]), which needs to be substantiated.
- d. What requirement or limitation ensures that HKLI will not operate if HKLI is inoperable due to maintenance, outage, or for longer term (p. 4.5-10)?

7. Alternatives

- a. The DEIR examined only a no project alternative (p. 5.0-3). This is inadequate due to the inadequate analysis (discussed supra), which may have underestimated significant impacts and thus skewed the current alternatives analysis. At minimum, the DEIR should consider an alternative with enhanced mitigation measures during operations that would potentially reduce project/cumulative impacts discussed herein and elsewhere in the accompanied expert letters.

Thank you for consideration of these comments. We ask that this letter is placed in the administrative record for the Project.

Sincerely,



Jordan R. Sisson
Attorney for CCV

EXHIBIT B



To: David Black, Senior Planner, Imperial County
From: James J. A. Blair, Associate Professor in Geography and Anthropology, Cal Poly Pomona
Date: October 18, 2023
Re: Comments on Draft Environmental Impact Report for Hell's Kitchen Project

Dear Mr. Black and Colleagues:

Thank you for the opportunity to comment on the Draft Environmental Impact Report (EIR) for the Hell's Kitchen PowerCo 1 (HPKP1) and LithiumCo 1 Project (HKL1). By describing the potential environmental effects associated with the development of a commercial lithium hydroxide production plant within the Salton Sea geothermal field in Imperial County, California, this draft report helps to identify some impacts, alternatives and mitigation measures. This has the potential to be an important reference contributing to a baseline because the proposed geothermal direct lithium extraction (DLE) technology is still not proven at a commercial scale, and there remain several unknowns about the potential cumulative impacts of the proposed Lithium Valley development projects until Imperial County's Specific Plan and Programmatic EIR become available. This draft EIR also gestures toward innovations to mitigate environmental impacts that may seem virtuous, such as statements indicating possible reuse of steam condensate and reverse osmosis for water needs, wetland habitat restoration for special status species, promotion of electric trucks for operations, and production of biproduct materials like silica that might divert some potentially hazardous solid waste from landfills. Nonetheless, it remains unclear exactly how some of these declarative statements factor into the proposed mitigation measures that the public is led to believe would result in less than significant levels across all categories.

Unfortunately, sufficient detail is also lacking on the proposed operations due to the proprietary nature of the geothermal DLE technology, so description of potential impacts of the processing of lithium involving acid and substantial amounts of water is rather opaque. The delayed addition of Chapters 6 and 7 also provided a narrow window of time within which to analyze all CEQA considerations and references. And the exceedingly short list of related projects shown in Table 3.0-1 demonstrate how this report treats this project in isolation and falls short of CEQA compliance on cumulative impacts, especially when we consider the ambitious, multi-sector land use planning for the Lithium Valley development project that is currently underway.

Still, I am grateful for the opportunity to review the document, and in what follows I highlight some areas of needed improvement. These suggestions are not exhaustive, but I hope that these modest observations may offer recommendations to enhance the report for a more robust consideration of potential alternatives and mitigations for the construction and operation phases, as well as cumulative impacts. Here are some comments on key aspects of the report that still need to be addressed:

Air Quality

Dust pollution is a serious concern in the Salton Sea region because toxic contaminants are already being swept into the atmosphere from the exposed playa due to the rapidly receding sea level. This has contributed to poor air quality and high rates of respiratory illness. Given this urgent local public health problem and the acknowledgment that the project has potentially significant impacts that conflict with or obstruct implementation of the applicable air quality plan, the Dust Control Plan is a welcome addition

3801 West Temple Avenue, 5 – 144 Pomona, CA 91768
Telephone: (909) 869-5085 E-mail: jblair@cpp.edu

to this report. However, consideration of cumulative impacts of geothermal DLE development should include mitigation measures for exacerbating fugitive dust pollution indirectly through exploitation of water resources that might otherwise be used for the priority needs to conserve or replenish the reduced inflow to the Salton Sea.

The report offers contradictory information about compliance with air quality plans for O₃, PM_{2.5} and PM₁₀ for which the area is in serious non-attainment. This, as well as an explicit discussion of noncondensable gases and cooling tower drift, as well as HCl vapor emissions and airborne pollutants from brine ponds require further explanation and clarification. It is also concerning that the project exceeds the threshold for NO_x in construction, as well as exceeding the threshold for CO and NO_x in operation due to the diesel generator. These emissions call for mitigation measures and should be considered in relation to the other geothermal plants operating in the region, existing agriculture, as well as the proposed battery manufacturing, battery recycling and associated logistics industry that will form the inland port that the County has planned for development as part of its Lithium Valley Land Use Alternatives. Myriad cumulatively considerable construction projects are planned throughout the area near the project location, and it is unreasonably myopic to suggest that because none are within one mile of the site that a less than significant cumulative air quality impact would be expected.

Biological Resources

Given the direct destruction of wetland habitat for a high occurrence of special status wildlife to construct this project, the report's attention to potentially significant impacts is valuable. Still, it remains unclear if the location of the Mitigation Plan area is appropriate for constructed native wetland habitat in an area of restored wetland in which native species like cattails have already been removed because they are deemed to obstruct the view of hunters and leveling areas. Such wildlife areas are not ecological reserves or preserves and should be managed differently. Please also note that BIO-5 Power Wash Equipment seems to be missing from Table ES-1.

Geology and Soils

Imperial Valley already has significant earthquake risks, so there are heightened local concerns about induced seismic activity from geothermal drilling as well as subsidence due to geothermal brine extraction and reinjection. Downplaying concerns about seismic activity, subsidence, lateral spreading and liquefaction risks because the project area is not located within a fault zone elides the known potential for ground shaking and surface rupture. Sparse detail provided on a forthcoming geotechnical engineering investigation does not inspire confidence that the level of impact after mitigation would be less than significant. Full description of recommendations should be summarized in Table ES-1 rather than copied across all thresholds. This may include recommendations on site preparation, foundations and settlements, soil mixing, piles, concrete mixes and corrosivity, site fill, excavations, seismic designs, pavements, and more. Similarly Table 4.6.1 lacks direct responses to each of the land use planning objectives. These mitigations need further explanation.

Hazards and hazardous materials

Given the track record of spill-related contamination at most of the geothermal facilities in the Salton Sea Known Geothermal Resource Area (SSKGRA) after inaccurate predictions of low spill risk in previous EIRs, the level of potential impact is far from "less than significant," especially when we consider cumulative effects. It is worth noting that CalEnergy / BHE Renewables already agreed to pay a \$910,000 penalty and conduct soil remediation as part of a 2007 consent agreement. It would be prudent for Controlled Thermal Resources (CTR) to plan for this potential consequence of inaction by providing more detailed mitigation measures in this EIR (beyond the vague assertion that HKP1 and HKL1 would cooperate with responsible agencies to facilitate spill response cleanup and spill site

remediation in section 2.9.2). Mitigation is required to account for substantial risks from further spills of arsenic and lead-containing materials from blowouts, corrosion, abrasion, accidents and scaling. Scaling limits geothermal power plant operations and must be removed or diluted from brine to avoid clogging reinjection wells if silica becomes colloidal. This may increase the use of freshwater and/or hydrochloric acid (HCl). Spills of geothermal brine could potentially impact extensive habitat for the special status wildlife in the area listed in Biological Resources.

Moreover, it is critical for handling and disposal routes of hazardous solid waste to be described in greater detail, especially iron silica filter cakes. According to a forthcoming report on environmental justice in California's "Lithium Valley" by Comite Civico del Valle and Earthworks, when iron and silica are precipitated on filter cakes, the resulting solid waste may include hazardous or harmful elements, including arsenic, barium and lead. It is intriguing that CTR is already considering second life uses of silica scaling by aiming to produce not just lithium hydroxide, but also silica (as well as bulk sulfide and polymetallic products) for commercial sale. The report even states that "the mineral extraction process would not generate any waste but result in biproducts which will be sold" (4.13.5). If it were described more explicitly in this context how this might serve as a mitigation measure for storing and transporting hazardous materials, then a cradle-to-cradle approach might help to divert these potentially hazardous solid waste streams away from the surrounding area or landfills. Scientists have already successfully synthesized from geothermal water mesoporous silica, which is a material that may be used in a variety of industries—including energy and mineral resources—as catalysts, adsorbents, ion exchangers, optic materials, and solar panels. Furthermore, geothermal silica waste may also be used to synthesize zeolites, which may serve as water retainers in soil to mitigate water loss for irrigation in the area due to drought and increased apportioning of water for industrial uses like this project. Some zeolites even have the capacity to encapsulate lead in the soil through mineral remediation. If measures are described clearly and taken to prevent contamination, this circular approach to hazardous waste management might offer potential mitigation for soil contamination due to spills.

Hydrology and Water Quality

Given recent significant hazardous flooding and quite shallow groundwater in the immediate area surrounding the project, the planned preparation of a Stormwater Pollution and Prevention Plan (SWPPP) will be a welcome contribution, though it would be helpful to provide more information at this moment because best management practices (BMPs) may not be sufficient in this environment. How will the Applicant mitigate flooding's impact on potential contamination from drilling sumps or brine ponds? Furthermore, despite poor quality groundwater with limited uses, cumulative impacts on water quality from disposal of geothermal fluids and upward mobility of fluids due to faulty injection well seals or seeps from brine ponds merit more detailed mitigation measures.

Transportation

Again, it is intriguing that the Applicant has committed to using electric trucks for all product shipping (4.11.4), but it is unclear how these fleets or heavy duty vehicle charging infrastructure might be assembled in such a short timeframe, when they will become commercially available, or how the use of these trucks might help mitigate air pollution. Moreover, merging of thresholds a and b as "less than significant" contradicts the listing of threshold b (and c) as potentially significant in previous planning documents for geothermal lithium development in the area, such as the EIR for EnergySource's neighboring ATLiS project. In this Hell's Kitchen draft EIR there is no commute trip reduction or rideshare program because the proposed project is "not considered a major employment center" (Table 4.7-4). This remarkable acknowledgment might match the listed number of 112 jobs (22 jobs at HKP1 and 90 jobs at HKL1), but it pales in comparison to the cumulative job growth estimates of 4,000+

locally hired workers that CTR has advertised extensively to gain the support of fenceline community members in an area with high rates of unemployment.

Tribal Cultural Resources

It is telling that undeleted comments from the report authors accidentally published in the available EIR document in section 4.12.5 acknowledge that “based on the consultation summary, Quechan did not want us to be involved.” Even if another accidentally published comment deemed the consultation complete, it would be helpful to provide details on the updates to the cultural resources report. Has the Cultural Committee from the Quechan Tribe had the opportunity to review this report? Assembly Bill 52 requires public agencies to consult with tribes during the CEQA process. Recent public hearings have revealed significant opposition to geothermal development from Indigenous elders and leaders who are working with the Native American Land Conservancy to register the Southeast Lake Cahuilla Active Volcanic Cultural District, and there have been serious failures to provide timely consultation to Tribes for the proposed Lithium Valley projects thus far.

It is critical to acknowledge not just the potential encounter of archaeological artifacts and site-specific cultural resources during development, but also to provide relevant mitigation measures for obstruction on a viewshed within a broader cultural landscape that includes nearby sacred sites, including mud pots, steam vents, and Obsidian Butte, Southern California’s only source of obsidian that has been used by California Indian peoples who have imbued it with meaning and power in rituals, traditions and stories. The determination that “there are no known tribal cultural resources within the Project site” fails to recognize these potentially significant impacts on the surrounding viewshed and cultural landscape. CEQA Guidelines indicate that even if a site is not listed, this does not mean it is not significant. It does not help that in the section of Table ES-1 on Aesthetics, thresholds a and b are combined, circumventing CEQA guidelines on scenic vistas. What if Rock Hill or Red Hill were used for the visual plan rather than highways? Visual consistency with existing power plants is not a strong standard.

Finally, in addition to a qualified archaeologist, a Tribal monitor should be included for monitoring of Tribal cultural resources. These experts, as well as the paleontologist, should be given more than 48 hours notice if other contractors like the hired biologist are employed during a longer stretch to be present and document compliance. Even if some Tribes have not responded with requests for consultation since the 2021 reporting, it may bear reminding that in 2016 the “Morongo Band of Mission Indians expressed concern for the project and requested monitoring by a Cahuilla representative during construction activities” (4.4.4). Also note that Appendix C, not Appendix E seems to contain the Native American Contact Program. It would be helpful for the public if the appendices were more clearly organized.

Utilities and Service Systems

Potential water constraints are mentioned in section 4.13 in the Environmental Issue Area of Utilities and Service Systems. Given the dominant historical legal standing of California relative to Arizona, Nevada and Mexico for access to water from the Colorado River, this report assumes that the Imperial Irrigation District (IID) will remain in a relatively stable position for the time being. However, this is misleading because the Colorado River Basin States Representatives of Arizona, California, and Nevada (Lower Division States) reached an agreement in May 2023 to conserve at least an additional 3 million acre-feet (MAF) of Colorado River Water in the Lower Basin by the end of calendar year 2026, with at least 1.5 MAF of that total being conserved by the end of calendar year 2024 (Lower Basin Plan). In this context, the Applicant’s general willingness to “work with IID to ensure any reduction in water availability can be managed by the Project” (section 4.13.7; see also Table ES-1) is not an adequate plan for the possibility that the IID might not receive its annual 3.1 million acre feet per year (AFY) according to the Quantification Settlement Agreement (QSA). It bears reminding

that the QSA already supplies nearly 415,000 AFY to San Diego County Water Authority (SDCWA), Coachella Valley Water District (CVWD) and LA's Metropolitan Water District (MWD). Water availability is thus already limited due to the QSA, as well as decreasing flows of the Colorado River due to long-term drought conditions, not to mention water needed to replenish the Salton Sea. The worst-case scenario must be addressed with a clear long-term plan if Lake Mead's water level drops to a "dead pool" point that may be too low to deliver water through the canal system to California and Imperial Valley in the first place.

Moreover, it is well known that the vast majority of IID water is apportioned to agriculture, and the listed number of AFY of water already distributed for non-agricultural uses is outdated in this draft report. The Applicant mentions in section 4.13.5-6 that "as of January 2022, 23,020 AFY remain available for new projects, ensuring reasonably sufficient supplies for new nonagricultural water users." However, we now know as a result of the August CEC public hearing for BHE's new proposed geothermal projects that as of July 2023, out of 25,000 AFY IID reserves for non-agricultural uses, 5,380 AFY were committed. Meanwhile, BHE Renewables has now requested 13,165 AFY for its three new proposed geothermal plants (not even including plans for lithium extraction), leaving only 6,455 AFY. Nonetheless, here the Applicant estimates that construction will require 240 AFY and once the geothermal DLE sites are fully constructed and operating the project will require 6,500 AFY of freshwater (200 for HKP1 operations and 6,300 for HKL1 operations). This appears to exceed the 6,455 AFY available after BHE's apportioned amount of water that IID has already supported in public letters submitted to the CEC docket.

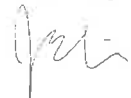
Even though the DLE technology may have proprietary restrictions, it would be helpful to have a more detailed water supply assessment for both geothermal power and lithium extraction processes involved in the project. It remains unclear how this particular geothermal plant (HPKP1) will require just 200 AFY—far less water than other proposed geothermal plants in the study area (e.g. 5,560 AFY proposed for BHE's Morton Bay, 6,480 AFY proposed for Elmore North and 1,125 AFY proposed for Black Rock). This estimate of 200 AFY listed toward the end of the report does not even match the approximately 400 AFY of fresh water listed for normal operation of HKP1 in an early section of the same report in section 2.9.2 Project Operations.

Now, if one of the key claims to the ostensible environmental superiority of this project is decreased water use for lithium extraction relative to conventional methods of brine evaporation or open-pit mining, then the considerable use of freshwater for lithium extraction (6,300 AFY for HKL1's projected life of 46 years) needs to be more clearly mitigated. Again, here this estimate of 6,300 AFY listed toward the end of the report does not match the approximately 6,100 AFY of water listed for HKL1 operations in the earlier relevant section of the same report in section 2.9.2. We do not have much basis for comparison, but the approved EIR for EnergySource's ATLiS operation at neighboring Hudson Ranch listed 3,400 AFY for that project's life of 30 years, just over half the amount of water per year estimated for HKL1 and for 20 fewer years.

For cumulative impacts, it would be highly pertinent to provide mitigation measures that reflect the most recent Colorado River agreements and planning for drought, which may become a significant constraint for nonagricultural water demand in IID water service areas that is estimated to increase from 26 AFY in 2020 to 80 AFY in 2055 for industrial uses, according to Table 4.13-3. Evidence of potential mitigation measures like reverse osmosis or the viability of reusing water from steam condensate mentioned in section 2.9.2 should be considered in relation to the sustainability of the entire operation of the project, including reinjection. If aspirations toward more sustainable and circular approaches are sincere and not illusory, then these potentially innovative mitigation measures need to be considered in more detail in the accounting of cumulative impacts on water resources.

Thank you again for the opportunity to provide comments on this draft report. Please let me know if there is further input that I may provide.

Sincerely,

A handwritten signature in black ink, appearing to read "J. Blair".

James J. A. Blair

Curriculum Vitae

JAMES J. A. BLAIR, Ph.D.

Department of Geography and Anthropology
California State Polytechnic University, Pomona
3801 West Temple Avenue, Pomona, CA 91768
909.869.5085
jblair@cpp.edu

EDUCATION

- Ph.D. **The Graduate Center, City University of New York**, Anthropology: 2016.
M.Phil. **The Graduate Center, City University of New York**, Anthropology: 2013 (Distinction).
B.A. **Boston College**, History, Philosophy and Latin American Studies (Honors): 2007.

ACADEMIC AND PROFESSIONAL EXPERIENCE

- 2023-Present **California State Polytechnic University, Pomona**, Department of Geography and Anthropology, Associate Professor (Early Tenure and Promotion).
2018-2023 **California State Polytechnic University, Pomona**, Department of Geography and Anthropology, Assistant Professor.
2017-2018 **Mellon/American Council of Learned Societies (ACLS)**, Public Fellows Program, appointed as International Advocate, Natural Resources Defense Council (NRDC).
2016-2017 **Brooklyn College, City University of New York**, Department of Anthropology and Archaeology, Visiting Assistant Professor.

SELECT PUBLICATIONS

- Blair, J. J. A. 2023. *Salvaging Empire: Sovereignty, Natural Resources and Environmental Science in the South Atlantic*. Ithaca and London: Cornell University Press.
- Blair, J. J. A., G. Gutierrez and R. Balcázar. 2023. "From Watershed Moment to Hydrosocial Movement: Patagonia without Dams and The Free-Flowing Rivers Network in Chile." *Human Organization*. Vol. 82 (3): 288-303.
- Blair, J. J. A., R. Balcázar, J. Barandiarán and A. Maxwell. 2023. "The Alterlives of Green Extractivism: Lithium Mining and Exhausted Ecologies in the Atacama Desert." *International Development Policy*. Vol. 16 (co-authored with Ramón Balcázar M., Javiera Barandiarán and Amanda Maxwell).
- Blair, J. J. A., R. Balcázar, J. Barandiarán and A. Maxwell. 2022. "Exhausted: How We Can Stop Lithium Mining From Depleting Water Resources, Draining Wetlands, and Harming Communities in South America." Report for the NRDC in collaboration with the Plurinational Observatory of Andean Salt Flats (OPSAL).
- Blair, J. J. A. and R. Balcázar. 2022. "Plurinational Climate Action: Environmental Governance Beyond Green Extractivism." *Cultural Anthropology: Hot Spots, Fieldsites*.
- Blair, J. J. A. and C. Isenhour. 2022. "Introduction: Negotiating the Crisis: Critical Perspectives on Climate Governance." *Cultural Anthropology: Hot Spots, Fieldsites*, June 23.
- Blair, J. J. A. 2022. "Data Gaps: Penguin Science and Petrostate Formation in the Falkland Islands (Malvinas)." In *The Nature of Data: Infrastructures, Environments, Politics*. Edited by J. Goldstein and E. Nost. Lincoln: University of Nebraska Press.
- Blair, J. J. A. 2022. "Tracking Penguins, Sensing Petroleum: 'Data Gaps' and the Politics of Marine Ecology in the South Atlantic." *Environment & Planning E: Nature and Space*. Vol. 5 (1): 60-80.

- Blair, J. J. A. 2022. "Natural Resource Defense Council (NRDC)." In *The Palgrave Handbook of Global Sustainability*, edited by Robert Brinkmann. Cham: Palgrave Macmillan.
- Blair, J. J. A. 2020. "Extractivismo del Litio y el Problema de la Escala: Acción Climática Global y Justicia Ambiental Local." *Salares Andinos: Ecología de Saberes por la Protección de Nuestros Salares y Humedales*. Edited by B. J. Henríquez, S. Uribe Sierra and R. M. Balcázar. Santiago: Fundación Tantí.
- Blair, J. J. A. 2019. "South Atlantic Universals: Science, Sovereignty and Self-Determination in the Falkland Islands (Malvinas)." *Tapuya: Latin American Science, Technology and Society*. Vol. 2 (1): 220-236.
- Blair, J. J. A. 2019. "Splintered Hinterlands: Public Anthropology, Environmental Advocacy and Indigenous Sovereignty." *Journal of Ethnobiology*. Vol. 39 (1): 32-49.
- Blair, J. J. A. 2017. "Settler Indigeneity and the Eradication of the Non-Native: Self-Determination and Biosecurity in the Falkland Islands (Malvinas)." *The Journal of the Royal Anthropological Institute (JRAI)*. Vol. 23 (3): 580-602.

SELECT CONFERENCE PUBLICATIONS

- "Between Clean and Green: Mining and Maladaptive Mitigation of Climate Change." Invited talk in Climate Vulnerabilities: Panel at U.S. National Academy of Sciences and Indonesian Academy of Sciences, Kavli Frontiers of Science Symposium in Balikpapan, Indonesia, August 10, 2023.
- "Hydrosocial Movements and Green Extractivism: Water Protection and Renewable Energy Development in Chile." Invited talk in Special Lecture Series on Latin America hosted online by Hankuk University of Foreign Studies, Korea, May 24, 2023.
- "Avoiding Methodological Nationalism Through Critically Engaged Research in a Disputed Overseas Territory." Invited talk at Researching the Overseas Territories Online Workshop, Newcastle, Exeter, and Royal Holloway, University of London, May 23, 2023.
- "The Limits and Possibilities of 'Extractive Recovery.'" Paper presented in "STS Engagements with Critical Mineral Studies" panel at Annual Meeting of the Society for Social Studies of Science (4S) in Cholula, Mexico, December 14, 2022.
- "Risks and Best Practices of Extracting Critical Minerals in the Transition to Cleaner Fuels." Invited talk at 11th Annual Environmental Health Leadership Summit, Comité Cívico Del Valle, Imperial Valley College in Imperial, CA, October 27, 2022 (with Jared Naimark).
- "The Disputed Hydrosocial Dynamics of Lithium Mining in Chile and California." Invited talk at the University Forum, Utah Tech University in St. George, UT, September 20, 2022.
- "Agotado: Cómo evitar que la minería del litio agote el recurso hídrico, drene los humedales y perjudique a las comunidades en América del Sur." Invited virtual webinar presentation with the Plurinational Observatory of Andean Salt Flats (OPSAL), May 17, 2022.
- "Developing Lithium Valley: Hydrosocial Dynamics and the Importance of Community Engagement for a Just Transition." Paper presented at California State University (CSU) Water Resources and Policy Initiatives (WRPI) Conference in Northridge, CA, April 7, 2022 (with Alexa Buss).
- "Energy Justice for Whom? Ethical Plateaus of Lithium Extraction and Electrified Transportation." Paper presented at Annual Meeting of the Society for Social Studies of Science (4S), Toronto, Canada, October 7, 2021.
- "Beyond Extractive Renewables: Addressing Ethical Dilemmas in Decarbonization." Invited presentation at the United Nations Association of Pomona Valley, November 17, 2020.
- "Transición Energética, Electromovilidad y Extractivismo del Litio en Salares de Chile, Argentina y Bolivia." Invited presentation at parallel civil society climate summit to the UN COP25 Global Climate Change Conference in Cerrillos, Chile, December 5, 2019.

SELECT EXTERNAL FUNDING

- 2023-2024 Imperial County, California, Community Engagement and Outreach Grant: Salton Sea Renewable Specific Plan and Programmatic Environmental Impact Report (\$363,000 allocated to Comite Civico del Valle to establish the Lithium Valley Equity Technical Advisory Group).
- 2023-2026 Environmental Protection Agency (EPA)-G2022-STAR-F2, Early Career: Drivers and Environmental Impacts of Energy Transitions in Underserved Communities Grant (\$649,456 total amount, \$115,000 allocated to Cal Poly Pomona as subrecipient with: PI Alida Cantor, Portland State University; Co-PI Dustin Mulvaney, San Jose State University; and Co-PI Kate Berry, University of Nevada, Reno).
- 2022-2025 National Science Foundation, BCS Human-Environment and Geographical Sciences (HEGS) Grant (\$399,876 total amount, \$84,000 allocated to Cal Poly Pomona as subrecipient with: PI Alida Cantor, Portland State University; Co-PI Dustin Mulvaney, San Jose State University; and Co-PI Kate Berry, University of Nevada, Reno).
- 2019-2020 Natural Resources Defense Council (NRDC), consultancy contracts (\$65,999).
- 2017-2019 Mellon/ACLS, Public Fellowship (\$140,000, appointed as International Campaign Advocate, Natural Resources Defense Council (NRDC)).
- 2014-2015 National Science Foundation, SBE Doctoral Dissertation Research Improvement Grant (\$17,703, co-funded by the Cultural Anthropology and Science, Technology, and Society (STS) programs).
- 2014-2015 Fulbright-IIE, All-Disciplines Postgraduate Award to United Kingdom (£12,000).
- 2013-2014 Wenner-Gren Foundation, Dissertation Fieldwork Grant (\$20,000).
- 2012 Social Science Research Council, Dissertation Proposal Development Fellowship (DPDF), Governing Global Production subfield (\$5,000).

PROFESSIONAL AFFILIATIONS

- Lead expert in Comite Civico del Valle's Lithium Valley Equity Technical Advisory Group established to conduct community-engaged research with fenceline communities regarding Imperial County's Salton Sea Renewable Specific Plan and Programmatic Environmental Impact Report, 2023-2024.
- Book Reviews Co-Editor, *American Anthropologist*, 2020-2023.
- Engaged Scholars Initiative participant, Campus Compact, 2021-2022.

EXTERNAL AWARDS AND HONORS

- 2023 U.S. National Academy of Sciences and Indonesian Academy of Sciences, Kavli Frontiers of Science Fellowship, sponsored by the David and Lucile Packard Foundation.
- 2021-2022 Campus Compact Engaged Scholar Award.

SKILLS

Languages

Spanish (fluent reading, speaking and writing; trained in media communication).
Portuguese (reading ability).

Computer

Data visualization (ESRI Story Maps and ArcGIS, Google Maps beta, OpenStreetMap).
Qualitative data analysis (NVivo, Atlas TI, Zotero, Evernote, Scrivener, Microsoft Office).

Advocacy

Indigenous Peoples partnership training, Indigenous Leadership Initiative/NRDC.

EXHIBIT C

The California State University
Chancellor's Office
Bakersfield
Chancellor's Office
Office
Dominguez Hills
East Bay
Fresno
Fullerton
Humboldt
Long Beach
Los Angeles
Maritime Academy
Monterey Bay
Northridge
Pomona
Sacramento
San Bernardino
San Diego
San Francisco
San Jose
San Luis Obispo
San Marcos
Sonoma
Stanislaus

October 23, 2023

To the County of Imperial, Planning and Development Service Office,

Please find attached my comments on the proposed geothermal-lithium development with a draft environmental impact report (DEIR) currently under review called Hell's Kitchen. I appreciate the opportunity to present this feedback to help strengthen community input to the environmental review process. I have been conducting research on environmental impacts from energy development for 15 years and a short version of my CV is attached to this memo. My comments are organized by theme grouped below, though some issues overlap.

Water

The project description lists several commercial outputs from the project including "lithium hydroxide, silica and polymetallic products, and possibly boron compounds, for commercial sale." What would be the implications for processing to recover all of these materials on water use? Would boron recovery increase the potential need for processing water? Or do processing water estimates include the maximum minerals recovery? What are the implications for wastewater disposal?

Dust control for construction and during operations is critical to air quality and public health, especially with the receding lake and rising incidences of valley fever in the region.¹ There seems to be some inconsistency in estimates for how much and where water use for dust control. In one place the document states rather precise amounts of water used to mitigate dust (240 AFY and 50,000 gallons per day), but elsewhere they describe water as one of several types of materials sprayed on land to do the same task. Do these other dust control techniques augment or reduce the amount of water needed for dust control? What is the contingency plan if the water use is not enough to adequately control dust?

Finally, what are the cumulative impacts to water resources in the area? Will water use on project site lead to decreased water use in agricultural operations? Will water use on the project site lead to reduced deliveries to nearby fields resulting in the loss of flows to marshes and wetlands?

Biological Resources

The Salton Sea region is part of the California Desert Conservation Area (CDCA) and given its ecological significance, any project here that converts land or changes water flows can raise impacts of concern. My primary comments on biological resources are that the biological resource impacts from the proposed project should require stronger mitigations for avian species, and there are some avian impacts that are not described.

¹ Johnston, J. E., Razafy, M., Lugo, H., Olmedo, L., & Farzan, S. F. (2019). The disappearing Salton Sea: A critical reflection on the emerging environmental threat of disappearing saline lakes and potential impacts on children's health. *Science of the Total Environment*, 663, 804-817.

Does the project include an avian protection plan? Will the project monitor avian mortality related to the operations of its facilities or associated roads?

There are suggested impacts to burrowing owls and habitat, yet the mitigations seem weak compared to Burrowing owl mitigations in other nearby projects in the CDCA. For example, there are potential impacts to avian species from sound during construction and operation. The assumption that nests will not be abandoned because the construction sounds are continuous and will be mitigated by emplacing hay bale buffers seems inconsistent with mitigations used elsewhere that require work stoppage when nearby nests or burrow are discovered.

The biological resource section should also describe the potential for the project to attract species that could negatively impact local species. There is no mention of the potential for power lines to attract ravens. Many nearby military facilities, national parks, and energy generation facilities in the California desert have raven adaptive management plans because they are predators of small vertebrates and bird eggs subsidized by human infrastructures.² How will garbage/dumpsters be managed?

Regarding the endangered Yuma Ridgway's rail and Burrowing owl, will the pre-construction surveys include nesting and burrow surveys? The applicant describes burrow surveys for burrowing owl and these and any nest surveys should be conducted and with sufficient intensity to find actively used burrows. There is also no mention of impacts or mitigations that might occur with the maintenance of road and berms to the project site, which could also be used by avian species of concern.

It is suggested in the mitigations that Yuma Ridgway's rail habitat loss will be offset by protecting other habitat. How near will that habitat be? How long will it be protected? This bird species is shown to do much better with Colorado River water than agricultural runoff which can contain selenium, and is injurious to the rail. Where will the location be and what type of water is delivered to those marshes?

Collisions with powerlines have been a known cause of injury to avian species for 150 years. Transmission line extensions should employ best practices to reduce collisions and it is not clear this impact is being mitigated at all. Electrocutation of avian species is another consideration with extending new power lines.³ Will "avian safe" electrical equipment be used on the project? Project designs should avoid any ecological traps that attract avian species to habitat where they can be injured.

The loss of Iodine Bush Scrub habitat is small, is it possible to avoid altogether? Where will the mitigation iodine bush scrub be located? Will that offset be in perpetuity? This species in this ecosystem needs period flooding to reproduce and

² Programmatic Environmental Assessment for Integrated, Adaptive Management of the Common Raven on Department of Defense Lands in the California Desert.

<https://www.29palms.marines.mil/Portals/56/Docs/Environmental%20Affairs/FinalPEAandSignedFONSIforManagementoftheCommonRavenOnDODLandsintheCalifornia%20Desert.pdf>

³ Avian Power Line Interaction Committee, *Suggested Practices for Avian Protection on Power Lines: The State of the Art in 2006*

be sustained so should mitigation parcels should be carefully evaluated for suitability and water availability. Loss of this habitat would conflict with “Goal 4 – Support development of renewable energy resources that will contribute to the restoration efforts of the Salton Sea.” This habitat loss alongside avian issues seems inconsistent with “the Project is being designed to minimize impacts to Salton Sea restoration areas.”

Environmental Justice

There are a few places where the applicant claims DEIR claims consistent with General Plan, but where it seems several elements are not adequately evaluated. In Table 4.5-1, “Objective 3.7 – Evaluate environmental justice issues associated with job creation and displacement when considering the approval of renewable energy Projects.” They note that “No sensitive receptors are within two miles of the Project site. No impacts to disadvantaged communities would occur from implementation, and no Health Risk Assessment is required.” The applicant does not mention where construction worker housing might be and whether this might displace local resident or drive up the costs of housing. The project should have a health risk assessment for cumulative impacts from dust.

Energy/Greenhouse Gases

Similar to a question raised in the section on water, what would be the additional energy requirements for recovery of boron versus without the recovery of boron (or other materials that might be recovered/foregone)? Is more energy required?

There are a few areas where the project is deemed “Inconsistent” with the county plans for the area. For example the proposed project will not include pedestrian and bicycle pathways on site that connect to the offsite roads, due to the distance from the nearest community centers located in Niland.

The project claims that it will minimize GHG impacts by utilizing electric powered construction equipment, but there is not a threshold set for defining when this practice will be followed. How nearby does equipment need to be to be commercially available? What premium is the applicant willing to pay to use electric vehicles or does it simply need to be similarly cost-effective. This lack of detail, triggering thresholds, or performance criteria makes this mitigation seem unenforceable.

The project claims there is no plans for bus service to area. Is this a topic that has been discussed with the local community plans for growth and amenities in the area? Supporting bus service to the plan could allow some workers to travel on public transportation and reducing GHGs.

All building structures should include rooftop solar, not just solar-ready roofs as described. All structures should be designed to exceed Title 24 Part 6 building energy efficiency standards, including self-generation.

The applicant claims to credit the project's generation of renewable energy in excess of what the project operations would require to offset its direct GHGs, but these are incommensurable. Onsite emissions includes combustion of liquid fuels whereas the renewable energy generation is for electricity. In their assessment of renewable energy generation they assume a capacity factor of 95% whereas the average capacity factor in the U.S. for geothermal is 78%.⁴

Truck traffic operational emissions are assumed to be electric but there is nothing binding in the plan that would result in electric trucks being used. It is not clear if the applicant will own and control these trucks or whether it is expected the buyers will use electric trucks? A more accurate estimate operational delivery trucks should use a blended emissions factor and assume some portion of the trucks will operate on diesel fuel in the short term, as nearly all trucks do today. It can be assumed that electric engine proportions will increase over time.

The plan notes that EV vehicle use will be encouraged by installation of EV chargers. But there is no number of chargers specified, nor whether they will be for light-duty or heavy-duty vehicles. It is noted there will be 84 truck trips per day. What portion of these trucks will have access to EV chargers installed onsite? There are currently only three EV chargers in all of Imperial County.

The project claims it is inconsistent with the county's plans for adding to the bike lane network because the nearest connection is 3.5 away. Has the idea that no bike lane is needed to this area been vetted with local planning officials and the community? This project is one of multiple projects coming together would add to vehicle miles travelled to the site and the early development of bike lanes could help encourage use, if it is something the community sees as important infrastructure to build. As the area gets built out, who will contribute to building biking and public transportation opportunities.

Does the estimate of GHGs include the potential use of equipment for installation of buffers to protect avian species from construction disturbances, should they occur? Does the total number of truck trips for dust control and water application, also include equipment use for soil amendment/stabilization?

The plan for landscaping on the project is unclear. In one part of the cross-check for consistency with county planning, it is deemed "Consistent. No landscaping is proposed as part of the Project; thus, no increase demand for water for landscaping." Then further below in the same table, Consistent. 10% of the developed Project site will be landscaped per County requirements." What is the plan for landscaping? How will landscaping consider local habitat.

Air Quality

Air quality is critical to this region so its critically important these impacts are adequately mitigated given the county's challenges meeting the air quality

⁴ Energy Information Administration. <https://www.eia.gov/todayinenergy/detail.php?id=42036>

mitigation plans. Unfortunately the mitigations for this project look rather meager at lessening the impacts on the region's already overburdened air quality.

The main concern with air quality during all of construction, operation, and cumulatively are with dust emissions. Increased traffic on rural unpaved roads could be magnified by future developments.

Similar to issues related to GHG emissions, there are no binding requirements or thresholds that would hold project developers to using electric construction equipment, the primary mitigation for PM10, PM2.5, and ozone.

Instead of Tier 3 construction equipment standards for air quality, which were introduced in 1994, the applicant should propose tier 4 standards, a more recently final rule in 2004, and which would reduce emissions of PM and NOx by 90% from nonroad engines.⁵

During operations it is not clear how emissions of benzene or ammonia will be mitigated. There is no assessment of particulate matter emissions from tire dust or break pads which could increase particulate matter and heavy metal emissions.⁶

Hazards and Hazardous Materials/Geology Soils

There are numerous carbon dioxide wells in the area. Are there any known abandoned oil and gas wells nearby? Is there any concern that the project could result in disturbance to the integrity of the (purportedly) capped wells? Who is responsible for any disturbance to well integrity?

It would be helpful to understand the impacts of this project on fire protection resources or will the project require improvements off site that enhance road safety for emergency personnel and first responders. Transmission and distribution powerlines are the leading cause of wildfires in California, and recent fires in the area show this region is fire prone much like the rest of the state. Would the project stretch existing fire resources too far?

Finally, does the project have an adequate plan for decommissioning, including capping geothermal and injection wells? There should be a clear plan for how legacy wells that need to be capped and site cleanup will be financed managed.

Thank you for the opportunity to provide feedback in review of this project.

Sincerely,
Dustin Mulvaney,
Professor, Environmental Studies Department,
San José State University, San José, California

⁵ U.S. Environmental Protection Agency. <https://www.epa.gov/regulations-emissions-vehicles-and-engines/regulations-emissions-heavy-equipment-compression>

⁶ California Air Resources Board. <https://ww2.arb.ca.gov/resources/documents/brake-tire-wear-emissions>

Curriculum Vitae
Dustin Mulvaney, Professor,
Environmental Studies Department, San José State University

(a) Professional Preparation

New Jersey Institute of Technology	Newark, NJ	Chemical Engineering	BS, 1999
New Jersey Institute of Technology	Newark, NJ	Environmental Policy Studies	MS, 2002
University of California, Santa Cruz	Santa Cruz, CA	Environmental Studies	PhD, 2007
University of California, Berkeley	Berkeley, CA	Environmental Science, Policy, and Management	2009–2011

(b) Appointments

2020– , **Professor**, Environmental Studies Department, San Jose State University,
2020– , **Fellow**, Payne Institute for Public Policy, Colorado School of Mines,
2015–2020, **Associate Professor**, Environmental Studies Department, San Jose State University,
2016–2017, **Visiting Scholar**, Bill Lane Center for the American West, Stanford University
2011–15, **Assistant Professor**, Environmental Studies Department, San Jose State University,
2009–11, **Science, Technology, & Society Postdoctoral Scholar**, Department of Environmental
Science, Policy, and Management, University of California, Berkeley
2008–09, **Teaching Fellow in Sustainability Engineering and Ecological Design**, Electrical
Engineering, UC Santa Cruz.

(c) Selected Publications

Mulvaney, D., Bazilian, M. (2023). Price Volatility, Human Rights, and Decarbonization Challenges in Global Solar Supply Chains. *Energy Research and Social Science*, 102, 103167. <https://doi.org/10.1016/j.erss.2023.103167>

Turley, B., Cantor, A., Berry, K., Knuth, S., Mulvaney, D., Vineyard, N. (2022). Emergent landscapes of renewable energy storage: Considering just transitions in the Western United States. *Energy Research and Social Science*, 90, 102583. <https://doi.org/10.1016/j.erss.2022.102583>

Mulvaney, D., Richards, R., Bazilian, M.D., Hensley, E., Seetharaman, S. (2021). Progress Towards a Circular Economy in Materials to Decarbonize Electricity and Mobility. *Renewable and Sustainable Energy Reviews*. 137: 110604. <https://doi.org/10.1016/j.rser.2020.110604>

Sovacool, B.K., S.H. Ali, M. Bazilian, B. Radley, B. Nemery, J. Okatz, D. Mulvaney. (2020). Sustainable Minerals and Metals for a Low Carbon Future. *Science*. 367(6473): 30–33. <https://science.sciencemag.org/content/367/6473/30>

Pellow, M. A., Ambrose, H., Mulvaney, D., Betita, R., & Shaw, S. (2020). Research Gaps in Environmental Life Cycle Assessments of Lithium ion Batteries for Grid-Scale Energy Storage Systems. *Sustainable Materials and Technologies*, 7: e00120. <https://doi.org/10.1016/j.susmat.2019.e00120>

Mulvaney, D. (2020). *Sustainable Energy Transitions: Socio-Ecological Dimensions of Sustainability*. Palgrave-MacMillan, London. <https://www.palgrave.com/us/book/9783030489113>

Mulvaney, D. (2019). *Solar Power: Innovation, Sustainability, and Environmental Justice*. University of California Press: Oakland, CA. <https://www.ucpress.edu/book/9780520288171/solar-power>

Rebecca R. Hernandez, Alona Armstrong, Jennifer Burney, Greer Ryan, Kara Moore, Ibrahima Diedhiou, Steven M. Grodsky, Leslie Saul-Gershenz, Davis R., Jordan Macknick, Dustin Mulvaney, Garvin A. Heath, Shane B. Easter, Brenda Beatty, Michael F. Allen, and Daniel M. Kammen. (2019). Techno-ecological synergies of solar energy produce beneficial outcomes across industrial-ecological boundaries to mitigate global environmental change. *Nature Sustainability*. 2(7): 560–568. <https://doi.org/10.1038/s41893-019-0309-z>

Wade, A., R. Sinha, K. Drozdiak, D. Mulvaney, J. Slomka. (2018). Ecodesign, Ecolabeling and Green Procurement Policies – enabling more Sustainable Photovoltaics? *Proceedings of the IEEE Photovoltaic Specialist Conference and World Conference on Photovoltaic Electricity Conversion*. June 16, 2018.

Mulvaney, D. (2014). Are Green Jobs Just Jobs? Cadmium Narratives in the Life Cycle of Photovoltaics. *Geoforum*, 54, 178–186. <http://dx.doi.org/10.1016/j.geoforum.2014.01.014>

Newell, P. & Mulvaney, D. (2013). The Political Economy of the Just Transition. *The Geographical Journal*, 178(3), 1-12. <http://onlinelibrary.wiley.com/doi/10.1111/geoj.12008/abstract>

(d) Synergistic Activities

- External Evaluator, NASA, Center for Applied Atmospheric Research and Education.
- Voting member of the Joint Committee to develop the Sustainability standard for photovoltaics, an initiative led by the National Standards Foundation and the Green Electronics Council.
- Technical Advisory Committee, Waste Reduction Commission of Santa Clara County, to the Recycling and Waste Reduction Commission of Santa Clara County.
- Technical Committee, Ultra Low Carbon Solar Standard for photovoltaic manufacturing.
- Perovskite PV Accelerator for Commercial Technologies, Advisory Board Member, Electric Power Research Institute.

EXHIBIT D

College of Liberal Arts and Sciences
Department of Geography

Post Office Box 751 503-725-3165 tel
Portland, Oregon 97207-0751 acantor@pdx.edu

To: County of Imperial Planning & Development Services

From: Alida Cantor, Associate Professor of Geography

Date: October 23, 2023

Re: Comments on Draft Environmental Impact Report for the Hell's Kitchen Powerco 1
and Lithiumco 1 Project, Imperial County, California

Thank you for the opportunity to provide comments on the Draft Environmental Impact Report for the Hell's Kitchen PowerCo 1 (HKP1) and Hell's Kitchen LithiumCo 1 (HKL1) Project, Imperial County, California. Geothermal power and geothermal direct lithium extraction (DLE) may provide important renewable energy resources. However, it is crucial to examine any new proposed infrastructure carefully to ensure disproportionate or unacceptable impacts on local and/or disadvantaged communities. Because impacts may result in environmental injustices and/or impacts on Indigenous communities, it is important to critically examine any proposal, particularly one that utilizes a relatively new technology.

Below are my comments on the Draft Environmental Impact Report. I list comments in three areas: Water resources; cumulative impacts; and cultural and Tribal cultural resources.

Water resources:

The DEIR raises questions about water resources. Both HKP1 and HKL1 require water resources for their production processes, with additional water required for dust mitigation associated with construction and general operations.

In particular, future projected availability of Colorado River water presents a concern. The DEIR does not take into account recent developments around Colorado River Basin Drought Contingency Planning processes. Throughout Spring 2023, states using water from the Colorado River Basin have been negotiating; in May 2023, Arizona, California, and Nevada submitted a proposal to the federal government proposing to reduce Colorado River water use by 3 million acre feet. The plan is proposed to be implemented over the coming three years. This is an extremely meaningful development that could have significant impacts on IID's water allocations in the future.

The project proposes to utilize IID's "Interim Water Supply Policy (IWSP) for Non-Agricultural Projects." The plan notes the applicant will "work with IID to ensure reduction in water availability can be managed." However, this is vague and relies on a

third party's cooperation. If IID does not agree or is unable to provide the water needed, it would have implications for the project's functionality.

Cumulative impacts:

The project lightly addresses cumulative impacts throughout, noting that there are currently five other related projects nearby.

Related to the issue of water resources, there is potential for cumulative impacts of water availability which is not discussed adequately in the DEIR.

In section 4.13, "Utilities and services systems," the report notes that "As previously mentioned, the Project's water use represents 28.2% of the unallocated supply set aside in the IWSP for nonagricultural projects and approximately 28.2% of forecasted future nonagricultural water demands planned in the Imperial IRWMP through 2055." It is unclear how this project fits in with other planned projects, including the five other related projects nearby, as well as other geothermal and DLE projects within the IID's service area that are covered by the IRWMP.

If this project requires approximately 1/3 of the unallocated supply set aside, will there be sufficient water for the other planned projects? If other planned projects use more water, will there be enough water for this planned project? These are important questions that could have implications for the project's success.

This raises a concern that cumulative impacts need to be considered at multiple scales- that is, an assessment of cumulative impacts should consider not only the projects that are physically closest, but other projects that may draw upon the same resource bases, such as other projects relying upon the same nonagricultural water supply set aside by IID.

Cultural resources and Tribal cultural resources:

Consultation activities were somewhat unclear and inconsistent between section 4.4 and section 4.12.

Section 4.4 notes that "*The Morongo Band of Mission Indians expressed concern for the Project and requested monitoring by a Cahuilla representative during construction activities,*" but it is unclear whether there are actually plans in place for a Cahuilla representative to monitor construction activities, as requested.

If work activities and/or construction ceases due to discovery of cultural resources, it is unclear how long this pause will last until work resumes; how this could impact other aspects of the project; and what the archaeological data recovery program involves if a discovery contains significant and unavoidable impacts.

It appears that local Tribes were contacted in 2021, but it is unclear if all local Tribes have been consulted with regularly, up until the present date. There are several sentences in the document indicating that local Tribes have expressed concern with the project, and it is

not clear whether the Tribes consider the proposed mitigation measures to be adequate in addressing their concerns or not.

Thank you for the opportunity to provide comments.

Sincerely,

A handwritten signature in black ink, appearing to read 'AC', with a long horizontal flourish extending to the right.

Alida Cantor, Ph.D
Associate Professor
Portland State University Department of Geography
acantor@pdx.edu

CURRICULUM VITAE

Alida Cantor

Education

- Ph.D. 2016 Geography, Clark University, Worcester, MA
M.S. 2008 Community and Regional Development, University of California at Davis,
Davis, CA
B.A. 2005 Geography, Simon's Rock College, Great Barrington, MA

Academic Employment

Associate Professor, Department of Geography, Portland State University, 2023-present
Assistant Professor, Department of Geography, Portland State University, 2017-2023
Postdoctoral Research Fellow, Wheeler Water Institute, Center for Law, Energy & the
Environment, UC Berkeley School of Law, 2017
Teaching Assistant, Instructor, and Graduate Researcher, Graduate School of Geography, Clark
University, 2011-2016

Selected Publications

- Cantor, Alida**, B. Turley,* and K. Maxfield.* Accepted, 2023. Energy storage and environmental justice: A critical examination of a proposed pumped hydropower facility in Goldendale, Washington. *Antipode*.
- Kay, Kelly, C. Knudson, and **A. Cantor**. 2023. "Plantation pasts, plantation futures: Resisting zombie water infrastructure in Maui, Hawai'i." *Journal of Peasant Studies*.
- Ross, Alexander,* H. Chang, and **A. Cantor**. 2023. "Understanding Perspectives on Climate Hazards, Water Management, and Adaptive Transformation in an Exurban Community." *Sustainable and Resilient Infrastructures* 8(1): 48-67.
- Quimby, Barbara, C. Nichols, M. duBray, **A. Cantor**, J.C. Bauch, A. Wutich, C. Williams, S. Porter, W. Eaton, K. Brasier. 2023. "Changing Flows: Sociotechnical Tinkering for Adaptive Water Management." *Environmental Management* 71: 421-431.
- Song, Wonsuh, **A. Cantor** and H. Chang. 2022. "Virtual water and agricultural exports during recent drought in California." *International Journal of Geospatial and Environmental Research*. 9(1): Article 5.
- Cantor, Alida**, B. Turley,* M. Glass,* and C. Ross.* 2022. "Changes to alfalfa production practices and perceptions during the 2011-2017 California drought." *The Professional Geographer* 74(4): 628-641.
- Turley, Bethani,* **A. Cantor**, S. Knuth, D. Mulvaney, K. Berry, and N. Vineyard.* 2022. "Emergent landscapes of renewable energy storage: Considering just transitions in the Western United States." *Energy Research and Social Science* 90: 102583.
- Cantor, Alida**, M. Kiparsky, R. Bales, S. Hubbard, R. Kennedy, L.C. Pecharroman, K. Guivetchi, G. Darling, and C. McCready. 2021. "Making a water data system responsive to information needs of decision makers." *Frontiers in Climate: Special issue on Democratizing Data: Environmental Data Access and its Future* 3:761444.
- Cantor, Alida**, L. Sherman, A. Milman, and M. Kiparsky. 2021. "Regulators and utility managers agree about barriers and opportunities for innovation in the municipal wastewater sector." *Environmental Research Communications* 3(3): 031001.

- Cantor, Alida.** 2021. "Hydrosocial hinterlands: An urban political ecology of Southern California's hydrosocial territory." *Environment and Planning E: Nature and Space* 4(2): 451-474.
- Cantor, Alida, K. Kay, and C. Knudson.** 2020. "Legal geography and political ecology of Hawai'i's public trust doctrine and water allocation in Maui." *Geoforum* 110: 168-179.
- Sherman, Lukas, **A. Cantor**, A. Milman, and M. Kiparsky. 2020. "Examining the complex relationship between innovation and regulation through a survey of wastewater utility managers." *Journal of Environmental Management* 260: 110025.
- Owen, Dave, **A. Cantor**, N. Green Nysten, T. Harter, and M. Kiparsky. 2019. "California groundwater management, science-policy interfaces, and the legacies of artificial legal distinctions." *Environmental Research Letters* 14(4): 045016.
- Cantor, Alida** and S. Knuth. 2019. "Speculations on the postnatural: Restoration, accumulation, and sacrifice at the Salton Sea." *Environment and Planning A: Economy and Space* 51(2): 527-544.
- Cantor, Alida** and J. Emel. 2018. "New Water Regimes: An Editorial." *Resources* 7(2).
- Cantor, Alida.** 2017. "Material, political, and biopolitical dimensions of "waste" in California water law." *Antipode* 49(5): 1204-1222.
- Stoddard, Elisabeth and **A. Cantor.** 2017. "A relational network vulnerability assessment of the North Carolina hog industry." *Annals of the American Association of Geographers* 107(3): 682-699.
- Cantor, Alida.** 2016. "The public trust doctrine and critical legal geographies of water in California." *Geoforum* 72: 49-57.

External grants and research funding (PI)

- Environmental justice impacts across the life cycle of energy storage. PI: Alida Cantor. Co-PIs: Dustin Mulvaney, Kate Berry, James Blair. US Environmental Protection Agency. Early Career: Drivers of Environmental Impacts of Energy Transitions in Underserved Communities. 2023. (\$649,456).
- Building capacity for collaborative interdisciplinary research on water and society. PI: Alida Cantor. Co-PIs: Melissa Haeffner, Janet Cowal, Heejun Chang, Shelby Anderson. NSF Build and Broaden Program. 2022. (\$369,530).
- Hydrosocial dynamics and environmental justice in water-energy transitions. PI: Alida Cantor. Co-PIs: Dustin Mulvaney, Kate Berry, James Blair. NSF Human-Environment and Geographical Sciences Program. 2022. (\$399,876).
- California water law and policy research. PI: Alida Cantor. University of California Water Security and Sustainability Research Initiative. 2018-2019. (\$21,000)

Awards and honors received

- Outstanding Researcher Award, Sigma Xi Research Society, Columbia-Willamette. 2023.
- John Eliot Allen Outstanding Teaching Award, Portland State University. 2021.
- Excellence in Sustainability Research Award, Portland State University. 2019.

Membership in Professional Organizations

- American Association of Geographers
Society for Applied Anthropology
Society for Social Studies of Science

EXHIBIT E



To: Mr. David Black, Senior Planner, Imperial County

From: Dr. Ali Sharbat, Professor of Civil Engineering, Cal Poly Pomona

Date: October 20, 2023

Re: Comments on Draft Environmental Impact Report for Hell's Kitchen Project

Dear Mr. Black,

Thank you for the opportunity to review the Draft Environmental Impact Report (DEIR) for Hell's Kitchen Powerco 1 (HKP1) and Lithiumco 1 (HKL1) Project. I am pleased to have the chance to analyze the document in detail and offer my feedback from my academic perspective. I am a Professor of Civil Engineering at Cal Poly Pomona, specializing in water engineering. Below, I have provided my comments and questions reflecting my perspective on the DEIR:

1. **Section 1:** The DEIR presents HKP1 and HKL1 as a single interconnected package. While the primary purpose is to assess their cumulative effects, it would be beneficial for reviewers to provide clear details for HKP1 and HKL1 separately to enhance the clarity of the report.
2. **Section 2:** The report mentions a net power generation rating of 49.9 megawatts. The applicant needs to provide more specific details about power generation and consumption in various processes and stages. Additionally, the report needs to clarify the power consumption associated with the lithium extraction process in details.
3. **Section 2:** The report is presented in a manner that assumes both HKP1 and HKL1 will be operational simultaneously. It is, however, unclear whether and how HKL1 is going to operate if, for any reason, HKP1 is offline. The applicant needs to provide details on the contingency plans or operational strategies for HKL1 in case HKP1 experiences downtime. Clarity in this regard is essential for a comprehensive understanding of the project's operational resilience and environmental impacts.
4. **Section 2.6:** Has there been a hydrogeology study focused on the geological interconnection between deep well injection and geothermal resources specific to this proposal? This connection has not been discussed. Mismanagement of brine injection could potentially affect existing geothermal resources.
5. **Section 2.6:** What are the specific chemical characteristics of the brine that will be injected into the underground layers? Are there any trace chemicals associated with membrane, ion-exchange resin, or other processes?



Civil Engineering
College of Engineering

6. **Section 2.8:** Is the reference to a "3-inch/24-hour rain event" (i.e., the 100-year event) based on the county's stormwater manual? This information is not clear in the report.
7. **Section 4.2:** The report lacks information on water usage for air quality mitigation efforts. Additionally, the applicant needs to provide details on the water quality parameters associated with this particular water supply / usage.
8. **Section 4.6:** More details are needed on deep well injection, including injection pressure, well depth, and any potential seismic impacts.
9. **Section 4.9:** The report does not mention the disposal strategy for the RO concentrate (i.e. reject brine) stream. The applicant needs to provide information on how this waste stream will be managed.
10. **Section 4.8:** More information is needed on the composition and volume of the filter cake. The applicant needs to elaborate on transportation and disposal routes, and consider discussing any alternative disposal options.
11. **Section 4.8:** Have alternative locations been considered for the disposal facility for the filter cake?
12. **Section 4.8:** Regarding hazardous waste, is the spent resin considered hazardous waste or regular solid waste? What is the disposal plan for spent resin?
13. **Section 4.9:** For runoff water management, if a Stormwater Pollution Prevention Plan (SWPPP) is developed, what Best Management Practices (BMPs) are being considered? Conventional BMPs may not be effective due to the shallow groundwater table in the region. Is there any runoff water leaving the site? A detailed SWPPP, including alternative assessments, is needed.
14. **Section 4.13:** The DEIR states a total IID dependence of 6,500 acre-feet per year. However, recent developments and events related to the Colorado River's Quantification Settlement Agreement (QSA) allotment may affect IID's annual water supply. The report should address water supply sustainability, especially in light of changes in the Colorado River basin's hydrology and assess alternative scenarios. This is a major comment.
15. **Section 4.13:** The applicant should specify the chemicals used for regenerating resins in the HKL1 plant.

These clarifications would not only enhance the comprehensibility of the DEIR but also contribute to a more robust and informative assessment of the Hell's Kitchen Powerco 1 (HKP1) and Lithiumco 1 (HKL1) Project. Thank you for considering these comments. I am fully committed to assisting in any way possible to ensure that the report is as accurate and thorough as possible. Please feel free to reach out to me if there is any need for further clarification on my comments and questions. I am readily available to engage in further discussions and provide additional insights to support the refinement of the DEIR.



CalPolyPomona

California State Polytechnic University, Pomona • 3801 West Temple Avenue, Pomona, CA 91768
909.869.2488 • Fax 909.869.4342 • www.cpp.edu

**Civil Engineering
College of Engineering**

The County's willingness to reflect these comments is greatly appreciated, and I look forward to collaborating to achieve a more comprehensive and transparent evaluation of this project.

Sincerely,

A handwritten signature in black ink, appearing to read "M. Sharbat".

Ali Sharbat, PhD, PE
Professor, Department of Civil Engineering
Cal Poly Pomona
Email: sharbat@cpp.edu
Phone: 909-869-2175

Ali Sharbat, Ph.D., P.E.

Professor • Civil Engineering Department • California State Polytechnic University, Pomona
3801 West Temple Ave, Pomona, CA 91768 • sharbat@cpp.edu

Education:

- **Post-Doctoral:** Institute for Energy and the Environment, New Mexico State University (NMSU), 2010-2012.
- **Ph.D. in Engineering: Environmental Engineering,** University of Nevada Las Vegas (UNLV), 2007-2010.
- **M.Sc. in Civil Engineering: Environmental Engineering,** Sharif University of Technology, Tehran-Iran, 2003-2005.
- **B.Sc. in Civil Engineering:** Science and Culture University, Tehran-Iran, 1999-2003.

Patent at Cal Poly Pomona:

- US 2021/ 63210948 A1: Baghaei Lakeh, R., **Sharbatmaleki, M.**, Engel, T., “A Heat Storage System using Storage Materials with Uncontrolled Thermo-physical Properties”.
- US 2014/0102980 A1: **Sharbatmaleki, M.**, Moe, N., “Process and Apparatus for Treating Perchlorate in Drinking Water Supplies”.
- US 2017/0050868 A1: **Sharbatmaleki, M.**, Michael Lepore, Tiffany Lai, Terrence Gaines, Kalvin Lam, Lucas Townsend, Ik-Hyoun Kim, Natalie La, Deanna Lestina, Christine Zheng, and Yaocihuatl Bourdon; “Photovoltaic Powered Electrodialysis Desalination System”.

Book Chapters at Cal Poly Pomona:

- Author, Chapter 9 of the book titled “Inland Desalination and Concentrate Management”, Publisher: American Water Works Association, 2018.
- Editor, Chapter 3 of the book titled “Electrodialysis and Electrodialysis Reversal”, Publisher: American Water Works Association. *In Press*.

Funding History at Cal Poly Pomona:

- PI: \$555K contract sponsored by the LA County Safe, Clean Water Program (SCWP): “Evaluation of Infiltration Testing Methods for Design of Stormwater Drywell Systems”, 2022-2026.
- PI: \$44K contract sponsored by the Eastern Municipal Water District: “Brine Concentration Demonstration Project Phase II”, 2020-2021.
- PI: \$45K contract sponsored by the Eastern Municipal Water District: “Purified Water Replenishment Brine Concentration Pilot Project”, 2019-2020.
- PI: \$10K grant sponsored by the Southern California Gas Company, Environmental Champion program: “Development of Carbon Sequestration Methods: Research, Education, and Outreach”, 2019-2020.
- PI: \$141K grant sponsored by the US Department of Interior, Bureau of Reclamation’s US Department of Interior (DSDI) research contract: “Evaluating Contaminates of Emerging Concern’s Fate in Potable Reuse Membrane Treatment”, 2020-2023.
- Co-PI: \$149K grant sponsored by the US Department of Interior, Bureau of Reclamation’s Desalination and Water Purification Research (DWPR) Program: “Repurposing Concentrate of Membrane Processes for Low-cost Thermal Energy Storage”, 2019-2020.
- PI: \$145K funded by King Lee Technologies for advancements phases in Development of Solar Decentralized Graywater Treatment Unit, 2018-2019.

- PI: \$182K (plus \$30K amendment) project (involving 5 other CPP faculty members) under CSU-WRPI for providing technical assistance (TA) to Sunbird Mobile Home Park disadvantaged community (DAC) for the California State Water Resources Control Board (SWRCB), 2017-2018.
- PI: \$60K grant sponsored by the US Department of Interior, Bureau of Reclamation's US Department of Interior research contract: "Contaminants of Emerging Concerns in Potable Reuse Concentrate – Phase II", 2017-2018.
- PI: \$10K grant sponsored by the Southern California Gas Company, Environmental Champion program: "Water Energy Nexus Development and Outreach", 2017.
- PI: \$70K grant sponsored by the US Department of Interior, Bureau of Reclamation's US Department of Interior (DSDI) research contract: "Contaminants of Emerging Concerns in Potable Reuse Concentrate". 2016-2017.
- Co-PI: \$100K grant sponsored by the Metropolitan Water District of Southern California titled "Solar Decentralized Graywater Treatment Unit", under 2016 Innovative Conservation Program (ICP), 2016-2018.
- PI: \$9,500 sponsored by the CPP SPICE funding program: "Improving the Quality of Computer Simulations in the Existing Environmental Engineering Courses at the CE department", 2016-2017.
- PI: \$10K grant sponsored by the Southern California Gas Company, Environmental Champion program: "CECs in Water Reuse", 2016.
- \$11K award sponsored by the Cal Poly Pomona's "Early Career Summer Support Program", 2016.
- Co-PI: \$25K research grant from the Strategic Interdisciplinary Research Grant Program (SIRG), Cal Poly Pomona: "Microalgae for a Synergistic Approach to Agricultural Nutrient Recovery", 2016.
- Co-PI: \$25K research proposal for the Strategic Interdisciplinary Research Grant Program (SIRG), Cal Poly Pomona: "Water for Communities in Need: Determining Processes, Priorities, and Successes": Spring 2016
- PI: \$10K grant sponsored by the Metropolitan Water District of Southern California under Southern California World Water Forum College Grant Program: "Solar-powered Desalination and Purification System of Inland Brackish Water Using Reverse Osmosis", 2016.
- PI: \$100K grant sponsored by the US Department of Interior, Bureau of Reclamation's Desalination and Water Purification Research (DWPR) Program: "Development of Photovoltaic Electrodialysis (PV-ED) Desalination System", 2014-2015.
- PI: \$10K grant sponsored by the US Department of Interior (DSDI) research contract: "Direct/Indirect Potable Reuse: Emerging Contaminants (ECE's) in Concentrate Stream of RO Facilities", 2014-2015.
- PI: \$6,164 proposal for release-time & student assistant grant for CPP SPICE grant opportunity titled: "Development of Campus-wide Workshops on Water Education Water Awareness", 2015.
- Co-PI: \$25K research proposal for the Strategic Interdisciplinary Research Grant Program (SIRG), Cal Poly Pomona: "A Solar-assisted Inland Water Desalination System Using Thermal Energy Storage": Spring 2015.
- Participated as one of the core team members at the CSU WRPI in preparation of applications for the Technical Assistance (TA) for Disadvantaged Communities (DAC) programs for the California State Water Resources Control Board (SWRCB) and California Department of Water Resources (DWR) to receive \$2.0M TA-DAC grant since spring 2015 till present.
- PI: \$8,061 proposal for release-time & student assistant grant for CPP SPICE grant opportunity titled: "Citation and Referencing Workshops for Cal Poly Pomona Academic Community: Mendeley Free Citation Tool": Summer 2014.

- PI: \$8,500 project (plus \$3,000 for a grad-student intern) for CSU Water Resources and Policy Initiatives (WRPI): “Drinking Water Technical Assistance and Training for Disadvantaged Communities in the California Central Valley”, 2014.
- PI: \$4,500 (plus \$2,826 for a student intern) from President’s Research, Scholarship, and Creative Activity (PRSCA), Cal Poly Pomona, proposal: “Renewable Energy for Desalination: Development of a Photovoltaic Reverse Osmosis (PV-RO) Desalination System”: Fall 2014.
- Team member on a collaborative multi-institutional project: “Engineers in Training: Expanding multi-institutional bonds to team up students for the creation of novel environmental projects” among Cal Poly Pomona and Pasadena Community College (PCC), 2012-2016.
- PI: \$20K Strategic Interdisciplinary Research Grant Program (SIRG), Cal Poly Pomona, proposal: “Perchlorate Removal from Ground Water by Electrodialysis”: Spring 2013.
- PI: \$4,000 President’s Research, Scholarship, and Creative Activity (PRSCA), Cal Poly Pomona, proposal: “Investigation of Possible Mechanism(s) of Ion-exchange Resin Biological Regeneration Used for Treatment of Oxyanion Pollutants from Drinking Water”, Fall 2012.
- PI: \$1,000 Kellogg FuTURE Mini-Grant, Cal Poly Pomona, proposal: “Removal of Nitrate from a Rural Water System Using Ion Exchange Media in Conjunction with Bioregeneration”: Spring 2013.

Journal Publications at Cal Poly Pomona:

- K.M. Sadeghi, S. Symons, S. Saneie, N. McIntosh, J. Jimenez, O. Murillo, S. Gonzales, M. **Sharbatmaleki**, and H.A. Loaiciga, "The New Headworks Odor Control BioTrickling Filter Project: Performance Data and Operations & Maintenance Challenges at Hyperion Water Reclamation Plant in City of Los Angeles, California," World Env & Water Resources Congress, 2023 (pp. 59-73).
- Sadeghi, K.M., Murillo, O., Symons, S., Saneie, S., Daycock, M., Kucherer, C., **Sharbatmaleki, M.** and Loaiciga, H., (2022) “Hyperion Water Reclamation Plant: Air Emission Control System at Hyperion BioEnergy Facility (HBEF) Using Catalytic Oxidation (CO) and Selective Catalytic Reduction in the City of LA, California”. In World Env and Water Resources 2022 (pp. 1196-1210).
- Medinilla, V. R., Sprague, T., Marseilles, J., Burke, J., Deshmukh, S., Delagah, S., & **Sharbatmaleki, M.** (2020). Impact of Ammonia-Based Aeration Control (ABAC) on Energy Consumption. *Applied Sciences*, 10(15), 5227.
- Huang, J., Xu, Q., Wang, X., Ji, H., Quigley, E. J., **Sharbatmaleki, M.**, ... & Li, C. (2021). Effects of hydrological and climatic variables on cyanobacterial blooms in four large shallow lakes fed by the Yangtze River. *Environmental Science and Ecotechnology*, 5, 100069.
- Li, S., Duran, K., Delagah, S., Mouawad, J., Jia, X., & **Sharbatmaleki, M.** (2020). Energy efficiency of staged reverse osmosis (RO) and closed-circuit reverse osmosis (CCRO) desalination: a model-based comparison. *Water Supply*, 20(8), 3096-3106.
- Li, Simeng, Celeste Y. Chan, **M. Sharbatmaleki**, Helen Trejo, and Saied Delagah. "Engineered Biochar Production and Its Potential Benefits in a Closed-Loop Water-Reuse Agriculture System." *Water* 12, no. 10 (2020): 2847.
- Shahrestani, H., Moghaddam, H., Delagah, S., **Sharbatmaleki, M.**: “Utilization of Local Water Supplies for the City of Los Angeles by Investment in Indirect Potable Water Reuse” Submitted to the *Journal of Water Science and Technology*.
- Farrokh Shad, M., Juby, G. J., Delagah, S., & **Sharbatmaleki, M.** (2019). Evaluating occurrence of contaminants of emerging concerns in MF/RO treatment of primary effluent for water reuse—Pilot study. *Journal of Water Reuse and Desalination*, 9(4), 350-371.
- Hanrahan, C., Karimi, L., Ghassemi, A., & **Sharbat, A.** (2016). High-recovery electrodialysis reversal for the desalination of inland brackish waters. *Desalination and Water Treatment*, 57(24), 11029-11039.

- Romeyn, T. R., Harijanto, W., Sandoval, S., Delagah, S., & Sharbatmaleki, M. (2016). Contaminants of emerging concern in reverse osmosis brine concentrate from indirect/direct water reuse applications. *Water Science and Technology*, 73(2), 236-250.
- Sharbatmaleki, M., Unz, R. F., & Batista, J. R. (2015). Potential mechanisms for bioregeneration of perchlorate-containing ion-exchange resin. *Water research*, 75, 1-10.
- Sharbatmaleki, M., "Dynamic Analysis Approach for Decision Making around Expansion of Wastewater Treatment Facilities", Western Decision Sciences Institute (WDSI) 2013.
- Sharbatmaleki, M., Batista, J. R., "Multi-cycle Bioregeneration of Spent Perchlorate-containing Macroporous Selective Anion-exchange Resin", *Water Research*, Vol. 46 (1), pp 21-32, 2012.

Conferences and Presentations at Cal Poly Pomona:

- K.M. Sadeghi, S. Symons, S. Saneie, N. McIntosh, J. Jimenez, O. Murillo, S. Gonzales, M. Sharbatmaleki, and H.A. Loaiciga, "The New Headworks Odor Control BioTrickling Filter Project: Performance Data and Operations & Maintenance Challenges at Hyperion Reclamation Plant in City of LA, California," World Env & Water Resources Congress, Henderson, NV, May 21-24, 2023.
- Huang, J., Li, S., Delagah, S., Ahles, D., Mouawad, J., Sharbat, A., (2022)., High Recovery Water Reuse: An Innovative Method of Using Closed Circuit Reverse Osmosis (CCRO) – Pilot Study", paper submitted for the American Water Works Association (AWWA) / American Membrane Technology Association (AMTA) Annual Conference, Las Vegas, NV, 2022.
- Gauri Mhamunkar, Joseph Kiriakos, Brian Camey, Saied Delagah, Aaron Mandell, Ali Sharbat, and Reza Baghaei Lakeh (2021), Techno-Economics of Using Concentrate of Membrane Processes as a Low-Cost Thermal Energy Storage Medium, ASME International Mechanical Engineering Congress
- Cerano-Lopez, Alejandro, Chad N. Contreras, Allison Y. Inanoria, Karla I. Duran, Simeng Li, Ali Sharbat, and Xudong Jia, (2019), "Purified Water Replenishment Brine Concentration Pilot Project." the 2019 Southern California Conferences for Undergraduate Research
- Lakeh, RB, Andrade, D, Miller, K, Modabernia, MM, Nguyen, TJ, Nguyen, J, Flanagan, E, Jacobo, D, Lopez, L, Phun, B, Kest, J, Baradii, J, Delagah, S, & Sharbatmaleki, M., (2018), "Design and Testing of a Solar-Driven Wastewater Treatment Unit for Off-Grid Applications." Proceedings of the ASME 2018 International Mechanical Engineering Congress, Vol. 6B: Energy.
- Justine Nguyen, Kyle James Miller, Thuan N Nguyen, Daniel Andrade, Masoud Modabernia, Reza Baghaei Lakeh, and Ali Sharbat, (2017), "Decentralized Renewable Off-Grid Wastewater Treatment", 2017 Southern California Conferences for Undergraduate Research
- Baghaei Lakeh, R, Andrade, D, Miller, KJ, Du, B, Pham, J, Modabernia, MM, Ng, PY, Nguyen, TN, Nguyen, JL, Mena, C, Anderson, KR, & Sharbatmaleki, M. (2017), "A Case Study of Decentralized Off-Grid Water Treatment Using Reverse Osmosis." Proceedings of the ASME 2017 International Mechanical Engineering Congress. Vol. 5: Education and Globalization
- Baghaei Lakeh, R., Sharbat, A., (2017), "Decentralized, Renewable Off-grid, Water Treatment", Annual Conference of CSU Water Resources and Policy Initiative (WRPI), San Jose, CA
- R. Baghaei Lakeh, S. Delagah, and M. Sharbatmaleki: "Reverse Osmosis Concentrate: A Waste or an Asset" at the ASME 2019 Int. Conference on Energy Sustainability, Bellevue, WA, July 2019.
- Alejandro Cerano-Lopez; Chad N. Contreras; Allison Y. Inanoria; Karla I. Duran; Mariya Borovska; Victoria R. Medinilla; Xudong Jia; Simeng Li.; and Ali Sharbat, "Purified Water Replenishment Brine Concentration Pilot Project" the 2019 Southern California Conferences for Undergraduate Research, November 23, 2019, San Marcos, CA.
- Ramirez, I., Lim, B., Juby, G., Delagah, S., Farrokh Shad, M., Sharbatmaleki, M., "Removal of Contaminants of Emerging Concern from using a Novel Water Reclamation", WateReuse California Annual Conference, Garden Grove CA, March, 17-19, 2019.

- Zabalza, C., Juby, G., Delagah, S., Farrokh Shad, M., Sharbatmaleki, M., “Suggested Monitoring for Direct Potable: Southern California Water Reclamation”, WaterReuse California Annual Conference, Garden Grove CA, March, 17-19, 2019.
- Farrokh Shad, M., Juby, G., Delagah, S., Sharbatmaleki, M., “Tracking Contaminants of Emerging Concern through a Novel MF/RO Water Reclamation Process” Submitted to WEFTEC, the Water Environment Federation's Technical Conference, Chicago, IL, September 21-25, 2019.
- Farrokh Shad, M., Juby, G., Delagah, S., Noh, B., Sharbatmaleki, M., “Analysis and removal of CECs from a WWTP Primary Effluent by Novel MF/RO Treatment Process-Pilot Study” AWWA 2019 Membrane Technology Conference, New Orleans, LA, Feb. 25-28, 2019.
- Lakeh, Reza Baghaei, Daniel Andrade, Kyle Miller, Mohammad Masoud Modabernia, Thuan John Nguyen, Justine Nguyen, Elbon Flanagan et al. "Design and Testing of a Solar-Driven Wastewater Treatment Unit for Off-Grid Applications." In ASME 2018 International Mechanical Engineering Congress and Exposition, American Society of Mechanical Engineers, 2018.
- Graham Juby, Mojtaba Shad, Ilene Ramirez, and M. Sharbatmaleki: “Alternative Approach to Produce High Quality Water for Groundwater Replenishment” at the Inland Empire Utilities Agency, Chino, CA, April 2018.
- Lakeh, Reza Baghaei, Daniel Andrade, Kyle J. Miller, Bowen Du, Joshua Pham, Mohammad M. Modabernia, Pui Y. Ng et al. "A Case Study of Decentralized Off-Grid Water Treatment Using Reverse Osmosis." In ASME 2017 International Mechanical Engineering Congress and Exposition, American Society of Mechanical Engineers, 2017.
- Graham Juby, Mojtaba Shad, Saied Delagah, M. Sharbatmaleki: “Evaluating Management and Disposal of CECs in Water Reuse Projects” at the American Water Works Association (AWWA) / American Membrane Technology Association (AMTA) Conference, Long Beach, CA, Feb, 2017.
- Reza Baghaei Lakeh, and M. Sharbatmaleki: “Decentralized Renewable Off-grid Water Treatment” at the 2017 Annual Conference of California State University Water Resources and Policy Initiative (WRPI), San Jose, CA, April 2017.
- Reza Baghaei Lakeh, Daniel Andrade, Kyle Miller, Bowen Du, Joshua Pham, Mohammad Modabernia, Pui Ng, Thuan Nguyen, Kevin R. Anderson, M. Sharbatmaleki: “Solar-powered Desalination and Purification System of Inland Brackish Water Using Reverse Osmosis” at the Metropolitan Water District of Southern California for the Southern California World Water Forum College Grant Program (WWF). Los Angeles, CA, May 2017.
- M. Sharbatmaleki: “Development of a Zero-Carbon Footprint Brackish Water Desalination System” to American Water Works Association (AWWA) / American Membrane Technology Association (AMTA) Annual International Conference, San Antonio, TX, Feb 2016.
- Kevin R. Anderson, Maryam Shafahi, Pedro Perez, Benjamin Kampen, Chris McNamara, Suzanne Shihadeh, Ali Sharbat, Monica Palomo, Reza Baghaei Lakeh, Yasser Salem, Souha Jouhar, Saman Bahrani, Kaian Wang, Joseph Juarez: “Case Study of a Solar Tower/ Compost Waste-to-Energy Test Apparatus” at the 31st International Conference on Solid Waste Technology and Management, Philadelphia, PA, April 3-6, 2016. Awarded the “Russell Ackoff Award” for best paper.
- Team presentation “Algal Productivity in Brine Water for Biofuel Production: A Multi-disciplinary Approach to Investigating the Effects of TDS, Nitrate, and Anti-Scalant on Algal Growth” at the 2015 National Conference on Undergraduate Research (NCUR) conference in Cheney, WA. (April 16-18, 2015).
- Team presentation “Algal Productivity in Brine Water for Biofuel Production: A Multi-disciplinary Approach to Investigating the Effects of TDS, Nitrate, and Anti-Scalant on Algal Growth” at the 2015 National Conference on Undergraduate Research (NCUR) conference in Cheney, WA. (April 16-18, 2015).

- Team presentation “Drought Solutions through Green Treatment Technology: A Photovoltaic Electro-Dialysis Unit” at the 2015 WaterReuse California Annual Conference (March 16, 2015).
- Team presentation “Treatment Methods and Regulations for Contaminants of Emerging Concern in RO Brine Concentrate” at the 2015 WaterReuse California Annual Conference (March 16, 2015).
- Team presentation “Inland Desalination and Brine Management: Salt Recovery and Beneficial Uses of Brine” at the 2015 ASCE EWRI Congress, Austin, TX (May 16-19, 2015)
- Team presentation “Inland Desalination and Brine Management: Salt Recovery and Beneficial Uses of Brine” at the NSF 2015 Emerging Researchers National (ERN) Conference in STEM in Washington, DC (Feb. 19-21, 2015).
- Team presentation “Water Reuse, Contaminants of Emerging Concern, Current Practices, and Future Trends” at the 2015 American Water Resources Association (AWRA) conference (March 30, 2015)
- Conference Proceeding and Presentation titled “Contaminants of Emerging Concern In Reverse Osmosis Brine Concentrate From Indirect/Direct Water Reuse Applications”, 2015 AWWA/AMTA Annual Conference, Orlando, FL, March 2-6, 2015.
- Team presentation “Algal Productivity in Brine Water for Biofuel Production: A Multi-disciplinary Approach to Investigating the Effects of TDS, Nitrate, and Anti-Scalant on Algal Growth”, 2015 National Conference on Undergrad Research (NCUR) conference, Cheney, WA, April 16-18, 2015.
- Sharbatmaleki, M., Poster presentation titled “Assessing Local Implementation of Hexavalent Chromium Treatment Technologies” at the CSU COAST-WRPI Research Poster Reception, Long Beach, CA (March 8, 2016).
- Team presentation titled “Heavy Metal Pollution In The Santa Ana River Watershed Due To Passenger Vehicles” at the 2016 Creative Activities and Research Symposium, Cal Poly Pomona (August 17, 2016)
- Team presentation titled “The Design of a Photovoltaic Electrodialysis (PV-ED) Unit: Zero Carbon Footprint Desalination” at the 4th Annual RSCA Conference at Cal Poly Pomona (March 4, 2016).
- Team presentation titled “Geo-synthetics and Design of Pavements” at the 2016 Creative Activities and Research Symposium, Cal Poly Pomona (August 17, 2016)
- Team presentation titled “Drought: Direct and Indirect Water Reuse Case Studies” at the 2015 Southern California Conferences for Undergraduate Research (SCCUR) at Harvey Mudd College, Claremont, CA (November 21, 2015)
- Sharbatmaleki, M., “Dynamic Analysis Approach for Decision Making around Expansion of Wastewater Treatment Facilities”, Western Decision Sciences Institute (WDSI) 2013 Annual Conference, Long Beach, CA, March 2013.
- Lara, M., Perreyra, Y., Rodriguez, T., Grano, P., Sharbatmaleki, M., “Comparison of Concentrate Disposal/Management Methods”, LA Metropolitan Water District Exposition, May 1, 2014.
- Calderon, B., Espinoza, D., Kashifi, A., Williams, S., Yang H., Palomo, M., Sharbatmaleki, M., “The Removal of Nitrate and Perchlorate from RO Concentrate Stream”, 2014 Cal Poly Pomona Student Research Conference, Pomona, CA, March 2014.
- Calderon, B., Espinoza, D., Kashifi, A., Williams, S., Yang H., Palomo, M., Sharbatmaleki, M., “The Removal of Nitrate and Perchlorate from RO Concentrate Stream”, The 28th Annual CSU Student Research Competition, East Bay, CA, May 2014.
- Choe, A., Sharbatmaleki, M., “Inland Brine Disposal for Brackish and Saline Water Desalination Plants Producing Drinking Water”, Southern California Conferences for Undergraduate Research, Whittier, CA, Nov. 23, 2013.
- Palomo, M., DiFiori, R., Sharbatmaleki, M., “Expanding Multi-institutional Bonds to Team up Students for the Creation of Research Environmental Projects”, ASEE Zone IV Conference, Long Beach, CA, April 25, 2014.

- Sharbatmaleki, M., “Mass Transfer Studies of Ion-exchange Resin Bio-Regeneration Used for Treatment of Perchlorate from Drinking Water”, AWWA Water Quality Conference, Long Beach, CA, November 2013.
- Sharbatmaleki, M., “Mass Transfer Studies of Ion-exchange Resin Bio-Regeneration Used for Treatment of Perchlorate from Drinking Water” to AWWA Water Quality Conference. November 2013, Long Beach, CA.

Honors and Awards:

- **Excellence in Teaching Award:** Chi Epsilon 2019 James Robbins Award
- 2020-2021 **Outstanding Advisor Award** for the College of Engineering, Cal Poly Pomona
- **Tau Beta Pi, Chi Epsilon, and Phi Kappa Phi** Honor Society member.
- Co-adviser for a student team winning the **1st place** award for the Best Senior Project of the year: College of Engineering, Cal Poly Pomona, May 2019.
- Co-adviser for a student team winning the **2nd place** Eco Innovator Award of Excellence: 2017 Green Expo of the Metropolitan Water District of Southern California.
- Adviser for a student team winning the **2nd place** Eco Innovator Award of Excellence: 2016 Green Expo of the Metropolitan Water District of Southern California.
- **Best Paper** Award at the 2015 WaterReuse California Annual Conference (March 16, 2015).
- Adviser of the **2nd place** team: 2015 ASCE EWRI Congress – Senior Design Competition in Austin, TX (May 16-19, 2015).
- **Best Paper** Award at the 31st International Conference on Solid Waste Technology and Management, Philadelphia, PA (April 3-6, 2016).
- **Merit Scholarship**, Sharif University of Technology, Master’s Degree, 2003-2005.
- Ranked 89th among 9324 participants in the Nationwide Civil Engineering M.Sc. Entrance Exam, (**top 1%**), Iran, spring 2003.

Professional Affiliations:

- Professional Engineering (**PE**) # 022428, Nevada, 2013 to present.
- American Society of Civil Engineers (**ASCE**), 2006 to present.
- American Water Works Association (**AWWA**), 2007 to present. (active member)
- Water and Environment Federation (**WEF**), 2007 to 2010.
- International Desalination Association (**IDA**), 2012 to 2014.
- American Chemical Society (**ACS**), 2008 to 2010.

Graduate Students at Cal Poly Pomona:

- **Undergraduate students:** 200+ students, and most of them found their career in the water industry.
- **Graduate students:** Ignacio Ramirez, Darian Doyle, Travis Romeyn, Hoda Shahrestani, Ilene Ramirez, Mojtaba Farrokh Shad, Benson Lim, Christina Zabalza, Han Yang, Erik Cheung, Sahar Ahmed, Andres Convarrubias, Rommel Garcia, Nisarg Joshi (incomplete), Robert Kochan, Tiffany Tran, Han Yang, Victoria Medinilla, Ilene Ramirez, Jian Haung, Micheal Kim, Levon Tawilian.

EXHIBIT F

October 23, 2023

Sent via email

David Black, Senior Planner

davidblack@co.imperial.ca.us

Imperial County Planning and Development Services

801 Main Street El Centro, CA 92243

Dear Mr. Black,

Please find the attached comments from Earthworks on the Draft Environmental Impact Report (DEIR) for the Hell's Kitchen PowerCo1 and LithiumCo1 Project. Earthworks is an environmental nonprofit organization that protects communities and the environment from the adverse impacts of mineral and energy development while promoting sustainable solutions. We're driven by our commitment to collaborate with communities on the frontline, using science in innovative ways, and building people power to ensure a more just and livable future. For the past two years we have worked with communities in Imperial County to better understand the impacts of proposed lithium extraction projects. We have reviewed the DEIR and are concerned that it has failed to disclose and analyze several significant environmental impacts as required by the California Environmental Quality Act (CEQA). We ask that the DEIR be revised to address our comments below.

Please include this letter and references in your file for the project. Please also include me on your notice list for all future updates, notices, and documents related to the project.

Thank you for your consideration,



Jared Naimark

California Mining Organizer

Earthworks

1958 University Ave.

Berkeley, CA 94704

jnaimark@earthworksaction.org

Aesthetics

The DEIR states that the project will include two 60-foot tall lime silos, 80-foot tall evaporator support structure, 50-foot tall cooling towers, 80-110 foot tall crystallizers, and transmission structures up to 120 feet tall (4.1-10). However, the DEIR finds a less than significant impact to visual quality because construction will be consistent with other power plants in the area (4.1.11).

This analysis fails to take into account the significant cumulative impacts the project would have on degrading the viewshed of Obsidian Butte, a cultural site held sacred by multiple Native American tribes.¹ The DEIR should be revised to analyze whether the Hell's Kitchen project would degrade the visual quality of Obsidian Butte, and if so, include mitigation measures.

Air quality

The DEIR states that the project conflicts with applicable air quality plans for Ozone, PM₁₀ and PM_{2.5} (4.2.10). However, the DEIR goes on to state that the project is in compliance with attainment plans for these pollutants. The DEIR should be revised to explain more clearly what plans are in conflict and what are compliant, and what mitigation is required.

The DEIR finds that during start-up conditions, air emissions of CO and NO_x were estimated to exceed CEQA significance thresholds (4.2-13). However, it is not clear how the mitigation measure described brings these emissions below significance thresholds. The DEIR should be revised to clearly explain how the required mitigation measure reduces emissions during startup.

According to the air quality technical report (43-33), the project will produce HCl vapor emissions. However, no analysis of HCl is included in the EIR. HCl can cause a range of health impacts, including difficulty breathing. The DEIR should be revised to analyze the impact of HCl vapor emissions and require specific mitigation measures. This should include a discussion of how effective the HCl scrubbers are, how their efficacy be monitored, the expected quantity of HCl emissions, and compliance with state and federal requirements.

The project includes a brine pond for startup and upset conditions (2.10-11). However, the DEIR does not include an analysis of air quality impacts from the brine pond. Salton Sea geothermal

¹ Gates, T., & Crawford, C. (2010). *Ethnographic Assessment of the Importance of Obsidian Butte to the Native American Community, Imperial County, California*. California Energy Commission.

brine is known to contain hazardous elements that may become airborne when wind blows across the pond. These impacts should be analyzed in the EIR and mitigation measures required.

The main contributor to poor air quality in the region is the receding Salton Sea and exposed playa.² By consuming additional freshwater that may otherwise flow into the Salton Sea, the project is contributing to worsening air quality. The DEIR does not include any analysis of indirect impacts to air quality from exacerbating Salton Sea degradation. The DEIR should be revised to analyze this as a connected action. Furthermore, the DEIR should be revised to include an analysis of how the project's impacts on water supply (and cumulative impacts of the lithium industry overall) may limit Salton Sea restoration options, such as voluntary fallowing to transfer agricultural water into the sea.

Hazards and hazardous materials

The DEIR fails to analyze the impact of brine spills from drilling, pipeline, processing, reinjection or descaling. Brine is known to contain hazardous materials such as lead and arsenic, and has been spilled by similar operations in the area.^{3 4 5 6} The DEIR should be revised to analyze the impact of brine spills and include specific mitigation measures.

Utilities and service systems

The DEIR finds that when drought conditions occur, water supply will be unaffected because of IID high priority Colorado River water rights (4.13-16). However, there is no discussion of negotiated cuts to IID's Colorado River use agreed to in 2023, nor is there discussion of the

² Frie, A. L., Dingle, J. H., Ying, S. C., & Bahreini, R. (2017). The Effect of a Receding Saline Lake (The Salton Sea) on Airborne Particulate Matter Composition. *Environmental Science & Technology*, 51(15), 8283–8292. <https://doi.org/10.1021/acs.est.7b01773>

³ Department of Toxic Substances Control. (n.d.). *CALENERGY - CALENERGY - VULCAN/DEL RANCH(HOCH)FACILITIES*. EnviroStor. Retrieved May 17, 2023, from https://www.envirostor.dtsc.ca.gov/public/profile_report?global_id=71003831

⁴ Department of Toxic Substances Control. (n.d.). *CALENERGY - ELMORE FACILITY*. EnviroStor. Retrieved May 17, 2023, from https://www.envirostor.dtsc.ca.gov/public/profile_report?global_id=71003832

⁵ Department of Toxic Substances Control. (n.d.). *CALENERGY - LEATHERS FACILITY*. EnviroStor. Retrieved May 17, 2023, from https://www.envirostor.dtsc.ca.gov/public/profile_report?global_id=71003833

⁶ Department of Toxic Substances Control. (n.d.). *CALENERGY - UNITS1&2/UNITS 3&4/5 FACILITIES*. EnviroStor. Retrieved May 17, 2023, from https://www.envirostor.dtsc.ca.gov/public/profile_report?global_id=71003830

likelihood of future cuts. The DEIR should be revised to include an analysis of water supply within the context of extreme drought and likely cuts throughout the Colorado River basin.

Furthermore, the mitigation measure listed simply states that the project will work with IID should reductions come into effect, but does not include any details. The DEIR should be revised to include detailed mitigation steps, including whether or not water be cut to the project or if reductions would come from elsewhere, and analysis of the impacts of cutting water supply during the project's operation.

As the lithium industry in Imperial Valley expands, it may be limited by water supply. IID has reserved up to 25,000 acre-feet of water per year for non-agricultural use. However, the DEIR does not include an analysis of cumulative impacts to this water supply. The DEIR should be revised to include a cumulative analysis of how this project, along with other past, present, and reasonably foreseeable lithium projects, including geothermal, battery plants, and associated infrastructure with lithium valley, would impact the region's non-agricultural water supply. This should include discussion of whether water may have to be diverted from agriculture or Salton Sea restoration to supply the growing lithium industry.

Finally, the DEIR finds that the descaling process, estimated to be required every three years, has the potential to exceed hazardous waste standards for both California and Nevada. In this case it would have to be trucked to Nevada. The DEIR states this is an extremely rare occurrence, occurring only twice in the past 10 years (4.13-2). However, this is a new project. It is not clear what record of waste disposal is being cited here. This section should be revised to include a clear analysis of the hazardous waste expected to be produced by Hell's Kitchen descaling operations and appropriate mitigation measures.

Jared Naimark

Community Mining Organizer



Jared joined Earthworks in 2022. He works to support frontline communities at risk from existing and proposed mining throughout California. Before joining Earthworks, Jared worked for two years as a program associate at the 11th Hour Project, where he helped develop new grantmaking initiatives to support Indigenous self-determination, protect the right to protest, and address the impacts of mining in the context of the renewable energy transition.

Jared has a background in political ecology and is passionate about movements for environmental and social justice. He previously worked in solidarity with the Karen Indigenous rights movement in Myanmar, conducting research and advocacy for campaigns to defend territory from mining, mega-dams, oil palm, and other extractive projects.

He holds a BS in Earth Systems from Stanford University, and a Master of Environmental Science from the Yale School of the Environment. Outside of work, Jared loves to hike, bike, and listen to old jazz records.

Contact Jared (he/him)

Email: [jnaimark\[at\]earthworks\[dot\]org](mailto:jnaimark@earthworks.org)

Phone: 202-887-1872 X 156

Twitter: [@JaredNaimark](https://twitter.com/JaredNaimark)

Location: Palo Alto, California on unceded Ohlone lands

EXHIBIT G

October 19, 2023

David Black, Senior Planner
Imperial County Planning & Development Services Department
801 Main Street
El Centro, CA 92243

Dear Mr. Black and staff:

I am a Professor of Geography at the University of Nevada, Reno and have been working on water and natural resource issues for over 30 years. My CV is attached.

As part of the Lithium Valley Environmental and Technical Advisory Committee developed by Comite Civico del Valle, I have been asked to review the Draft Environmental Impact Report (DEIR) for the Hell's Kitchen Power Co1 and Lithium Co1 Project (Hell's Kitchen project) proposed by Controlled Thermal Resources Inc. (CTR). Below you will find comments on the DEIR for the Hell's Kitchen project organized around construction phase, operations, and cumulative impacts.

Construction Phase

- In CUL-3 it is mentioned that a tribal monitor shall be provided an opportunity to attend briefings and be present onsite, if requested. It is unclear whose tribal monitor this is and what they can actually do while onsite. Moreover, this minimal effort does not satisfy the need for free, prior, and informed consent with Tribes.
- In Cultural Resources, Threshold c, how can finding human remains be considered "less than significant" both before and after mitigation, given NAGPRA and other cultural resource protection statutes and regulations?
- In Hazards and Hazardous Materials, Threshold b – MM HAZ-2, will the soil sampling be targeting surface or subsurface samples? Need to describe the goal of soil sampling, the process to be used in sampling and analysis, what the thresholds are, and what will be done if thresholds are exceeded.

Operations

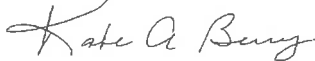
- In BIO-13 it is mentioned that to offset the loss of the Yuma Ridgway Rail's habitat, it is necessary to procure water from IID. Who will procure this water? How is this specifically accounted for in the overall water demands and water planning for the Hell's Kitchen project?
- In BIO-19 there is a discussion of mitigation wetland loss by creating ~152 acres of native wetland/open water habitat. Who will procure this water? How is this specifically accounted for in the overall water demands and water planning for the Hell's Kitchen project?

- In Utilities and Service Systems, threshold b, the likelihood of drought is not adequately addressed. The mitigation listed under UTIL-1 is not actually mitigation.

Cumulative Impacts

- While the Hell's Kitchen project is highly dependent on receiving water from Imperial Irrigation District (IID), this DEIR has not adequately addressed the evolving situation with allocations of Colorado River water. The U.S. Department of Interior has new guidelines for managing the Colorado River starting in 2027 that establish new operating rules for water allocations in the Lower River. Moreover, a consensus-based proposal from the Lower Basin states that included California agreed to a 3 million acre-foot reduction, which also impacts IID's allocation of Colorado River water. Better water planning for the Hell's Kitchen project needs to be done to take into account the long-term and cumulative impacts of declining allocations for IID. In addition, the Hell's Kitchen project needs to be evaluated in terms of the cumulative impacts of broader development proposals within Imperial County.

Sincerely,

A handwritten signature in cursive script that reads "Kate A. Berry".

Kate A. Berry, Ph.D.

Biographical Sketch

Kate A. Berry, Professor
Department of Geography
University of Nevada, Reno

(a) Professional Preparation

Northern Arizona University	Flagstaff, AZ – For. & Natural Resources Mgt.	BS, 1980
Colorado State University	Ft Collins, CO - Watershed Science & Mgt.	MS, 1985
University of Colorado, Boulder	Boulder, CO - Geography	PhD, 1993

(b) Appointments

2012-present **Professor**, Department of Geography, University of Nevada, Reno
2011-2013 **Director**, University Core Curriculum, University of Nevada, Reno
2011-2012 **Acting Director**, Nevada State Climate Office
2008-2011 **Chair**, Department of Geography, University of Nevada, Reno
1999-2011 **Associate Professor**, Department of Geography, University of Nevada, Reno
1993-1999 **Assistant Professor**, Department of Geography, University of Nevada, Reno
1991-1993 **Adj. Fac. & Prog. Advisor**, Env. Policy & Mgt. Division, University of Denver
1985-1991 **Environmental Consultant**, ERO Resources, Denver, CO
1980-1982 **Forester**, Columbia Gorge Ranger District, Mt Hood National Forest, Troutdale, OR

(c) Selected Publications

Borgias SL*, **Berry KA**. (accepted & being revised) Beyond injustice: Diverse visions and coalitions for water justice in rural-urban water conflicts. *Water Alternatives*.

Vineyard, N*, **Berry KA**, Ormerod KJ. (2023) Legal geographies of water. *WIRES Water* e1652. <https://doi.org/10.1002/wat2.1652>.

Berry KA, Cohn TC. (2023) Space, time, and hydrosocial imaginaries: Water quality governance of the Pyramid Lake Paiute Tribe. *Professional Geographer*. <https://doi.org/10.1080/00330124.2022.2075403>.

Turley B, Cantor A, **Berry KA**, Knuth S, Mulvaney D, Vineyard N. (2022) Emergent landscapes of energy storage: Considering just transitions in the Western United States. *Energy Research & Social Science* 90: 102583. <https://doi.org/10.1016/j.erss.2022.102583>.

Cohn TC, Higheagle S, Whyte KP, **Berry KA**, Green K, Carter M. (2022). “We had to jump over, but we’re still here”: *Nimiipúu* spatio-temporalities of water and fish in times of climate change, *Indigenous Water and Drought Management in a Changing World*, ed. Sioui M. Elsevier Publishers, pp 91-108.

Hillis V, **Berry KA**, Swette B, Aslan C, Barry S, Porensky L. (2020) Unlikely alliances and the future of social-ecological systems in the American West. *Environmental Research Letters* 15: 045002. <https://doi.org/10.1088/1748-9326/ab6fbc>.

Cohn TC, **Berry KA**, Whyte KP, Norman E. (2019) Spatio-temporality and tribal water quality governance in the United States. *Water* 11(1): 99. doi:10.3390/w11010099. Also published in: Wilson NJ, Harris LM, Nelson J, Shah SH. (2019) *Water Governance: Rethorizing Politics* Basel, Switzerland: MDPI, p. 236-249. ISBN 978-3-03921-560-7. doi.org/10.3390/books978-3-03921-561-4.

Berry KA, Jackson S, Saito L, Forline L. (2018). Reconceptualising water quality governance to incorporate knowledge and values: Case studies from Australian and Brazilian Indigenous communities. *Water Alternatives* 11(1): 40-60. <https://www.wateralternatives.org/index.php/alldoc/articles/vol11/v11issue1/408-a11-1-3/file>.

Berry KA, Matsui K, Jackson S, Cavazos Cohn T. (2017) Indigenous water histories II: Water histories and the cultural politics of water for contemporary Indigenous groups, *Water History* 9(1): 1-8. doi:10.1007/s12685-017-0195-0.

Horangic A, **Berry, KA**, Wall T. (2016) Influences on stakeholder participation in water negotiations: a case study from the Klamath Basin. *Society & Natural Resources* 29(12): 1421-1435. doi:10.1080/08941920.2016.1144837.

Perry D, **Berry KA**. (2016) Central American regional integration through infrastructure development: A Costa Rican case study of hydropower. *Regions & Cohesion* 6(1): 96-115. doi:10.3167/reco.2016.060105.

Mann K, **Berry KA**, Bassett S, Chandra S. (2013) Voting on floodplain conservation: the role of public values and interactions along the Carson River, Nevada. *Society & Natural Resources* 26(5): 568-585. doi:10.1080/08941920.2012.713449.

Berry KD, Saito L, Kauneckis D, **Berry KA**. (2012) Understanding perceptions of successful cooperation on water quality issues: a comparison across six western US interstate watersheds. *Regions & Cohesion* 2(2): 57-82. doi:10.3167/reco.2012.020204.

Berry KA. (2012) Tribes and water, In *A twenty-first century U.S. water policy*, edited by Gleick P, Christian-Smith J. Oxford: Oxford University Press pp 90-108.

Berry KA, Mollard E. (2010) Editors, *Social participation in water management and governance: Critical and global perspectives*, London: Routledge/Earthscan Publishers.

(d) Synergistic Activities

Member, Board of Directors of Great Basin Resource Watch (since 2017).

Discussions with Tribal leaders and rural residents on water and hard rock mining issues in Nevada, in association with the Great Basin Resource Watch (2018-2020).

Chair, International Programme Advisory Committee for CoCooN (Conflict & Cooperation in Natural Resource Management in Developing Countries), Netherlands Organization for Scientific Research (NWO-WOTRO) (2009-2018).

Member, Association of American Geographers' project on Catalyzing Research on Geographies of Broadening Participation (2012-2014).

EXHIBIT H

LAW OFFICE OF JORDAN R. SISSON

LAND USE, ENVIRONMENTAL & MUNICIPAL LAW

3993 Orange Street, Suite 201
Riverside, CA 92501

Office: (951) 405-8127
Direct: (951) 542-2735

jordan@jrsissonlaw.com
www.jrsissonlaw.com

December 13, 2023

VIA EMAIL:

David Black, Senior Planner
Imperial County Planning & Development Services Department
davidblack@co.imperial.ca.us
icpdscommentletters@co.imperial.ca.us

RE: ITEM 8, PLANNING COMMISSION; FINAL EIR COMMENTS REGARDING HELL'S KITCHEN POWERCO I AND LITHIUM CO I PROJECT (SCH No. 2022030704)

Dear Mr. Black and Imperial County Planning & Development Services Department ("ICPDS"):

On behalf of Comité Civico del Valle ("**Comité**"), this office respectfully submits the following comments to the County of Imperial ("**County**") on the Final Environmental Impact Report ("**EIR**")¹ and "**Staff Report**"² for the above-referenced construction of a geothermal power plant that will produce up to 49.9 megawatts net of geothermal green energy ("**HKPI**"), and construction of a related commercial lithium hydroxide production plant via a geothermal brine process facility or ("**HKLI**"). Controlled Thermal Resources (US) Inc., via its subsidiary Hell's Kitchen Geothermal, LLC, (collectively "**Applicant**") is proposing the HKPI and HKLI facilities that include a 2.3-mile gen-tie line (collectively "**Project**") located within the Salton Sea geothermal field near adjacent to Davis Road and south of Noffsinger Road in Imperial County, California ("**Site**").

In short, the FEIR's response to comments fails to make a good-faith effort to respond to numerous Draft EIR comment letters, including those cover letters and attached comments submitted on behalf of CCV. The generic response in the FEIR was a distinct departure from the EIR preparer's past practice of responding to individual comments, such as its prior response to Energy Source's Mineral ATLI's Project. (See e.g., excerpts attached hereto as Exhibit A). So too, CCV is concerned that some Draft EIR comments were not provided or responded to in the Final EIR, such as the October 23, 2023 Leadership Counsel letter attached hereto as Exhibit B. Furthermore, CCV is disappointed with the Final EIR's general dismissal of the numerous concerns raised by CCV (as well as other commenters like the Imperial Irrigation District ("**IID**") and others) requesting more information about the Project. As indicated in the Earthwork Final EIR comment letter attached hereto as Exhibit C, the requested information is critical to fully understand key components of the Project and environmental setting that relate to the Project's impacts and potential mitigation/alternative analysis.³ This fatal flaw infects the EIR's impact analysis—particularly as it relates to the Project impacts (project-specific and cumulative) on water and potential exposure to hazardous materials. As a result, the EIR's impact analysis lacks

¹ <https://www.icpds.com/assets/Hell'sKitchen-FEIR-1701483474.pdf>.

² <https://www.icpds.com/assets/hearings/8.-CUP21-0020-CUP21-0021-Hell's-Kitchen-PC-Hearing-Pkg-12-13-23-1702404597.pdf>.

³ Under CEQA, an accurate, stable and finite project description is the sine qua non of an informative and legally sufficient EIR. (See *San Joaquin Raptor Rescue Ctr. v. Cnty. of Merced* (2007) 149 Cal.App.4th 645, 654-655.) It is the County's affirmative duty to consider approval of the Project only after "meaningful consideration of alternatives and mitigation measures." (*Mountain Lion Foundation v. Fish & Game Com.* (1997) 16 Cal.4th 105, 134.)

substantial evidence to support its conclusions of no significant impacts or the need to consider additional mitigation measures or Project alternatives.

Of particular concern is the EIR's failure to provide any real analysis of Project water impacts caused by the almost certainty of reduced Colorado River water allocations to the IID. We share the IID concerns that the EIR should have better assessed the Project's cumulative impacts should include the Salton Sea restoration projects as well as the three BHE projects pending approval, as well as the need for greater analysis for impact on salinity at the Salton Sea due to the Project's net reduction of drainage flow to Salton Sea. (See e.g., FEIR, pp. ES-91 – ES-93.) So too, we find it unacceptable the FEIR's blanket statement that the Applicant will work with IID to ensure reductions of water are managed. (Id., at p. ES-96.⁴)

While Comité is not opposed to lithium development near the Salton Sea (as a general matter), it is very concerned about the proposed Project that is relying on a fatally flawed EIR. Thus, Comité respectfully requests the County Planning Commission to stay action on the Project approvals until a CEQA-compliant Draft EIR is recirculated that addresses the concerns raised by Comité and other commenters. Such a revised CEQA analysis should include enforceable mitigation measures, with an adequate range of project alternatives, and enforceable conditions that continue to monitor changing developments to this entirely novel operation proposed by the Applicant. This could potentially be achieved through the use of a development agreement that provides the County flexibility to monitor changing conditions, implement developing best practices, and codify genuine community benefits.

Thank you for your consideration. Comité may supplement these comments in the future.

Sincerely,



Jordan R. Sisson
Attorney for Comité Civico del Valle

Attachments:

- Exh. A: FEIR Excerpts for Energy Source's Mineral ATLis Project
- Exh. B: Leadership Counsel for Justice 7 Accountability (10/23/23)
- Exh. C: Earthworks Comment Letter (12/13/23)

⁴ CEQA requires lead agencies to craft mitigation measures that would be based on enforceable performance criteria. (See *City of Maywood v. Los Angeles Unified School Dist.* (2012) 208 Cal.App.4th 362, 407.)

EXHIBIT I

CHAPTER 3.0 – COMMENTS AND RESPONSES TO COMMENTS

3.0 INTRODUCTION

This chapter includes all comments received on the Draft EIR during the 50-day public and agency review period (45-day minimum per CEQA, plus five days per County of Imperial Guidelines). No new significant environmental impacts or issues beyond those already identified in the Draft EIR for the Energy Source Mineral ATLiS Project were raised during the public review period. Acting as lead agency under CEQA, Imperial County directed responses to the comments received on the Draft EIR. Pursuant to CEQA Guidelines Section 15088.5, none of the comments received during the comment period involve any new significant impacts or “significant new information” that would require recirculation of the Draft EIR. This issue is discussed further in Chapter 1.0, Introduction in the Final EIR.

3.1 LIST OF COMMENTERS

The following individuals and representatives of organizations and agencies submitted written comments on the Draft EIR.

Table 3.0-1: List of Commenters on the Draft EIR

Comment Letter No.	Commenting Agency	Date of Comment
1	Imperial County Air Pollution Control District	July 7, 2021
2	California Department of Conservation	August 13, 2021
3	Imperial Irrigation District	August 17, 2021

It should also be noted that the Imperial County Fire Department submitted a letter prior to the public review period, noting that the Applicant met with the Fire Department, and listed the items that the Applicant has agreed to implement as part of the proposed Project. The Project will implement all of the requested requirements.

Additionally, Adams Broadwell Joseph & Cardozo (ABJC) Attorneys at Law submitted three comment letters during the public review period. Two were public records requests asking for more information, and one was a request to extend the public review timeline. Since closure of the public comment period, both letters have been revoked accordant with a request ABJC made to the County on September 9, 2021.

3.2 COMMENTS AND RESPONSES

3.2.1 Requirements for Responding to Comments on a Draft EIR

CEQA Guidelines Section 15088 requires that lead agencies evaluate all comments on environmental issues received on the Draft EIR and prepare a written response. The written response must address the environmental issue(s) raised and provide a detailed response. Rationale must be provided when specific comments or suggestions (e.g., additional mitigation measures) are not accepted. In addition, the written response must be a good faith and reasoned analysis. As long as a good faith effort at full disclosure is made in the EIR (CEQA Guidelines Section 15204), lead agencies need only to respond to significant environmental issues associated with the project and do not need to provide all the information requested by commenters.

CEQA Guidelines Section 15204 recommends that commenters provide detailed comments that focus on the sufficiency of the Draft EIR in identifying and analyzing the possible impacts on the environment and ways in which the significant effects of the project might be avoided or mitigated. CEQA Guidelines Section 15204 also notes that commenters should provide an explanation and evidence supporting their comments. Pursuant to CEQA Guidelines Section 15064, an effect shall not be considered significant in the absence of substantial evidence.

CEQA Guidelines Section 15088 also recommends that where the response to comments results in revisions to the Draft EIR, those revisions should be noted as a revision to the Draft EIR or in a separate section of the Final EIR. No comments necessitated revisions to the Draft EIR, as mentioned in Chapter 4.0, Errata of this Final EIR.

3.2.2 Comments and Responses to Comments

Written comments on the Draft EIR are reproduced on the following pages, along with responses to those comments. To assist in referencing comments and responses, the letters are coded using numbers (e.g., Comment Letter 1) and each issue raised in the comment letter is assigned a number that correlates with the letter (e.g. 1-1, 1-2, 1-3, etc.).

Comment-initiated text revisions to the Draft EIR and minor staff-initiated changes are compiled in their entirety and are demarcated with revision marks in Chapter 4.0, Errata, of this Final EIR.

150 SOUTH NINTH STREET
EL CENTRO, CA 92243-2850

TELEPHONE: (442) 265-1806
FAX: (442) 265-1799

AIR POLLUTION CONTROL DISTRICT



July 7, 2021

Jim Minnick, Director
Imperial County Planning & Development Services
801 Main Street
El Centro, CA 92243

**SUBJECT: Draft Environmental Impact Report for Energy Source Mineral ATLiS Project
(Energy-Source Minerals, LLC)**

Dear Mr. Minnick:

During a conference call with representatives of the Project on July 1, 2021, the Air District expressed concern that adjusting the default setting of 50 percent to 100 percent for Paved Roads and Road Dust represented an unrealistic model of real world conditions. The California Emissions Estimator Model (CalEEMod) default settings are not arbitrary. They represent mutually agreed upon best available control measures and should not be changed without prior consultation with the Air District.

However, following consultation with Project representatives, an **enhanced Construction Dust Control Plan (E-CDCP) as a condition of the Conditional Use Permit (CUP)** would be sufficient to keep the Project from exceeding a Tier 1 "less than significant" threshold. An E-CDCP should include some, but is not limited to, the following examples. The Project applicants are encouraged to review the options below and then consult with the Air District.

- **Watering must be performed continuously** at all times on all roadways with record-keeping to document such.
- **Reduced speed** for all vehicle types not to exceed 40 mph on paved surfaces/roadways and no more than 15 mph on unpaved surfaces/roadways.
- Whenever possible, **trips should be made using carpools** to reduce the 499 Worker Trips during the Building Construction phase as modeled by CalEEMod.

Comment
1-1

- Other **discretionary fugitive dust controls can be implemented** as described in Section 7.1 of the Imperial County California Environmental Quality Act (CEQA) Hair Quality Handbook.

↑
Comment
1-1 cont.


The CalEEMod output included in the DEIR provides for a construction schedule of just under 18 months. As a precautionary measure against a condensed construction period the **Air District is requesting the following condition**. A **Construction Equipment List** in Excel format detailing the equipment type, make, model, year, horsepower, hours of daily operation, date arrived onsite, and date removed from site must be submitted to the Air District on a regular basis to ensure NOx emissions remain under the CEQA thresholds of significance.

Comment
1-2

In addition to the above, the Project must adhere to **Regulation VIII** at all times. Formal written notification must be given to the Air District **10 days prior to the start of construction**. Finally, any **generator** greater than 50 brake horsepower must be permitted through the Permitting and Engineering.

Comment
1-3

For your convenience, Air District rules and regulations can be accessed online at <https://apcd.imperialcounty.org/rules-and-regulations>. The Air District offices can be reached at (442) 265-1800.

Respectfully,

Curtis Blondell
APC Environmental Coordinator

Reviewed by,

Monica N. Soucier
APC Division Manager

RESPONSE TO COMMENT LETTER 1

Commenter: Curtis Blondell, APC Environmental Coordinator, Imperial County Air Pollution Control District

Date of Letter: July 7, 2021

Response to Comment 1-1: The commenter describes their concern regarding adjusting the CalEEMod default setting of 50 percent to 100 percent for Paved Roads and Road Dust. Following a conference call between representatives of the Project and the Imperial County Air Pollution Control District (ICAPCD) it was determined that the Applicant would implement an enhanced Construction Dust Control Plan (E-CDCP) as best management practice that would be codified as a condition of approval (COA) of the Conditional Use Permit. Preparation of the E-CDP is fundamentally a preventive and protective measure and is reflective of a stakeholder, namely the ICAPCD. It also serves to confirm generally applicable regulations that would apply to the Project that further reduce an already less-than-significant impact and improve environmental conditions when compared with the baseline conditions. The Applicant voluntarily adopted this condition as a preventive and protective measure, and not a CEQA mitigation measures. The Applicant will consult with the ICAPCD to determine the necessary management practices to satisfy the E-CDCP.

Response to Comment 1-2: The commenter requests a Construction Equipment List in Excel format detailing the equipment type, make, model, year, horsepower, hours of daily operation, date arrived on site, and date removed from site to ensure NO_x emissions remain under the CEQA threshold of significance. The Applicant agrees to submit a Construction Equipment List to the ICAPCD on a regular basis throughout the construction period. As noted in the response to Comment 1-2, the Applicant voluntarily adopted this condition as a preventive and protective measure, and not a CEQA mitigation measure.

Response to Comment 1-3: The commenter requests formal written notification to the ICAPCD ten days prior to the start of construction, in compliance with ICAPCD Regulation VIII. The Applicant will provide this formal written notification. Additionally, the Applicant will apply for an ICAPCD permit for the 600-horsepower emergency generator proposed as part of the Project. As noted in the response to Comment 1-2, the Applicant voluntarily adopted this condition as a preventive and protective measure, and not a CEQA mitigation measure.

DocuSign Envelope ID: 5E8EBBED-AB5B-4164-888A-46DA04A60E8B



California
Department of Conservation
Division of Mine Reclamation

Gavin Newsom, Governor
David Shabazian, Director

August 13, 2021

COPY SENT VIA EMAIL: DavidBlack@co.imperial.ca.us

Mr. David Black
Imperial County
Planning and Development Services Department
801 Main Street
El Centro, CA 92243

Dear Mr. Black:

DRAFT ENVIRONMENTAL IMPACT REPORT FOR THE ENERGY SOURCE MINERAL ATLiS PROJECT; IMPERIAL COUNTY, CALIFORNIA STATE CLEARINGHOUSE (SCH) #2020120143

Thank you for including the Department of Conservation's Division of Mine Reclamation (Division) in the environmental review process for the Energy Source Mineral ATLiS Project (Proposed Project) Draft Environmental Impact Report (Draft EIR) released on June 28, 2021. The Draft EIR indicates that Imperial County (County), as lead agency under the California Environmental Quality Act (CEQA), prepared and circulated an Initial Study and Notice of Preparation for the Proposed Project on December 8, 2020, to agencies and the public to review and provide comment; the Department of Conservation did not receive this document. Comments from this process were considered and used in preparation of this Draft EIR.

Comment
2-1

As described in the Draft EIR, the Proposed Project would construct and operate a commercial lithium hydroxide production plant within the Salton Sea geothermal field in the County. Specifically, the Proposed Project would consist of:

- Construction and operation of a facility (the ATLiS plant) to extract lithium, manganese, zinc, and other commercially viable substances from geothermal brine from the neighboring Hudson Ranch Geothermal Plant (HR1) and process the extracted substances to produce commercial quantities of lithium and, to the extent possible, manganese, zinc, and other products.
- Construction and operation of brine supply and return pipelines and other associated interconnection facilities with the HR1.
- Construction of a primary access road from McDonald Road (approximately 500 feet west of the HR1 entrance), a second primary access about 800 feet west, and an emergency access entrance only from Davis Road.
- Paving of McDonald Road from State Route 111 (Highway 111) to English Road (approximately 2 miles).
- Construction of a power inter-connection line from the Imperial Irrigation District (IID) and HR1 switchyard located at the northeast corner of the HR1 site.

Comment
2-2

State of California Natural Resources Agency | Department of Conservation
801 K Street, MS 09-06, Sacramento, CA 95814
conservation.ca.gov | T: (916) 323-9198

DocuSign Envelope ID: 5E8EBBED-AB6B-4164-888A-48DA04A60E8B

Mr. David Black
ATIS - DMR CEQA Comment Letter
August 13, 2021

- Construction of associated facilities between HR1 and the Project site to facilitate the movement of brine and other services.
- Construction of a laydown yard that will also support temporary offices during construction as well as serve as a truck management yard during operations.
- Construction of offices, repair facilities, shipping and receiving facilities, and other infrastructure including the relocation of the IID structures and road improvement at Highway 111.

Comment
2-2 cont.

The Division's primary focus is on active surface mining; however, the Division also addresses issues related to abandoned (pre-1976) legacy mines. The Division has review responsibilities associated with lead agency implementation of the Surface Mining and Reclamation Act of 1975 (SMARA; Public Resources Code [PRC] Section 2710 et seq.). SMARA provides a comprehensive surface mining and reclamation policy to assure that:

- Adverse environmental effects of surface mining operations are prevented or minimized and mined lands are reclaimed to a usable condition which is readily adaptable for alternative land uses.
- Production and conservation of minerals are encouraged, while giving consideration to values relating to recreation, watershed, wildlife, range and forage, and aesthetic enjoyment.
- Residual hazards to the public health and safety are eliminated.

Comment
2-3

Division staff has reviewed the subject Draft EIR pursuant to CEQA statutes and guidelines and offers the following comments at this time:

- The Division questions where in the Draft EIR consideration is given to SMARA and the primary relationship it establishes between mining and reclamation. Specifically, will a reclamation plan be developed for the Proposed Project? If so:
 - Division staff will provide comments on the Reclamation Plan for this proposed mining activity once the Reclamation Plan and any supporting documents have been received by the Division along with the statement from the County that certifies the submission as complete and in accordance with PRC Section 2772.1(a)(3)(A-C).
 - Division staff will provide comments on the financial assurance cost estimate for the Proposed Project in accordance with PRC Section 2773.4(a-c).

Comment
2-4

The Division requests to be included on the distribution list for this Proposed Project. Additionally, the Division requests that any subsequent project documents (e.g., the

Comment
2-5

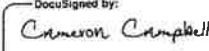
DocuSign Envelope ID: 5E8EBBED-AB5B-4164-888A-46DA04A60E8B

Mr. David Black
ATLiS - DMR CEQA Comment Letter
August 13, 2021

Final EIR, hearing notices for the Draft and Final EIRs, and any supplemental environmental documents), as well as a copy of the certified Final EIR, be sent to the Division at DMR-Submittals@conservation.ca.gov.

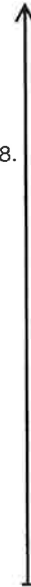
If you have any questions about these comments, please contact me at (916) 323-9198.

Sincerely,

DocuSigned by:

F1336FAAF5AA485

Cameron Campbell, P.G.
Supervisor

cc: State Clearinghouse, state.clearinghouse@opr.ca.gov
Department of Conservation, Office of Legislative and Regulatory Affairs,
OLRA@conservation.ca.gov
Greg Tenorio, Department of Conservation, Legal Office
State Mining and Geology Board, smgb@conservation.ca.gov
Carol E. Atkins, Division of Mine Reclamation, Environmental Services Unit



Comment
2-5 cont.

RESPONSE TO COMMENT LETTER 2

Commenter: Cameron Campbell, Supervisor, California Department of Conservation

Date of Letter: August 13, 2021

Response to Comment 2-1: Introductory statement noting that the California Department of Conservation (DOC) did not receive the Initial Study and Notice of Preparation for the Project dating back to December 2020. No response is required.

Response to Comment 2-2: The commenter accurately provides a description of the Project. No response is required.

Response to Comment 2-3: The commenter explains the goals of the surface mining and reclamation policy under the Surface Mining and Reclamation Act of 1975 (SMARA).

Response to Comment 2-4: The commenter inquires about the consideration given to SMARA in the Project's draft EIR, specifically whether the Project will develop a reclamation plan. At the conclusion of the Project, a reclamation plan will be prepared and provided to DOC staff for review. The County will certify the submission as complete in accordance with PRC Section 2772.1(a)(3)(A-C), and DOC staff will provide comments on the financial assurance cost estimate in accordance with PRC Section 2773.4(a-c).

Response to Comment 2-5: The commenter requests to be included in the distribution list for the Project. The County will distribute all subsequent Project documents, including a copy of the certified Final EIR, to the DOC.



www.iid.com

Since 1911

August 17, 2021

Mr. David Black
Planner IV
Planning & Development Services Department
County of Imperial
801 Main Street
El Centro, CA 92243

SUBJECT: NOA of a DEIR for the Energy Source Mineral AtliS Project

Dear Mr. Black:

On June 28, 2021, the Imperial County Planning & Development Services Department published the Notice of Availability of a Draft Environmental Impact Report for the Energy Source Mineral AtliS Project. The applicant, Energy-Source Minerals, LLC; proposes to construct and operate a commercial lithium hydroxide, manganese and zinc production plant within the Salton Sea geothermal field to process geothermal brine from the neighboring Hudson Ranch 1 geothermal power plant and produce mineral products for commercial use. The project includes the construction of brine pipelines and other associated interconnection facilities with the HR 1 plant; construction of a primary access road from McDonald Road, a second primary access about 800 ft. west and an entrance-only emergency access from Davis Road; paving of McDonald Road from SR 111 to English Road; construction of an interconnection line from the IID and Hudson Ranch 1 switchyard located at the northeast corner of the HR 1 site to the AtliS plant; construction of associated facilities between HR 1 and the project site to facilitate the movement of brine and other services; construction of a laydown yard that will also support temporary offices during construction as well as serve as a truck management yard during operations; and construction of offices, repair facilities, shipping & receiving facilities and other infrastructure including the relocation of IID structures and road improvements at SR 111. The project site is located at 477 West McDonald Road, Calipatria, CA.

Comment
3-1

The Imperial Irrigation District has reviewed the project information and in addition to the remarks provided in the January 14, 2021 district letter (see attached letter), has the following comments:

Comment
3-2

1. The proposed project has identified a raw water supply need of 3,400 acre-feet per year. In order to obtain a water supply from IID for a non-agricultural project, the project proponent will be required to comply with all applicable IID policies and regulations, including the Interim Water Supply Policy for non-agricultural projects. Such policies and regulations require, among other things, that all potential

IMPERIAL IRRIGATION DISTRICT • PO BOX 917 • IMPERIAL, CA 92251

David Black
August 17, 2021
Page 2

environmental and water supply impacts of the project be adequately assessed, appropriate mitigation developed if warranted, including any necessary approval conditions adopted by the relevant land use and permitting agencies.

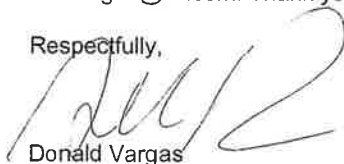
↑
Comment
3-2 cont.

2. The project proponent will be required to enter into a water supply agreement. If IID implements a water allocation or apportionment program pursuant to the IID Equitable Distribution Plan, or any amending or superseding policy for the same or similar purposes, during all or any part of the term of said water supply agreement, IID shall have the right to apportion the project's water as an industrial water user. Further information on how to obtain a water supply agreement is available for download at the district website <https://www.iid.com/water/municipal-industrial-and-commercial-customers> or contact Justina Gamboa-Arce at (760) 339-9085 or jgamboarce@iid.com.

↑
Comment
3-3

Should you have any questions, please do not hesitate to contact me at 760-482-3609 or at dvargas@iid.com. Thank you for the opportunity to comment on this matter.

Respectfully,



Donald Vargas
Compliance Administrator II

Enrique B. Martinez – General Manager
Mike Pacheco – Manager, Water Dept.
Marilyn Del Bosque Gilbert – Manager, Energy Dept.
Constance Bergmark – Mgr. of Planning & Eng./Chief Elect. Engineer, Energy Dept.
Jamie Asbury – Assoc. General Counsel
Vance Taylor – Asst. General Counsel
Michael P. Kemp – Superintendent, Regulatory & Environmental Compliance
Laura Cervantes – Supervisor, Real Estate
Jessica Humes – Environmental Project Mgr. Sr., Water Dept.



www.iid.com

Since 1911

January 14, 2021

Mr. David Black
Planner IV
Planning & Development Services Department
County of Imperial
801 Main Street
El Centro, CA 92243

SUBJECT: NOI to Prepare a Draft EIR for Energy Source Mineral Atlis Project; CUP #20-0008

Dear Mr. Black:

On December 8, 2020, the Imperial Irrigation District received from the Imperial County Planning & Development Services Dept. a request for agency comments on the Notice of Preparation of a Draft Environmental Impact Report for the Energy Source Mineral Atlis Project. The applicant, Energy Source Mineral, LLC, is proposing to construct and operate a commercial lithium hydroxide production plant within the Salton Sea geothermal field in Imperial County, California. The plant will process geothermal brine from the neighboring Hudson Ranch Power I geothermal plant to produce lithium hydroxide, as well as zinc and manganese products to be sold commercially. Among other activities, the project is considering the construction of a primary access road from McDonald Road (approx. 500 ft. west of the HRP I geothermal plant entrance) and an emergency access entrance from Davis Road, the paving of McDonald Road from Highway 111 to English Road (about 3 miles) and the construction of a power interconnection line from the IID and the existing HRP I switchyard. The project will be located at 477 West McDonald Road, Calipatria, CA on land owned by Hudson Ranch Power I, LLC: APNs 020-100-025, -100-044, and -100-046. Currently, the HRP I geothermal plant is sited within the northeast corner of parcel APN 020-100-044.

The Imperial Irrigation District has reviewed the project information and has the following comments:

1. Since the project considers the installation of 600 HP emergency diesel electricity generation to be used to keep vital plant systems operating during plant outages, this will need to be vetted by IID Energy Department for system impacts. For further information, the applicant should be advised to contact Jesus Martinez who oversees the district's Transmission Planning section at (760) 339-0574.
2. For distribution-rated electrical service for the project (15kV or less), the applicant should be advised to contact Ignacio Romo, IID Customer Project Development Planner, at (760) 482-3426 or e-mail Mr. Romo at igromo@iid.com to initiate the customer service application process. In addition to submitting a formal application (available for download at the district website <http://www.iid.com/home/showdocument?id=12923>), the applicant will be required to submit a complete set of County-approved plans (including CAD files),

Comment
3-4

Comment
3-5

Comment
3-6

IMPERIAL IRRIGATION DISTRICT • P.O. BOX 937 • IMPERIAL, CA 92251

David Black
January 14, 2021
Page 2

project schedule, estimated in-service date, one-line diagram of facility, electrical panel specifications (size, voltage, and location) and the applicable fees, permits, easements and environmental compliance documentation pertaining to the provision of temporary and permanent electrical service to the project. The applicant shall be responsible for all costs and mitigation measures related to providing electrical service to the project.

Comment
3-6 cont.

3. IID water facilities that may be impacted include the O Lateral and the O Drain due to road improvements to be undertaken at Highway 111 and McDonald Road. The project proposes the relocation of canal gates on the west side of Highway 111 and relocation of a drain exit structure on the west side of Highway 111.

Comment
3-7

4. To insure there are no impacts to IID water facilities, the applicant should submit the project's design plans to the IID Water Department Engineering Services section for review prior to final design approval. The IID WDES Section can be contacted at (760) 339-9265 for additional information.

Comment
3-8

5. To obtain water for construction, the applicant should be advised to contact IID North End Division at (760) 482-9800. The use of IID water during the project's construction phase will require an encroachment permit.

Comment
3-9

6. The applicant may not use IID's canal or drain banks to access the project site. Any abandonment of easements or facilities will be approved by IID based on systems (irrigation, drainage, power, etc.) needs.

Comment
3-10

7. Any construction or operation on IID property or within its existing and proposed right of way or easements including but not limited to: surface improvements such as proposed new streets, driveways, parking lots, landscape; and all water, sewer, storm water, or any other above ground or underground utilities; will require an encroachment permit, or encroachment agreement (depending on the circumstances). A copy of the IID encroachment permit application and instructions are available for download at <http://www.iid.com/departments/real-estate>. The IID Real Estate Section should be contacted at (760) 339-9239 for additional information regarding encroachment permits or agreements.

Comment
3-11

8. In addition to IID's recorded easements, IID claims, at a minimum, a prescriptive right of way to the toe of slope of all existing canals and drains. Where space is limited and depending upon the specifics of adjacent modifications, the IID may claim additional secondary easements/prescriptive rights of ways to ensure operation and maintenance of IID's facilities can be maintained and are not impacted and if impacted mitigated. Thus, IID should be consulted prior to the installation of any facilities adjacent to IID's facilities. Certain conditions may be placed on adjacent facilities to mitigate or avoid impacts to IID's facilities.

Comment
3-12

9. Any new, relocated, modified or reconstructed IID facilities required for and by the project (which can include but is not limited to canals, drains, electrical utility substations, electrical transmission and distribution lines, water deliveries, canals, drains, etc.) need to be included as part of the project's CEQA and/or NEPA documentation, environmental

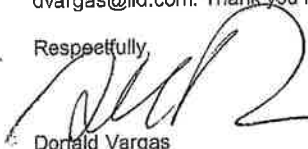
Comment
3-13

David Black
January 14, 2021
Page 3

Impact analysis and mitigation. Failure to do so will result in postponement of any construction and/or modification of IID facilities until such time as the environmental documentation is amended and environmental impacts are fully analyzed. **Any and all mitigation necessary as a result of the construction, relocation and/or upgrade of IID facilities is the responsibility of the project proponent.**

Should you have any questions, please do not hesitate to contact me at 760-482-3609 or at dvargas@iid.com. Thank you for the opportunity to comment on this matter.

Respectfully,



Donald Vargas
Compliance Administrator II

Comment
3-14

Enrique B. Martínez – General Manager
Mike Pacheco – Manager, Water Dept.
Marilyn Dai Bosque Gilbert – Manager, Energy Dept.
Sandra Blain – Deputy Manager, Energy Dept.
Consuelo Bergmark – Mgr. of Planning & Eng./Chief Elect. Engineer, Energy Dept.
Janile Asbury – Assoc. General Counsel
Vance Taylor – Asst. General Counsel
Michael P. Kamp – Superintendent, Regulatory & Environmental Compliance
Laura Cervantes – Supervisor, Real Estate
Jessica Humos – Environmental Project Mgr. Sr., Water Dept.

RESPONSE TO COMMENT LETTER 3

Commenter: Donald Vargas, Compliance Administrator, Imperial Irrigation District

Date of Letter: August 17, 2021

Response to Comment 3-1: Introductory statement noting that the Imperial Irrigation District (IID) received the Notice of Availability for the Project on June 28, 2021. The commenter accurately summarizes the project description. No response is required.

Response to Comment 3-2: The commenter states that the Project is required to comply with all applicable IID policies and regulations to obtain a water supply from IID. All environmental and water supply impacts of the Project were adequately assessed in the draft EIR, and appropriate mitigation was developed.

Response to Comment 3-3: The commenter requests that the Applicant enter into a water supply agreement. As noted in the Water Supply Assessment prepared for the Project, the Applicant will enter into a water supply agreement prior to Project implementation.

Response to Comment 3-4: The commenter provides a copy of their comment letter dated January 14, 2021. The comment is an introductory statement noting that the IID received the Notice of Preparation for the Project on December 8, 2020. The commenter accurately summarizes the project description. No response is required.

Response to Comment 3-5: The commenter states that the installation of a 600-horsepower emergency diesel electricity generator proposed for the Project will need to be vetted by the IID Energy Department. The Applicant will contact Jesus Martinez as suggested to complete vetting.

Response to Comment 3-6: The commenter requests that the Applicant contact Ignacio Romo at IID to initiate the customer service application process. The Applicant will contact Mr. Romo in addition to submitting a formal application and submitting a complete set of County approved plans; project schedule; estimated in-service date; one-line diagram of the facility; electrical panel specifications; and the applicable fees, permits, easements, and environmental compliance documentation.

Response to Comment 3-7: The commenter correctly summarizes the Projects' impacts to IID water facilities. No response is required.

Response to Comment 3-8: The commenter requests that the Applicant submit the Project's design plans to the IID Water Department Engineering Services. The Applicant will send the Project's design plans for review prior to final design approval.

Response to Comment 3-9: The commenter advises that the Applicant contact IID North End Division to obtain water for construction. The Applicant will contact IID and submit an encroachment permit for the use of IID water during construction.

Response to Comment 3-10: The commenter states that the Applicant may not use IID's canal or drain banks to access the Project site. The Applicant will not use the IID canal or drain banks for Project access.

Response to Comment 3-11: The commenter requires an encroachment permit or encroachment agreement for construction or operation on IID property or within its existing and proposed right-of-way or easements. The Project does not propose construction or operation on IID property.

Response to Comment 3-12: The commenter advises the Applicant to consult with IID prior to the installation of any facilities adjacent to IID's facilities. The Project does not propose the construction of facilities adjacent to IID's facilities.

Response to Comment 3-13: The commenter requests that any new, relocated, modified, or reconstructed IID facilities be included as part of the Project CEQA and/or NEPA documentation. The Project proposes to relocate canal gates on the west side of Highway 111 and to relocate a drain exit structure on the west side of Highway 111. These relocations are analyzed in the Project's Draft EIR.

EXHIBIT J



October 23, 2022

David Black, Planner IV
Imperial County Planning and Development Services
801 Main Street
El Centro, CA 92243
Sent via email: davidblack@co.imperial.ca.us

RE: Draft Environmental Impact Report for Hell's Kitchen PowerCo 1 and LithiumCo 1 Project

Dear Mr. Black,

We are writing to comment on the Draft Environmental Impact Report (DEIR) for the Hell's Kitchen PowerCo 1 and LithiumCo 1 Project (project). Leadership Counsel for Justice and Accountability advocates alongside residents of Riverside County's unincorporated communities of Thermal, Oasis, Mecca, and North Shore in the Eastern Coachella Valley for the inclusion of the community in decision-making processes, prevention of further environmental harms to the community, and promoting investment and policies that advance community priorities. To ensure the project does not create more harm to the surrounding communities and ensures an accessible public process we recommend the following.

The Final EIR Must Consider Existing Environmental Conditions

The DEIR falls short of providing an accurate representation of the current environmental conditions within the region, specifically in relation to air quality, the Salton Sea, water, hydrology, and energy. This is particularly important given that the existing conditions of these elements include poor resource quality, high contamination levels, and dilapidated infrastructure. Communities in the region have advocated for a cleaner environment, enhanced community investments, and an overall improvement in their quality of life as it pertains to the current conditions of these essential elements.

The final Environmental Impact Report (EIR) must consider the extremely poor environmental conditions the region currently faces, and how the project would exacerbate these existing conditions unless project impacts are fully mitigated. As courts and CEQA guidelines have pointed out "[t]he significance of an activity depends on the setting."¹ Existing environmental conditions in the region provide little room for polluting industries to open or expand without having a significant impact on the proposed location's environmental conditions.

¹ *Kings County Farm Bureau v. City of Hanford* (1999) 221 Cal.App.3d 692, 718; CEQA Guidelines Sec. 15064(d); 15300.2(a)

Existing Air Quality Conditions

The communities situated to the west and east of the plant have been designated as AB 617 communities under the California Air Resources Board's Community Air Protection Program. This program is dedicated to reduce air emissions exposure and improve overall air quality in communities that have been the most impacted by poor air quality.² Therefore this signals that the communities in the region are among those most severely impacted by poor air quality and therefore it is crucial that the final EIR acknowledges this and describes all the existing emissions sources and conditions in these communities.

In 2018, the El Centro-Heber-Calexico Corridor in Imperial County, located to the south of the project, was identified as an AB 617 community due to the significant impact of factors such as agricultural activities, concentrated animal feeding operations, off-road equipment, on-road vehicles, unpaved roads, industrial energy production, off-highway vehicles, and regional wind events.³ Similarly, in 2019, the Eastern Coachella Valley (ECV) in Riverside County, situated to the north of the project, was designated as an AB 617 community, primarily due to the impacts of the Salton Sea, pesticides, fugitive dust and off-roading, open burning and illegal dumping, diesel mobile sources, and the Greenleaf Desert View Power Plant.⁴

As clearly demonstrated by the AB 617 plans in both of these communities, the issue of air emissions from heavy-duty trucks remains a top priority for the region. Since the project, as described by the DEIR, will increase heavy-duty truck activity it is imperative that the final EIR includes a thorough examination of the current heavy-duty truck operations, their effects on both the communities and the environment, and takes into account the additional impact this project will introduce within this context.

Lastly, the Salton Sea will continue to have long term impacts on the region's air quality from the continuous exposure of its extremely contaminated lakebed which becomes airborne. The emissions of dust from the exposed lakebed contribute to elevated contamination levels in the surrounding communities severely impacting the health and quality of life of residents.

Existing Energy Conditions

²California Air Resources Board. "Community Air Protection Program | California Air Resources Board." (n.d.-a). <https://ww2.arb.ca.gov/capp>

³Imperial County Air Pollution Control District. "Imperial County Year 1 Community Air Monitoring Plan for the El Centro-Heber-Calexico." 2019.

⁴South Coast Air Quality Management District. "Eastern Coachella Valley Community Emissions Reduction Plan." 2021.

The Imperial Irrigation District (IID) serves as the primary energy provider for Imperial County and portions of Riverside County, including all of the ECV. While the DEIR states that the proposed plant will generate more energy than it consumes in general, it does not discuss the potential ramifications of this energy-intensive facility on the region's energy grid and its impacts to the energy service and reliability of residential customers throughout the region. Imperial County and the ECV have been continuously affected by power outages, especially during severe weather events. Between 2017 and 2022, the IID's service area, covering Imperial and Riverside County, endured a total of 5,865 power outages lasting an hour or more.⁵

Existing Salton Sea Conditions

The DEIR incorrectly states the current conditions of the Salton Sea. The DEIR states that during extreme events discharges from the site are not anticipated because all on-site stormwater runoff will be fully retained and emergency overflows from the retention basin will discharge to the Salton Sea. However, the DEIR falls short of effectively describing the current conditions and state of the Salton Sea. For instance, it inaccurately describes the Salton Sea as a 376 square mile inland lake when this information is two decades outdated. In reality, the Salton Sea is now 313 square miles and is continuing to recede.⁶

Given the project's direct connection to the Salton Sea, a comprehensive analysis and description of the Sea's history, its current state, and its ongoing impact on public health and the quality of life for the surrounding communities are imperative. For example, ECV residents show an increased incidence of pulmonary disease compared to the general population; it has been estimated that while the incidence of childhood asthma in California is ~8%, in the region surrounding the Salton Sea it has been estimated to be upwards of 20%, with significant economic and social impacts in the community.⁷

Existing Hydrology and Water Conditions

The DEIR states that approximately 50,000 acre-feet of effective agricultural water can be attributed to each inch of rainfall. However, this statement lacks a proper citation or any indication of the specific timeframe for this calculation. Moreover, it is essential to acknowledge the evolving environmental conditions in the region due to the accelerating climate crisis and recent changes in water consumption. Consequently, the reported 30-year average of 2.59 inches should be analyzed with consideration of the rapidly evolving environmental conditions.

⁵ Imperial Irrigation District. "IID Outage_Report 2017 thru 2022 for Outages lasting 1 hour or longer 06032022.xlsx." June 6, 2022

⁶ Pacific Institute. "Current Information on the Salton Sea" <https://pacinst.org/current-information-salton-sea/>

⁷ University of California Riverside School of Medicine Center for Health Disparities Research. "Disparities in Environmental Exposures and Health Impacts: Childhood asthma and the Salton Sea". <https://healthdisparities.ucr.edu/childhood-asthma-and-salton-sea>

There must be a clear description of the project's water demand, especially in relation to the current conditions in the region. While the IID has adopted an Interim Water Supply Policy (IWSP) for Non-Agricultural Projects from which water supplies can be contracted to serve new developments within IID's water service area, to date, IID has issued two Water Supply Agreements under the IWSP totaling 5,380 acre-feet per year, leaving a balance of 19,620 acre-feet per year of supply available for contracting under the IWSP.⁸

Additionally, the DEIR states that as the project site is largely undeveloped at this time, water use will increase with the implementation of the proposed project. The Water Supply Assessment predicts a substantial water demand of approximately 6,500 acre-feet per year, which is over 30 times the recent combined deliveries from IID's "Q" and "R" laterals, as indicated in Table 15, "Ten-Year Historic Delivery (AFY), 2013-2022." This raises important questions about the operational capacity of these two laterals. Furthermore, it is crucial to consider the cumulative environmental impacts that such modifications or replacements may entail. Additional information on water conditions and impacts will be necessary.

The DEIR states that the project would implement pre- and postconstruction Best Management Practices (BMPs) to maintain water quality over the 50-year life of the project and points to further information on Appendix I, however, this appendix is an environmental site assessment user questionnaire and does not provide the necessary detailed BMPs.

Further disparities in Appendix references include:

- APPENDIX H – Conceptual Hydrology Study is mislabeled. Note for example that on p. 4.5-1 it states, “The energy consumption modeling output is included in this EIR as Appendix H,” and on p. 4.5-9 it states, “fuel use assumptions provided in Appendix H.” P. 4.9-1 references the “Conceptual Hydrology Study prepared by Q3 Consulting ... prepared by Q3 Consulting, included in Appendix H.” Yet Appendix H, starting on p. 1645 of the pdf, is actually “Appendix H: EDR Street Directories,” (see p. 1351 of the pdf). The Conceptual Hydrology Study appears somewhat randomly on p. 1275, found only through a phrase search. Please label the appendices appropriately and add hyperlinks to them so that the public can find the relative information.
- Appendix M - Water Supply Assessment is also not labeled or hyperlinked appropriately. It begins on p. 1780 of the pdf. P. 1802 of the pdf states “The proposed Project owner will need to contract with IID to deliver up to 6,500 AFY [acre-feet per year] of untreated water.” Has this volume been incorporated in the cumulative impacts assessment?

⁸ Imperial Irrigation District. “Municipal, Industrial and Commercial Customers”.
<https://www.iid.com/water/municipal-industrial-and-commercial-customers>

Last, the final DEIR states that the Proposed Project has the potential to result in both direct and indirect water quality impacts that could be significant. Given the existing issues with groundwater quality in both the Eastern Coachella Valley and Imperial County, it is inappropriate to move forward with a project that has the potential to further degrade water quality. Given the multiple inconsistencies and potential impacts on water, this project could be in violation of multiple water policies and law including, but not limited to, complies with all state and federal laws and policy, including but not limited to the reasonable and beneficial use doctrine, the Porter-Cologne Water Quality Control Act, the Sustainable Groundwater Management Act, the state and federal Antidegradation Policy, the Nonpoint Source Policy, Clean Water Act, and the Public Trust Doctrine.

Geology and Soils Conditions

There must be a more thorough analysis of the potential impacts and concerns related to seismic-related ground failure and liquefaction due to the shallow groundwater and subsurface soil conditions. This is specially important given the history of lead and arsenic contamination associated with BHE Renewables / CalEnergy's geothermal power plants, which led to a \$910,000 penalty and the removal of more than 8,000 cubic yards of contaminated soil, is relevant to the discussion about potential impacts from releases of solid and hazardous waste.⁹

The Final EIR Must Consider Cumulative Impacts of Other Geothermal/Lithium Projects

In discussing cumulative impacts, the DEIR does not acknowledge the eleven geothermal energy facilities currently operating in the Salton Sea Known Geothermal Resource Area (KGRA), other lithium extraction projects currently in development, and foreseeable future geothermal power and lithium-related projects.

BHE Renewables, doing business as CalEnergy, operates ten existing geothermal power plants in the Salton Sea KGRA, and Energy Source operates the John L. Featherstone/Hudson Ranch I geothermal power plant. BHE Renewables plans to develop a direct lithium extraction facility connected to its existing power plants and currently operates demonstration projects to extract lithium from geothermal brine and convert extracted lithium chloride into battery-grade lithium carbonate. Energy Source, through its ATLiS project, plans to use geothermal brine from its Hudson Ranch I power plant to produce lithium hydroxide monohydrate, zinc, and manganese products.

In addition, the Lithium Valley Commission noted that “[e]xperts estimate the geothermal resource of the Salton Sea KGRA is robust enough to support development of between 2,330 and

⁹ Iris Environmental, Cal Energy Geothermal Facilities. Removal Action Workplan (RAQ) Implementation Report. November 10, 2011.

2,950 MW of additional geothermal power plants, six (6) times the current installed capacity.”¹⁰ The media has also reported an agreement between CTR and Statevolt for a Gigafactory to manufacture electric vehicle batteries on the Hell’s Kitchen site.¹¹

CEQA requires consideration of the full environmental picture, including incremental effects that are “cumulatively considerable,” meaning that a project’s effects “are significant when viewed in connection with the effects of past projects, the effects of other current projects, and the effects of probable future projects.”¹² An EIR that “understates information concerning the severity and significance of cumulative impacts” effectively “impedes meaningful public discussion and skews the decision maker’s perspective concerning the environmental consequences of the project, the necessity for mitigation measures, and the appropriateness of project approval.”¹³

The final EIR must consider the big picture impacts of the other geothermal projects and lithium-related development in the Salton Sea KGRA, especially how those impacts will affect air quality and the availability of sufficient water supplies. The mitigation discussions for both the air quality and water supply categories are currently vague as to how the proposed measures will reduce impacts to “less than significant,” even without adding a broader discussion of cumulative impacts. For example, the draft EIR’s reliance on California’s water rights priority ignores the May 2023 agreement where the Lower Basin States, including California, agreed to Colorado River cutbacks totaling at least 3 million acre-feet through 2026.

In addition to comprehensively evaluating geothermal and lithium-related activities, it is imperative to conduct a thorough assessment of cumulative environmental impacts. As outlined above, the DEIR current analysis of the existing environmental conditions and the prospective repercussions of this project when combined with them is inadequate. For instance, it is vital to have a thorough examination of the effects of the increased heavy-duty truck traffic that this project will introduce to the region, taking into account the existing impacts and concerns related to related activities traffic.

The Final EIR Must Include Feasible Mitigation Efforts To Avoid or Reduce Impacts

The mitigation strategies outlined in the DEIR fall short of preventing further harm or additional damage to the already affected region. There must be a comprehensive plan to deploy all feasible mitigation measures that ensure the reduction of the project’s impacts to less than significant levels.

¹⁰ Report of the Blue Ribbon Commission on Lithium Extraction in California: Pursuant to Assembly Bill 1657 (E.Garcia, Chapter 271, Statutes of 2020) (Dec. 1, 2022) at 28.

¹¹ David Dayden. “The American Prospect, Building Steam in Lithium Valley.” <https://prospect.org/environment/buildingsteam-in-lithium-valley/>. Dec. 5, 2022.

¹² Pub. Res. Code § 21083(b)(2); CEQA Guidelines §§ 15065(a)(3), 15130(a).

¹³ *Citizens To Preserve the Ojai v. County of Ventura* (1985) 176 Cal.App.3d 421, 431.

The mitigation measures must ensure a clear nexus and rough proportionality between the measures and the significant impacts of the project to guarantee that the mitigation is appropriate and effective.¹⁴ It is imperative that the chosen mitigation measures are not only feasible but also fully enforceable, to be imposed by relevant agencies to provide the necessary accountability.¹⁵ The mitigation measures should focus on lowering both the initial and long-term effects of the proposed project on nearby communities as well as the region as a whole. The EIR must fully analyze the existing conditions and cumulative impacts of the project especially as they relate to the topics below given that these have historically impacted communities in the region and therefore the final EIR must identify the appropriate mitigation measures to reduce their effects on residents.

Their Must Be A Commitment to Greater Community Engagement

The potential to further impact this already overburdened community makes it all-the-more important to provide meaningful and accessible community engagement opportunities for residents to learn about the project and provide feedback throughout the project's development and consideration. All relevant material should be provided in languages spoken by community residents, which include Spanish, English and Purepecha. Additionally, these materials and resources should be made largely accessible to residents by ensuring the information is shared in means and platforms that are accessible to the community and using the level of technical language and content that is accessible and understandable by the average person yet informative. Timely notice should be provided to community members so that they have the opportunity to plan and prepare adequate comments that leaves ample opportunity to incorporate residents' comments into the project's design and all aspects of the EIR, including the impacts and alternatives analysis and mitigation.

* * * * *

Thank you for your consideration of these comments. Please contact mloera@leadershipcounsel.org with any inquiries.

Sincerely,

Mariela Loera
Regional Policy Manager
Leadership Counsel for Justice and Accountability

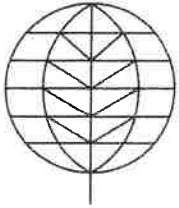
¹⁴ CEQA Guidelines § 15126.4, subd. (a)(4)(A)–(B), citing *Nollan v. Ca. Coastal Commission* (1987) 483 U.S. 825, *Dolan v. City of Tigard* (1994) 512 U.S. 374

¹⁵ CEQA Guidelines, § 15041

Michael Cohen
Senior Associate
Pacific Institute

Isabella B. Arzeno-Soltero
Assistant Professor
University of California Los Angeles

EXHIBIT K



EARTHWORKS

December 13, 2023

Sent via email

David Black, Senior Planner

davidblack@co.imperial.ca.us

Imperial County Planning and Development Services

801 Main Street El Centro, CA 92243

Dear Imperial County Planning Commissioners,

Please find the attached comments from Earthworks on the Final Environmental Impact Report (FEIR) for the Hell's Kitchen PowerCo1 and Lithium Co1 Project. Earthworks is an environmental nonprofit organization that protects communities and the environment from the adverse impacts of mineral and energy development while promoting sustainable solutions. We're driven by our commitment to collaborate with communities on the frontline, using science in innovative ways, and building people power to ensure a more just and livable future. For the past two years we have worked with communities in Imperial County to better understand the impacts of proposed lithium extraction projects. We submitted expert comments on the Draft Environmental Impact Report (DEIR) with Comité Civico del Valle (Comment Letter #10, Exhibit E in the FEIR ES-168) detailing how the applicant has failed to disclose and analyze several significant environmental impacts as required by the California Environmental Quality Act (CEQA). We have reviewed the FEIR and are deeply concerned that the majority of our comments have not received a response and the EIR is inadequate to properly disclose, analyze, and mitigate the significant environmental impacts of the project. We ask that the Planning Commission not certify the FEIR, and require the EIR to be recirculated and revised to correct these deficiencies.

Please include this letter in your file for the project. Please also include me on your notice list for all future updates, notices, and documents related to the project.

Thank you for your consideration,

Jared Naimark
California Mining Organizer
Earthworks

1958 University Ave.
Berkeley, CA 94704
jnaimark@earthworksaction.org

Dedicated to protecting communities and the environment from the adverse impacts of mineral and energy development while promoting sustainable solutions.

1612 K St. NW, Suite 904
Washington, DC 20006

202.887.1872

EARTHWORKS.ORG

earthworksaction

earthworks

General lack of response to comments

The FEIR states, "Many of the comments associated with Comment Letter #10 request further information on the Project Description; however, the comment does not specifically state any errors in analysis of Project Description. The absence of the requested information does not inherently results in flaws with the Project Description. Many of the comments are highly speculative and request information that would in no way benefit the analysis or directly result in a better understanding of the Project or its impacts on the environment" (ES-177). However, the purpose of CEQA is to disclose, analyze, and mitigate project impacts. There are numerous errors in the analysis that stem from the lack of information. The FEIR should be revised to respond to each and every request for information on the project description. Furthermore, the FEIR as published completely omits the second page of Earthworks' comments. The FEIR should be revised to include these comments in the record, and respond to them.

Directional drilling onto state lands represents a new significant impact

Comment letter #3 from the State Lands Commission (ES-61) states that the applicant plans to use directional drilling to access subsurface resources on state lands, however this is not included in the project description nor analyzed in the EIR. The response simply dismisses this as a separate project. However, the brine accessed from this drilling will need to be processed in the HKP1 and HKL1 facilities, meaning it should be analyzed as one project, not inappropriately piecemealed under CEQA. This is a new significant impact that requires the FEIR to be recirculated and revised.

Visual impacts

The FEIR does not include any response to Earthworks' previous comment that the visual impacts analysis is flawed because it is missing a viewshed analysis of Obsidian Butte. The FEIR should be revised to respond this comment and include visual impacts to Obsidian Butte in its analysis, and require mitigation measures.

Air quality

There is no response to previous comments regarding the air quality impacts of exacerbated degradation of the Salton Sea due. This is a likely impact due to reduced inflow caused by cumulative freshwater consumption for the project and related lithium industry projects. The FEIR should be revised to respond to this comment and properly analyze and mitigate this issue.

Brine spills

There is no response to previous comments on the need to analyze the impact of brine spills, which have the potential to release hazardous materials into the environment. The FEIR should be revised to respond to this comment, analyze the risk of brine spills, and require mitigation measures.

Freshwater consumption

There is no response to previous comments on water consumption. The FEIR simply points to the Water Supply Assessment (WSA). However, it is unclear if this WSA has been updated to reflect substantial comments from Imperial Irrigation District, and it contains several instances of figure errors and null text. The FEIR should be revised to respond to comments regarding cumulative impacts to available freshwater supply for non-industrial use, and include detailed mitigation measures for likely scenarios of water-shortages due to extreme drought.

Hazardous waste management

There is no response to previous comments regarding hazardous waste management. In particular, the DEIR states that hazardous waste being trucked to Nevada will be "extremely rare," yet provides no supporting evidence for that claim. The FEIR should be revised so that the public can understand how conclusions about hazardous waste impacts are being reached.

Hydrochloric acid

There is no response to previous comments about the need to analyze and mitigate the risk of HCl emissions. The FEIR should be revised to respond to these comments.

EXHIBIT L

STATE OF CALIFORNIA

GAVIN NEWSOM, Governor

**CALIFORNIA STATE LANDS
COMMISSION**

100 Howe Avenue, Suite 100-South
Sacramento, CA 95825-8202



Established in 1938

JENNIFER LUCCHESI, Executive Officer
916.574.1800

TTY CA Relay Service: 711 or Phone **800.735.2922**
from Voice Phone **800.735.2929**
or for Spanish **800.855.3000**

Contact Phone: 916.574.1900

October 23, 2023

File Ref: SCH #2022030704

David Black, Planner
Imperial County Planning & Development
801 Main Street
El Centro, CA 92243

RECEIVED

By Imperial County Planning & Development Services at 7:56 am, Oct 23, 2023

**Subject: Draft Environmental Impact Report for the Hell's Kitchen Powerco 1 and
Lithiumco 1 Project, Imperial County, California**

Sent via email only: ICPDSCommentLetters@co.imperial.ca.us

Dear Mr. Black:

The California State Lands Commission (Commission) staff has reviewed the subject Draft Environmental Impact Report (Draft EIR) for the Hell's Kitchen Powerco 1 and Lithiumco 1 Project (Project), which is being prepared by Imperial County (County). The County, as the public agency with direct approval over the Project, is the lead agency under the California Environmental Quality Act (CEQA) (Pub. Resources Code, § 21000 et seq.).

Project Description

Controlled Thermal Resources, Inc. (CRT) via its subsidiary Hell's Kitchen Geothermal, LLC is proposing the Hell's Kitchen PowerCo 1 (HKP1), and Hell's Kitchen LithiumCo 1 LLC is proposing the Hell's Kitchen LithiumCo 1 (HKL1) in Imperial County, California. HKP1 involves the development of a geothermal power plant that will produce up to 49.9 megawatts (MW) net of geothermal green energy. HKL1 involves development of mineral extraction and processing facilities capable of producing lithium hydroxide, silica and polymetallic products, and possibly boron compounds, for commercial sale.

The Draft EIR identifies the No Project Alternative as the Environmentally Superior Alternative.

Environmental Review

Commission staff requests that the County consider the following comments on the Project's Draft EIR.

General Comment

The Commission received and is currently processing applications from the Project proponent for a geothermal resources lease and a mineral extraction lease for subsurface use of State lands that are adjacent to the Project area (as identified in the Draft EIR). The Project proponent is seeking leases from the Commission to allow it to directionally drill from the Project area into the subsurface of adjacent State lands, most of which are owned in fee by the California Department of Fish and Wildlife (CDFW), and some of which the State holds a reserved mineral interest (RMI) in. For the lands owned by CDFW, the Commission would issue and manage a lease on behalf of CDFW, with CDFW's written consent, pursuant to Public Resources Code section 6924. The Draft EIR does not include any State lands in the designated Project area and neither the Project Description nor the Draft EIR analysis evaluate the potential impacts from any wells that would be drilled from the Project area into State lands.¹

If considered part of the Project, the EIR must disclose that CRT plans to access subsurface geothermal reservoirs outside of the designated Project area through directional drilling from the proposed Project site. As part of this disclosure, the document should identify the parcels, prepare a separate figure showing the surface and subsurface locations, describe the directional drilling construction methods and timing, and include any other information that would contribute to the environmental impact analysis. Unless this information and analysis is included in the Final EIR, the Commission, as a CEQA Responsible Agency (identified in Section 2.2.2.2), will need to conduct further environmental review to evaluate new or increased levels of impacts. This review could include a supplemental or subsequent CEQA document and would be conducted prior to any Commission action. If the County is considering a subsequent document to evaluate off-site drilling locations, please consider that action may be interpreted as piecemealing under CEQA, as noted in the letter from the

¹ The State lands that are the subject of the two applications to the Commission include APN 020-010-042, owned by CDFW. A portion of this parcel is included in the Project area for the Gen-Tie and Power Line, however it appears from the information provided in the Draft EIR that the Gen-Tie and Power Line will be constructed within existing rights-of-way, and thus would not require a Lease from CDFW or the Commission.

Imperial Irrigation District on the Project's Notice of Preparation, dated May 10, 2022.

The Draft EIR also lacks clarity and consistency regarding the number of wells to be drilled as part of the Project. Section 2.6.1 provides that the Project will include a total of seven wells for production and injection, including one well for injection of aerated fluids, and states that the two previously drilled exploration wells will be used as commercial production wells. Elsewhere, the Draft EIR notes that the Project site currently contains "four geothermal exploratory well pads and six separate geothermal exploratory wells." (See section 4.13.4.) It is not clear in the Draft EIR where the existing wells are located, how many there are, and into which lands the "total of seven wells" will be drilled (e.g., whether the seven total wells would be drilled directionally into State lands). In addition, the EIR must disclose whether drilling into State lands is necessary to meet the Project's objectives.

Groundwater Resources

The Draft EIR determined that the Project construction, development, and operation would not result in potentially significant impacts to groundwater supplies because the Project would not use any groundwater (See section 6.1.5). However, the Draft EIR does not identify off site directional drilling that may require groundwater during construction. Therefore, Commission staff request that the EIR clarify whether the directional drilling would require groundwater or otherwise impede groundwater basin management. If so, then the EIR must analyze those reasonably foreseeable impacts to groundwater resources.

Tribal Cultural Resources

Section 4.12 of the Draft EIR does not mention whether the County contacted the Native American Heritage Commission (NAHC) to obtain a list of all tribes that are traditionally and culturally affiliated with the geographic area of the Project for notification purposes and to assure a more thorough tribal consultation effort. Commission staff recommends that the County contact the NAHC to ensure that all traditionally and culturally affiliated tribes are aware of the Project and provided the opportunity to consult with the County.

Appendix L of the Draft EIR indicates that the County sent letters to the Fort Yuma Quechan Indian Tribe and the Torres-Martinez Desert Cahuilla Indians on March 21, 2022, in compliance with AB 52. Per page 4.12-4 of the Draft EIR, both tribes responded to the initial notification letter, with one tribe, the Quechan Indian Tribe, requesting consultation on April 5, 2022. During the County's consultation with the Fort Yuma Quechan Indian Tribe, the Tribe requested

changes to the cultural resources report. The Draft EIR states that "...these changes were made, and the updated cultural report was sent to the tribe." Commission staff request that the County elaborate on their effort to ensure the Tribe consented to the requested changes made to the Cultural Report. In addition, the Draft EIR does not provide the response from the Torres-Martinez Desert Cahuilla Tribe; therefore, Commission staff also request that the response from the Torres-Martinez Desert Cahuilla Indians be clarified in the Draft EIR.

Environmental Justice

In 2018, the Commission adopted an Environmental Justice Policy. In this policy the Commission envisions a future in which environmental justice (EJ) communities are no longer disproportionately impacted by pollution or environmental hazards. The Draft EIR does not contain a separate EJ Discussion; however, EJ is discussed as part of the County's general plan policies in Table 4.5-1, specifically objective 3.7, which requires the County to evaluate environmental justice issues associated with job creation and displacement when considering the approval of renewable energy projects. The table indicates "No sensitive receptors are within 2 miles of the Project site. No impacts to disadvantaged communities would occur from implementation, and no Health Risk Assessment is required." According to CalEnviroScreen 4.0, the Project is located within a disadvantaged community as identified under Senate Bill (SB) 535 (De León, 2012). In addition, public concerns have been raised about the unknown public health impacts of lithium extraction and associated pollution burdens to nearby disadvantaged communities, including the impacts of chemicals used to separate lithium from the geothermal brine, and the potential link between geothermal activities at the Salton Sea and recent earthquakes. In light of these public concerns, Commission staff respectfully request more information be included in the document regarding impacts to adjacent disadvantaged communities due to Project implementation.

Thank you for the opportunity to comment on the Draft EIR for the Project. As a Trustee Agency, and as a Responsible Agency with respect to the activities contemplated by the applications currently under Commission review, the Commission may need to rely on the Final EIR for the issuance of any lease associated with the project that occurs on or in state lands; therefore, we request that you consider our comments prior to certification of the EIR. To the extent the State lands and wells are not included in the EIR, a further CEQA document will need to be prepared to address the Project-related development planned for State lands.

Please send copies of future Project-related documents, including electronic copies of the Final EIR, Mitigation Monitoring and Reporting Program, Notice of

EXHIBIT M



www.iid.com

Since 1911

November 22, 2023

RECEIVED

NOV 29 2023

IMPERIAL COUNTY
PLANNING DEVELOPMENT SERVICES

Mr. Jim Minnick
Director
Planning & Development Services Department
County of Imperial
801 Main Street
El Centro, CA 92243

SUBJECT: Hell's Kitchen Power Co. Geothermal & Lithium Project Draft EIR

Dear Mr. Minnick:

On May 10, 2022 and June 19, 2023, the Imperial Irrigation District provided comments to the Imperial County Planning & Development Services Department on the Notice of Preparation of an Environmental Impact Report and on the Administrative Draft Environmental Impact Report for the Hell's Kitchen Power Co. Geothermal & Lithium Project (See attached letters). We are disappointed that our concerns were not addressed in the subsequent Draft EIR. As a responsible agency for this project, and for the purpose of supporting the project to allow for additional approvals to carry out the project and to avoid foreseeable setbacks in its implementation by not addressing the aspects of the project affecting IID facilities and resources in the Draft EIR, including impacts and mitigation, the district submits the following comments:

1. **General Comment:** The proposed project should be depicted in more detail on figures. The project footprint is shown at a high-level on the figures in Section 2.0, but there is not specificity of locations of project components in sections of analysis. There are no figures that locate the project components relative to other existing or planned facilities on the site, such as drain and transmission line right of ways. Without a project footprint and site plan, the project description is uncertain and unclear regarding how the project impacts the resources on the project site and IID's facilities and rights of way. Unless the project is depicted on figures to correspond with analysis, it will be difficult for responsible agencies to use the final EIR.
2. **Page iii, LIST OF APPENDICES - APPENDIX M Water Supply Assessment:** Should be identified as a draft. The Water Supply Assessment is incomplete and contains inaccurate data. See enclosed WSA Hell's Kitchen Comments June 2023 for detailed review findings of Appendix M.
3. **Page ES-2, ES-4 INTENDED USES OF THIS EIR:** Should identify Imperial Irrigation District's use of the EIR for proposed actions as a responsible agency: "Imperial Irrigation District – Encroachment Permit(s) and Imperial Irrigation District Water Supply Agreement, and other approvals not yet known for water and/or energy needs."
4. **Page ES-4, Table ES-1:** Should be updated based on the related comments received herein for the following resources, but not limited to air quality, utilities and service systems and hydrology.

IMPERIAL IRRIGATION DISTRICT • P.O. BOX 937 • IMPERIAL, CA 92251

Jim Minnick
November 22, 2023
Page 2

5. **Page ES-10, Table ES-1: Summary of Significant Impacts and Mitigation Measures:** Bio-19 should be listed as "Potentially Significant" under "Level of Significance before Mitigation" column.
6. **Page ES-40 Table ES-1 Utilities and Service Systems:** Should be updated as IID water facilities that may be impacted include the L, M, O, P, Q, R, S and Vail 3 Drains; Alamo River; the L, M, O, P, Q, R, S Laterals; as well as any additional IID facilities that may be impacted by alignment changes.
7. **Page 1.0-6 - APPENDIX M: Water Supply Assessment** should be identified as a draft. The Water Supply Assessment is incomplete and contains inaccurate data. See enclosed WSA Hell's Kitchen Comments June 2023 – for detailed review findings of Appendix M.
8. **Page 2.0-1 Section 2.2 Project Location:** The Draft EIR is still indicating that the project's interconnection to the electrical grid will be via a 2-mile gen-tie to the Hudson Ranch facility substation, which is incorrect. The project's point of interconnection will be the new, not yet built, IID Davis Switching Station. The project will be loping in and out of the IID 230kV MB transmission line into the proposed Davis Switching Station. The MB line cut-in will be just outside the Hudson Ranch facility.
9. **Page 2.0-7 Section 2.5 Project Summary:** The project description/summary should include a sentence stating that the project does not include any work within the P, Q, R and S Drains and that any such work in the future will require a separate approval and environmental review. IID and Hell's Kitchen Geothermal LLC ("HKG") are entering into a series of agreements, pursuant to which HKG will be (i) extending the Q, R and S Drains from where they currently terminate on Section 11 to the Salton Sea or the westernmost edge of Section 10 in the event the Salton Sea is no longer on Section 10, and (ii) interconnecting one or more of the Q, R and S Drains within Section 10 or 11. The extension of the Q, R and S Drains are subject to a number of existing regulatory requirements and mitigation measures, with which HKG will be required to comply. It appears the current project excludes any drain extension or interconnection work or any other construction work within the Drains. It should be clear that the DEIR is not an environmental document for future drain extension or interconnection work, as well as any other work within the drains.

If the project approvals will encompass work within the P, Q, R and S Drains or the future extension and interconnection of these Drains ("Drain Work"), the DEIR must address the desert pupfish impacts associated with the Drain Work and incorporate the following regulatory mitigation measures that currently apply to the Drain Work and implementation must be consistent with the referenced conditions:

- A. U.S. Fish and Wildlife Service Final Biological Opinion dated December 18, 2002 ("BO"):
 - a. Pupfish Conservation Measure 1: Connectivity Impacts of the BO: IID is developing a joint pupfish drain connectivity and extension plan with the U.S. Bureau of Reclamation, the U.S. Fish and Wildlife Service and the California Department of Fish and Wildlife. Drain Work shall be consistent and in compliance with any final plan jointly

Jim Minnick
November 22, 2023
Page 3

developed. If no final plan exists at the time the design of the Drain Work commences, the design, configuration, and management of the work will be developed jointly with the U.S. Bureau of Reclamation, the U.S. Fish and Wildlife Service and the California Department of Fish and Wildlife staff, and will be developed in consideration of the specific physical characteristics of pupfish habitat (e.g., water depth and velocity, and channel width) and water quality (e.g., turbidity and selenium concentration).

b. Reasonable and Prudent Measure 1, Terms and Conditions No. 1.1. Work within the Drains shall be configured to maximize pupfish habitat and achieve no net loss of pupfish habitat in terms of drain length and width dimensions (i.e., areal extent) as the Salton Sea recedes.

c. Reasonable and Prudent Measure 3, Terms and Conditions No. 3.1. The Drain Work shall be designed to minimize the maintenance requirements that could result in take of pupfish to the extent possible without significantly reducing their habitat value.

d. Reasonable and Prudent Measure 3, Terms and Conditions No. 3.2. Where dewatering is required for construction within the Drains, the project shall implement gradual dewatering of the construction sites within potential pupfish Drains to allow pupfish to move out of the area such that they are not stranded by dewatering. A qualified biologist approved by U.S. Fish and Wildlife Service and California Department of Fish and Wildlife shall be present to relocate pupfish to a safe location if necessary to prevent stranding as a result of the physical structure of the drain. The biologist shall maintain a complete record of all pupfish moved from hazardous areas during the Drain Work. At a minimum, the information shall include: location (written description and map), date and time of observation, along with details of the relocation site; basic life history information (i.e., length and sex); and general condition and health, including any apparent injuries/state of healing.

e. Reasonable and Prudent Measure 3, Terms and Conditions No. 3.5. In the event emergency repairs are needed on the Drains and/or Drain Work, prior to the completion of the work, the Project proponent shall immediately notify IID, the U.S. Fish and Wildlife Service and California Department of Fish and Wildlife regarding any needed emergency repairs that may result in disturbance of or impacts to the listed species so that the U.S. Fish and Wildlife Service and the California Department of Fish and Wildlife can provide technical assistance to minimize the impacts associated with implementing the repairs.

B. Conservation Agreement Among the Bureau of Reclamation, Imperial Irrigation District, Coachella Valley Water District, and San Diego County Water Authority ("Conservation Agreement"):

a. Article 2, Species Conservation Measures, Reasonable Prudent Measures, and Terms and Conditions, Section 2.3, Connectivity Impacts—Drains. The project shall implement the provisions of Pupfish Conservation Measure 1 of the BO and the BO

Jim Minnick
November 22, 2023
Page 4

Incidental Take Statement Terms and Conditions Nos. 1.1, 3.1, 3.2, and 3.5, as applicable to the Drain Work.

C. California Endangered Species Act, Incidental Take Permit No. 2081-2003-024-006 ("ITP"):

a. Conditions of Approval, No. 2. The Project proponent shall comply with the ITP and Mitigation Monitoring and Reporting Program attached to the ITP as Attachment 1, as applicable to the Drain Work.

b. Conditions of Approval, No. 4(j)(i). IID is developing a joint pupfish drain connectivity and extension plan with the U.S. Bureau of Reclamation, the U.S. Fish and Wildlife Service and the California Department of Fish and Wildlife. The Drain Work shall be consistent and in compliance with any final plan jointly developed. If no final plan exists at the time the design of the Drain Work commences, the Drain Work shall be designed and configured in coordination with Seller, the U.S. Bureau of Reclamation, the U.S. Fish and Wildlife Service and the California Department of Fish and Wildlife to ensure the genetic interchange among the pupfish populations in the Drains. The design of the Drain Work shall minimize the maintenance requirements that could result in take of pupfish to the extent possible without significantly reducing their habitat value.

c. Conditions of Approval, No. 4(j)(ii). The Project proponent shall seek credit from the U.S. Fish and Wildlife Service and the California Department of Fish and Wildlife, for the linear channel distance of the Drain Work to qualify as linear channel distance of pupfish drain habitat required by the ITP. IID is developing a joint pupfish drain connectivity and extension plan with the U.S. Bureau of Reclamation, the U.S. Fish and Wildlife Service and the California Department of Fish and Wildlife. The Drain Work shall be consistent and in compliance with any final plan jointly developed. If no final plan exists at the time the design of the Drain Work commences, the design, configuration, and management of the Drain Work will be developed jointly with the U.S. Bureau of Reclamation, the U.S. Fish and Wildlife Service and the California Department of Fish and Wildlife (formerly CDFG) staff, and will be developed in consideration of the specific physical characteristics of pupfish habitat (e.g., water depth and velocity, and channel width) and water quality (e.g., turbidity and selenium concentration).

d. Conditions of Approval, No. 4(j)(xi). Where dewatering is required for construction of the Drain Work, the Project proponent shall implement gradual dewatering of the construction sites within potential pupfish drains to allow pupfish to move out of the area such that they are not stranded by dewatering. A qualified biologist shall be present to relocate pupfish to a safe location if necessary to prevent stranding as a result of the physical structure of the drain. The biologist shall maintain a complete record of all pupfish moved from hazardous areas during project construction. At a minimum, the information shall include: location (written description and map), date and time of observation, along with details of the relocation site; basic life history information (i.e., length and sex); and general condition of health, including any apparent injuries/state of healing.

Jim Minnick
November 22, 2023
Page 5

e. Permit Mitigation Measure No. 11. The Project proponent shall notify IID and the California Department of Fish and Wildlife within three working days if a pupfish is found dead or injured and the death or injury is reasonably attributable to activities by the applicants. A written notification will be made within five calendar days and will include the date, time, and location of the discovered pupfish, the expected cause of injury or death and any other pertinent information. The injured pupfish will be transported to a veterinarian or certified wildlife care facility and the Department informed of the final disposition of any surviving pupfish. All dead pupfish shall be submitted to educational/research institutions possessing the appropriate state and federal permits. If deposition to an institution is not possible, the pupfish will be marked, photographed, and left in the field.

f. Permit Mitigation Measure No. 12. The Project proponent shall immediately notify (i) IID of any emergency situation potentially impacting the Drains and/or pupfish habitat and/or pupfish, and (ii) shall notify the California Department of Fish and Wildlife and U.S. Fish and Wildlife Service within 24 hours of initiating emergency activities. In notifying the Department and Service, the project applicants shall describe the nature of the emergency and the actions necessary to correct the problem. Where multiple actions need to be taken, the IID Implementation Biologist will work with repair crews to prioritize repairs based on the risk to pupfish and habitats for pupfish provided under the Permit and threats to human health and safety and property. The Implementation Biologist will visit sites where emergency activities are being implemented as soon as possible. The biologist will take pictures of the damaged areas and note the general extent and species composition of any vegetation impacted by the emergency response activities. The project applicants will use this information to restore or create replacement habitat in accordance with Condition of Approval 4(j)(iv). Within one month of completing emergency actions, the project applicants will meet with the Department and Service to review the measures the project applicants will implement to mitigate any impacts resulting from the emergency actions. Following agreement with the Department and Service regarding appropriate mitigation, Seller will prepare a Post Incident Report for submittal to these agencies. This report will document: (a) the nature of the emergency, (b) the actions taken to address the emergency, (c) the impacts to pupfish and/or their habitats (e.g., area of drain habitat impacted), (d) the mitigation measures to be implemented to address the impacts, and (e) monitoring and reporting requirements (if any) for the mitigation measures. To facilitate effective and appropriate responses to emergencies, the Implementation Team may refine and further specify these general procedures to address specific types of emergencies that could arise.

g. Permit Mitigation Measure No. 79. IID is developing a joint pupfish drain connectivity and extension plan with the U.S. Bureau of Reclamation, the U.S. Fish and Wildlife Service and the California Department of Fish and Wildlife. The Drain Work shall be consistent and in compliance with any final plan jointly developed. If no final plan exists at the time the design of the Drain Work commences, the design, configuration, and

Jim Minnick
November 22, 2023
Page 6

management of the Drain Work will be developed jointly with the U.S. Bureau of Reclamation, the U.S. Fish and Wildlife Service and the California Department of Fish and Wildlife staff, to ensure that an appropriate level of connectivity between pupfish populations within individual drains that are connected to the Salton Sea either directly or indirectly and that are below the first check will be maintained in the event that conditions in the Salton Sea become unsuitable for pupfish. The Drain Work shall be designed to minimize the maintenance requirements that could result in take of pupfish to the extent possible without significantly reducing their habitat value.

h. Permit Mitigation Measure No. 80. IID is developing a joint pupfish drain connectivity and extension plan with the U.S. Bureau of Reclamation, the U.S. Fish and Wildlife Service and the California Department of Fish and Wildlife. The Drain Work shall be consistent and in compliance with any final plan jointly developed. If no final plan exists at the time the design of the Drain Work commences, the design, configuration, and management of the Drain Work will be developed jointly with the U.S. Bureau of Reclamation, the U.S. Fish and Wildlife Service and the California Department of Fish and Wildlife staff, to ensure that the specific physical characteristics of pupfish habitat (e.g., water depth and velocity, and channel width) and water quality (e.g., turbidity and selenium concentration). The project applicants will monitor the drains for pupfish use as the drain habitat is extended or created. Monitoring will occur for five years after creation, to allow pupfish to begin using the habitat. If pupfish use of these areas cannot be established after the initial five years, the Project proponent will work with IID, the Service and Department to identify potential causes for pupfish absence. If pupfish do not use the habitat, IID, in coordination with the Service and Department, will implement actions in the management, operation or maintenance of the extended or modified drains that are appropriate to correct conditions that may be causing the absence of pupfish. These actions may entail adjustments to channel configuration (channel and pool depths, flow velocity, connectivity, and turbidity), vegetation management and timing of scheduled maintenance. If IID determines that those actions require channel configuration of the Drains, the project applicants shall cooperate with and will not impede or take any measures to impede IID's implementation of any adjustments to channel configuration. Until such time as pupfish use is established, the Project proponent shall continue working with IID, the Service and Department to correct the conditions that may be causing the absence of pupfish.

i. Permit Mitigation Measure No. 89. For any construction activities (i.e., in-channel modifications) that directly affect the Drains, 1 the Project proponent shall implement gradual dewatering of the construction site to allow desert pupfish to move out of the area such that they are not stranded by dewatering. A qualified biologist shall be present to relocate pupfish to a safe location if necessary to prevent stranding as a result of the physical structure of the Drains. The biologist shall maintain a complete record of all pupfish moved from hazardous areas during project construction. At a minimum, the information shall include: location (written description and map), date and time of

Jim Minnick
November 22, 2023
Page 7

observation, along with details of the relocation site; basic life history information (i.e., length and sex); and general condition and health, including any apparent injuries/state of healing.

D. Imperial Irrigation District Water Conservation and Transfer Project, Habitat Conservation Plan, Final Environmental Impact Report/Environmental Impact Statement (State Clearinghouse number 1999091142) Mitigation, Monitoring and Reporting Program, September 2003 ("EIR/EIS MMRP"):

a. Impact BR-51; Mitigation Measure Salton Sea-2. IID is developing a joint pupfish drain connectivity and extension plan with the U.S. Bureau of Reclamation, the U.S. Fish and Wildlife Service and the California Department of Fish and Wildlife. The Drain Work shall be consistent and in compliance with any final plan jointly developed. If no final plan exists at the time the design of the Drain Work commences, the design, configuration, and management of the Drain Work will be developed jointly with the U.S. Bureau of Reclamation, the U.S. Fish and Wildlife Service and the California Department of Fish and Wildlife staff, to ensure an appropriate level of connectivity between pupfish populations within the Drains.

b. Impact BR-24, 26; Mitigation Measure Pupfish 3. The Project proponent shall increase the amount of potential pupfish drain habitat.

c. HCP Measure Pupfish-6. For any construction activities (i.e., in-channel modifications) that directly affect the Drains, the Project proponent shall gradually dewater the affected drain segment in a manner that will encourage the downstream movement of pupfish out of the affected area before construction activities commence. The Project proponent will ensure that a person qualified to capture and handle pupfish and that meets the approval of the USFWS and CDFW will be present during the dewatering process to salvage and transport any pupfish stranded in the affected portion of the drain. Prior to conducting construction activities that could result in the stranding of pupfish, Grantee shall work with the Habitat Conservation Plan Implementation Team to develop guidelines for relocating fish. Salvaged fish will be transported to a safe location downstream of the construction site or to a location determined by the HCP Implementation Team.

E. California State Water Resources Control Board Revised Order WRO 2002-0013 ("Order"):

a. Conditions No. 10 and 11. The Project proponent shall implement the Desert Pupfish Conservation Strategy found on pages A3-155 to A3-165 of the Habitat Conservation Plan for the IID water Conservation and Transfer Project, dated June 2002.

10. **Page 2.0-8, Section 2.5.1:** This section states that Hell's Kitchen LithiumCo1 (HKL1) will include construction of a 13.8kV power transmission cable from Hell's Kitchen PowerCo 1 (HKP1). IID is the sole load serving entity in its service area, thus the developer cannot carry this out because it would make them a de facto transmission provider. HKL1 can only be served directly from IID facilities, for that to happen IID needs to perform a System Impact Study (SIS) to determine the electrical infrastructure improvements required to

Jim Minnick
November 22, 2023
Page 8

serve the project. To initiate the SIS the developer must formally apply, which hasn't occurred. Consequently, the environmental factor "XIX. UTILITIES AND SERVICE SYSTEMS" was not appropriately assessed for potential impacts. To determine if the project would require or result in the relocation or construction of new or expanded electric power facilities, the construction or relocation of which could cause significant environmental effects, system impact study should have been performed. Additional analysis must be performed to identify the electric power facilities needed for the project, to fully analyze the environmental effects of the project and any needed electric power facilities, to identify any mitigation needed, and to identify approvals needed from IID for the project related to energy and IID's electrical system.

11. **Page 2.0-8 Section 2.61 Production and Injection Wells:** The components of the project are unclear and need to be further described with corresponding figures. Is Well Pad 4 and the S Berm or portions of the S Berm part of this project? If so the impacts to construction of the well pad and berm must be analyzed, including impacts to IID's S Drain. How will Well Pad 4 be accessed from the S Berm Road on the north side of IID's S Drain?
12. **Page 2.0-10, Table 2.0-2 Expected Brine Composition:** Clarification should be provided on the matter of what values are proposed to be reinjected into the ground.
13. **Page 2.0-23, fourth bullet, Transportation Plan:** Access to the site from Hwy. 111 to English Road along McDonald Road is an unpaved county road. IID's Managed Marsh Complex is located to the north (Phase 1) and south (Phase 2) of McDonald Road in this area. The traffic plan should note that the use of the Managed Marsh Complex berms is prohibited for commuting to the project site as these are not roads and are on private property.
14. **Page 2.0-14 Water Storage:** The capacity of the storage pond proposed is not identified. Impacts of the project cannot be analyzed adequately without this information.
15. **Page 2.0-18 Operational Water Supply Requirements:** Should be modified for consistency. The Draft EIR states "400 AFY of fresh water will be needed for normal operation." However, the Water Supply Assessment under Appendix M states the project "will require approximately 200 AFY of fresh water under normal operations" (WSA page 19, these volumes are in addition to the proposed 6,100 AFY to be used for cooling and processing).
16. **Page 2.0-19 Operational Water Supply Requirements:** Should be modified for consistency. The Draft EIR states the "S" Lateral may be a water source for the water supply needed, however, the "S" Lateral is not mentioned in the Water Supply Assessment under Appendix M as a potential water source.
17. **Page 2.0-24, Section 2.11.2 Responsible Agencies:** Imperial Irrigation District should be identified as a Responsible Agency. Other than an IID Encroachment Permit, the Project will require discretionary approvals over the project, including a Water Supply Agreement from IID and other agreements for energy purposes.

Jim Minnick
November 22, 2023
Page 9

18. **Page 3.0-4, Table 3.0-1 Related Projects:** The Quantification Settlement Agreement Water Transfer and Conservation Project, and associated environmental mitigation requirements including the Salton Sea Air Quality Mitigation Program should be included. The Salton Sea Management Program 10-Year Plan and Salton Sea Management Program Long Range Plan should be included. The cumulative impacts analysis should include these projects.
19. **Page 3.0-4, Table 3.0-1 Related Projects:** Related and similar project within close proximity to Hell's Kitchen should consider the three BHE Renewable projects currently under the permitting process: Morton Bay Geothermal, Black Rock Geothermal, and Elmore North Geothermal. These projects are closer and more related and similar in nature than some of the solar projects noted that are also pending approval.
20. **Page 4.1-11 Section 4.2:** In general, IID's comments under hydrology and utility systems (as it relates to water supply) are both directly and indirectly tied to air quality. A reduction of drainage flow into IID drains and the Salton Sea may affect the level of drainage vegetation and exposed playa which in turn could result in increased dust emissions without proper mitigation. A full assessment of the project and/or cumulative impacts to the Salton Sea is essential including the consideration of mitigation measures on how this project can contribute independently or to the Salton Sea Conservancy for Operation and Maintenance or apply other means of mitigation.
21. **Page 4.3-6, Habitat Conservation Plan:** A Draft Habitat Conservation Plan/Natural Communities Conservation Plan for the QSA Water Transfers covers the proposed project area and can be found <https://www.iid.com/water/library/qsa-water-transfer>.
22. **Page 4.3-37, Section 4.3.5, Project Impact Analysis, Fish, and page 4.3-42 Bio-8 Mitigation Measure:** The desert pupfish impact discussion in Section 4.3.5 on page 4.3-37 and the Bio-8 mitigation measure on page 4.3-42 do not mesh. The Bio-8 mitigation measure calls for a desert pupfish protection and relocation plan, which the impact discussion states should include approaches to dewatering to avoid or minimize species take, and requirements for habitat compensation. However, the desert pupfish impact discussion states, "The open water area adjacent to the Q Drain could provide suitable habitat for desert pupfish. Construction within the open water area could result in "take" of desert pupfish. A CDFW incidental take permit and USFWS authorization for take of desert pupfish would be required prior to construction in any areas containing suitable habitat for desert pupfish. The CDFW and USFWS take permits will include requirements for avoidance and mitigation of impacts on desert pupfish, including restrictions on the timing of construction activities, approaches to dewatering to avoid or minimize species take, and requirements for habitat compensation to support the species. The impact on desert pupfish would be less than significant due to compliance with the CDFW and USFWS incidental take permits and authorizations." The Bio-8 mitigation should include approaches to dewatering to avoid or minimize species take, and requirements for habitat compensation to support the species, which are discussed at page 4.3-37.

Jim Minnick
November 22, 2023
Page 10

23. **Page 4.9-5, Imperial Integrated Water Resources Management Plan:** The Imperial IWRMP is outdated and is no longer compliant with State standards and requirements and, therefore, no longer serves as the "governing document" for regional water planning.
24. **Page 4.9-6, Imperial Irrigation District, bulleted items:** Please update this section regarding policy documents that govern IID operations as follows: i) remove "The Definite Plan" and replace with "Rules and Regulations governing the Distribution and Use of Water", ii) Correct this sentence: "The Equitable Distribution Plan, which defines how IID will prevent overruns and stay within the cap on the Colorado River water rights" as follows: "The Equitable Distribution Plan manages the District's available water supply, distributing it equitably as determined by the IID Board of Directors," iii) Delete "Existing IID standards and guidelines for evaluation of new development and defining IID's role as a responsible agency and wholesaler of water" as this is not referencing any specific policy document.
25. **Page 4.9-6, Imperial Irrigation District last paragraph:** The IWSP was adopted in 2009. Replace "from which water supplies can be contracted to serve new developments within IID's water service area" with "under which water supplies, up to 25,000 acre-feet annually, have been assessed for new non-agricultural development and may be contracted for conservation at the discretion of the IID Board."
26. **Page 4.9-7, Table 4.9-1, Conservation and Open Space Element Goal 1, Environmental resources shall be conserved for future generations by minimizing environmental impacts . . . :** Project should not be found consistent with this Goal without further analysis and mitigation. A net reduction of drainage flow to the Salton Sea will result in impacts associated with a permanent higher concentration of salinity levels and lower drainage flow, impacting environmental resources at the Salton Sea. The project analysis should include a discussion on these impacts and address possible mitigation (i.e. fund the proposed new Salton Sea Conservancy for O&M).
27. **Page 4.9-7, Table 4.9-1, Conservation and Open Space Element Goal 6, The County will conserve protect, and enhance water resources in the County. . . :** Project should not be found consistent with this Goal without further analysis and mitigation. A net reduction of drainage flow to the Salton Sea will result in impacts to this water resource and open space around it. The project analysis should include a discussion on this impact and possible mitigation (i.e. fund the proposed new Salton Sea Conservancy for O&M).
28. **Page 4.9-7, Table 4.9-1, Conservation and Open Space Element Goal 6.3, Protect and improve water quality and quantity for all water bodies in Imperial County. . . :** Project should not be found consistent with this Goal without further analysis and mitigation. A net reduction of drainage flow to the Salton Sea will contribute to water quality impacts via higher concentration of salinity levels and permanent reduction of water to the Salton Sea. The project analysis should include a discussion on this impact and possible mitigation (i.e. fund the proposed new Salton Sea Conservancy for O&M).
29. **Page 4.9-8, Table 4.9-1, first Program listed under Water Element calls for limiting the degradation of surface water resources:** Project should not be found consistent with this Program without further analysis and mitigation. As noted above decreased drainage flows contribute to increased salinity at the Salton Sea and degradation of water

Jim Minnick
November 22, 2023
Page 11

- quality. The project analysis should include a discussion on this impact and possible mitigation (i.e. fund the proposed new Salton Sea Conservancy for O&M).
30. **Page 4.9-8, Table 4.9-1, last Program listed under Water Element calls for all development proposal brought before the County of Imperial be reviewed and be required to implement appropriate mitigation measures for significant impacts to water quality and quantity:** Project should not be found consistent with this Program without further analysis and mitigation. As noted above decreased drainage flows contribute to increased salinity at the Salton Sea and contributes to the degradation of water quality. The project analysis should include a discussion on this impact and possible mitigation (i.e. fund the proposed new Salton Sea Conservancy for O&M). The Water Supply Assessment (appendix M) does not adequately assess impacts to water quantity.
 31. **Page 4.9-9, Project Impact Analysis:** This narrative should address the fact that the proposed project will result in a net annual reduction of drainage flow to the Salton Sea thus contributing to the degradation of the water quality at the Salton Sea. The discussion should determine the net anticipated reduction in drainage flow after taking into consideration that none of the project's 6,500 AFY of water supply will be discharged into the drains that support the Salton Sea.
 32. **Page 4.9-10, 4.9.5 Impact Analysis, Operations:** Needs to address surface water quality impacts to drains and to the Salton Sea due to the net reduction flows during operation. See Prior comments.
 33. **Page 4.9-13, 4.9.6 Cumulative Impacts:** Need to address surface water quality impacts to drains and to the Salton Sea due to the net reduction flows that will result from urbanization and planned non-agricultural development. Projects under the entitlement process through the County are implemented and cumulative result in permanent flow reductions to the Salton Sea, contributing to even higher salinity concentration and affecting water quality. This analysis needs to be incorporated.
 34. **Page 4.9-13, Mitigation Measures:** Update this section to incorporate mitigation that may result from the requested analysis stated above.
 35. **Page 4.13-1, Section 4.13 paragraph one references "Information in this section is based on information obtained from the WSA for the Project (Chambers Group 2023) included in Appendix M of this EIR":** The Water Supply Assessment in the appendices should be labeled as draft as it contains inaccurate and incomplete data. IID has not completed the technical review of this document.
 36. **Page 4.13-1 Existing Environmental Setting, Regional Setting, Water and Sewer Service paragraph 3, second to last sentence:** Generally speaking, IID does not provide water to the West Mesa Unit. The Elder Canal serves the Imperial County and not the West Mesa Unit. Please delete this reference.
 37. **Page 4.13-1 Existing Environmental Setting, Regional Setting, Water and Sewer Service:** Should be updated as IID water facilities that may be impacted include the L, M, O, P, Q, R, S and Vail 3 Drains; Alamo River; the L, M, O, P, Q, R, S Laterals; as well as any additional IID facilities that may be impacted by alignment changes.

Jim Minnick
November 22, 2023
Page 12

38. **Page 4.13-1 Existing Environmental Setting, Regional Setting, Colorado River Water Rights, paragraph 1:** The QSA is not the set of agreements that grant California the most senior water rights. The QSA, among other things, set an annual consumptive use cap for IID of 3.1 million acre-feet. For information regarding IID's water rights, please refer to the *Quantification Settlement Agreement Cases*, 201 Cal. App. 4th 758 (2011), cert. denied 133 S. Ct. 312 (2012), and *Arizona v. California*, 99 S. Ct. 995 (1979).
39. **Page 4.13-8 Imperial Integrated Water Resources Management Plan:** This narrative incorrectly states that the Imperial IWRMP meets the basic requirement of California Department of Water Resources for an IRWMP. The Imperial IWRMP is outdated and no longer meets the State requirements. It is also not the governing document for regional water planning. Update this entire section.
40. **Page 4.13-8 Imperial Irrigation District bulleted items under first paragraph:** Update this section regarding policy documents that govern IID operations as follows: i) remove "The Definite Plan" and replace with "Rules and Regulations governing the Distribution and Use of Water", ii) Correct this sentence: "The Equitable Distribution Plan, which defines how IID will prevent overruns and stay within the cap on the Colorado River water rights" as follows: "The Equitable Distribution Plan manages the District's available water supply, distributing it equitably as determined by the IID Board of Directors," iii) Delete "Existing IID standards and guidelines for evaluation of new development and defining IID's role as a responsible agency and wholesaler of water" as this is not referencing any specific policy document.
41. **Page 4.13-8 Imperial Irrigation District last paragraph:** The IWSP was adopted in 2009. Replace "from which water supplies can be contracted to serve new developments within IID's water service area." With "under which water supplies, up to 25,000 acre-feet annually, have been assessed for new non-agricultural development and may be contracted for conservation at the discretion of the IID Board."
42. **Page 4.13-10, Table 4.13-2 Preservation of Water Resources , Objective 6.3 Protect Water Quantity, Analysis column 3:** The analysis needs to be modified. The percentage of project demand to "IWSP water demand" is not related to an available "unallocated supply" but rather to an "unallocated water supply that may be created and set aside for new non-agricultural projects." The project's water supply needs to be conserved and is not readily available. This analysis shall address the Colorado River System's existing conditions and IID's ability to conserve the Project's anticipated water supply demand in addition to existing water supply demands and potential new water conservation commitments up to 250,000 acre-feet per year through 2026. The percentage needs to be updated to reflect the current IWSP balance.
43. **Page 4.13-10, Table 4.13-2 Preservation of Water Resources , Objective 6.10 Encourage Water Conservation, Analysis column 3:** See prior comment regarding water supply and delete "unallocated supply set aside" as there is no water supply set aside. The water needs to be conserved subject to the terms and conditions of a Water Supply Agreement. Additionally, the analysis must include Best Management Practices that the project incorporates for water conservation and must further address what measures the project plans to take if there is future water supply curtailment of the 6,500 AFY requested. Please see IID/IC WSA Template 2023. Appendix M is incomplete as it

Jim Minnick
November 22, 2023
Page 13

relates to incorporation and identification of best management practices for water conservation.

44. **Page 4.13-11 & 4.13.4, Methodology:** Incorrectly references a WSA dated April 2023 (Appendix J). This draft EIR incorporates an incomplete WSA and as Appendix M.
45. **Page 4.13-11, Regional Water Demand, Section 4.13.4, last paragraph:** Please replace "kilo" with "thousand" (as in KAF).
46. **Page 4.13-11, Table 4.13-4, Table 4.13-5:** All tables taken from IID's WSA Template must recognize and date the source as Imperial Irrigation District. Table 4.13-5 also incorrectly states that Salton Sea mitigation is included in the nonagricultural delivery. That mitigation ended in 2017 and this information needs to be corrected. The data year is inaccurately labeled on title of Table 4.13-4.
47. **Page 4.13-13 Water:** IID water facilities that may be impacted include the L, M, O, P, Q, R, S and Vail 3 Drains; Alamo River; the L, M, O, P, Q, R, S Laterals. Expanded capacity, including new and modified facilities, needs to be analyzed.
48. **Page 4.13-15, Threshold b) narrative:** This section needs to be updated. The water supply assessment can't extend beyond 30 years (through 2053) because the Water Supply Assessment template created by IID and Imperial County does not extend beyond 2055. Therefore, there is no 50-year water supply assessment that can be applied to this project. Additionally, the IWSP does not dedicate or set aside 25,000 AFY of IID's annual water supply to serve new projects. Refer to prior comments regarding ability to "conserve" up to 25,000 acre-feet under the IWSP. The remaining IWSP balance is not 23,020, please refer to updated WSA template as this amount is under 19,620 AFY.
49. **Page 4.13-15 Table 4.13-6 Project Water Uses (AFY):** The table notes a total operational use of 299,000 AFY which is inaccurate. Change table to AF and not AFY.
50. **Page 4.13-16 Table 4.13-7 Project Water Uses (AFY):** The table notes a total water use summary of 299,000 AFY which is inaccurate. Change table to AF and not AFY.
51. **Page 4.13-16 Table 4.13-8 Amortized Project Water Uses (as percent of IWSP):** The table denotes the incorrect IWSP balance and thus this information is incorrect as the balance is under 19,620 AFY. Refer to an updated Water Supply Assessment.
52. **Page 4.13-16 Paragraph two:** The entire paragraph needs to be deleted as the statements are all inaccurate. The existing and near-term On-Farm Efficiency conservation and System Efficiency conservation undertaken by IID and its customers under the QSA and other near-term agreements **do not ensure** that the project's water needs will be met over the next 50 years. Hell's Kitchen, in coordination with IID, will need to implement a conservation program or project to generate the 6,500 AFY of water supply that it will need for its operations. Please refer to the IWSP: <https://www.iid.com/home/showpublisheddocument/IWSP>
53. **Page 4.13-16 Paragraph three:** The drought is entering its third decade (not for the past decade or so). This paragraph incorrectly references and Appendix J. Utility Mitigation Measures UTIL-1 as a blanket statement that the Applicant will work with IID to ensure

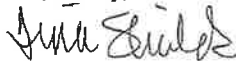
Jim Minnick
November 22, 2023
Page 14

reductions of water are managed is not an acceptable mitigation. As per the WSA Template approved by Imperial County and IID, the project proponent must identify specific measures of how a proportional percentage of water will be curtailed if water supply reductions were ordered by an agency having jurisdictional authority.

54. **Page 4.13-4 (error in renumbering, page 291 of pdf), paragraph two:** The entire paragraph needs to be deleted as the statements are inaccurate. The existing and near-term On-Farm Efficiency conservation and System Efficiency conservation undertaken by IID and its customers under the QSA and other near-term agreements **do not ensure** that the project's in addition to other cumulative water demand needs will be met over the next 50 years. Each independent new non-agricultural project, in coordination with IID, must implement a conservation program or project to generate their respective water supply demand. Please refer to the IWSP: <https://www.iid.com/home/showpublisheddocument/IWSP>
55. **Page 4.13-3, 4.13.7 Mitigation Measures (error in renumbering, page 292 of pdf):** Mitigation Measure UTIL-1 is not acceptable. As per the WSA Template approved by Imperial County and IID, the project proponent must identify specific measures of how a proportional percentage of water will be curtailed if water supply reductions were ordered by an agency having jurisdictional authority.
56. **Page 6.0-4, 6.1.5 Hydrology and Water Quality:** Hydrology and Water Quality should not be listed under "EFFECTS NOT FOUND TO BE SIGNIFICANT" unless an assessment/analysis is completed as previously noted above, and there is sufficient analysis and data to make such a finding.
57. **Page 6.0-10, 6.1.13 Utilities:** Utilities should not be listed under "EFFECTS NOT FOUND TO BE SIGNIFICANT" unless an assessment/analysis is completed as previously noted above, and there is sufficient analysis and data to make such a finding.

Thank you for the continued coordination with IID. Should you have any questions, please do not hesitate to contact Donald Vargas at (760) 482-3609 or via email at dvargas@iid.com.

Respectfully,



Tina Anderholt Shields, PE
Water Manager

Enclosure

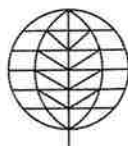
Jamie Asbury – General Manager
Mike Pacheco – Manager, Water Dept.
Matthew H Smelser – Manager, Energy Dept.
Geoffrey Holbrook – General Counsel
Joanna Smith Hoff – Deputy General Counsel
Michael P. Kemp – Superintendent General, Fleet Services and Reg. & Environ. Compliance
Donald Vargas, - Compliance Administrator I
Laura Cervantes – Supervisor, Real Estate
Jessica Humes – Environmental Project Mgr. Sr., Water Dept.
Justina Gamboa-Arce-Senior Water Resources Planner

EXHIBIT N

Environmental Justice In California's Lithium Valley

Understanding the potential impacts of direct
lithium extraction from geothermal brine.
A document for community education

NOVEMBER 2023



EARTHWORKS



Environmental Justice In California's Lithium Valley

Understanding the potential impacts of direct
lithium extraction from geothermal brine.

A document for community education

November 2023

ACKNOWLEDGMENTS

This report is written by Jared Naimark. Research was provided by Kenneth Larsen, editing by Brendan McLaughlin, and design by Creative Geckos. The report was reviewed by experts John Hadder (Great Basin Resource Watch), James J.A. Blair (Cal Poly Pomona) and Steven H. Emmerman (Malach Consulting). Thank you to the many Comite Civico del Valle and Earthworks staff and partners who provided essential direction and feedback.

ABOUT COMITE CIVICO DEL VALLE

Comite Civico del Valle (CCV) was founded on the principle that "Informed People Build Healthy Communities" and continues to incorporate this in all partnerships, research, and civic engagement taken by our organization. CCV is a 501 (c)(3) organization with an extensive background and accomplishments that date back to our grassroots origins in 1987. Our organization was founded in Imperial County, California with the endeavor of improving the lives of disadvantaged communities by informing, educating, and engaging the community's civic participation.

CCV is a member of the Lithium Valley Community Coalition (LVCC). The LVCC is a coalition of various organizations that represent disinvested communities, rural neighborhoods, organized labor, environmental justice, and people across the Imperial Valley standing up for a just and equitable Lithium Valley future. The LVCC envisions a region with an abundance of economic opportunities for historically disadvantaged communities, with a focus on doing no harm to the environment while advancing California's ambitious climate goals. The LVCC undertakes a task to meet the needs of the communities located in Lithium Valley in an equitable, environmentally friendly, and community-conscious manner. LVCC's goal is to ensure that disadvantaged communities can be represented in an equitable manner and have a seat at the decision-making table.

ABOUT EARTHWORKS

Earthworks is a nonprofit organization dedicated to protecting communities and the environment from the adverse impacts of mineral and energy development while promoting sustainable solutions. We work with communities and grassroots groups to reform government policies, improve corporate practices, influence investment decisions, and encourage responsible materials sourcing and consumption. We expose and aim to prevent the health, environmental, economic, social, and cultural impacts of mining and energy extraction through work informed by sound science.

Cover photo and current page photo: Comite Civico del Valle
Design by CreativeGeckos.com



EARTHWORKS • 1612 K St. NW, Suite 904 Washington, D.C., USA 20006
earthworks.org • Report at earthworks.org/lithium-valley | *Dedicated to protecting communities and the environment from the adverse impacts of mineral and energy development while promoting sustainable solutions.*

COMITE CIVICO DEL VALLE • 235 Main Street Brawley, CA 92227 • ccvhealth.org
Founded in Imperial County, California on the principle that "Informed People Build Healthy Communities" with the endeavor of improving the lives of disadvantaged communities, informing, educating, and engaging the community's civic participation.



Read online at
earthworks.org/lithium-valley

Table of Contents

Acknowledgments	2
Glossary	4
Executive Summary.....	6
Introduction	9
The Purpose of this Document	12
Environmental Justice and Community Engagement.....	12
Indigenous Rights	13
Literature Review.....	14
Lithium Brines in General	14
Salton Sea Geothermal Brines.....	16
Geothermal Power Plants.....	17
Direct Lithium Extraction Overview	20
Direct Lithium Extraction Proposals at the Salton Sea.....	21
Potential Environmental Impacts	23
Air Quality.....	23
Water Consumption	25
Salton Sea Degradation.....	27
Hazardous Waste and Materials.....	29
Seismic Activity.....	31
Conclusion.....	32
References	34

List of Tables

1. Estimated freshwater consumption at Imperial Valley direct lithium extraction projects25

List of Figures

1. Lithium Valley map..... 8
2. Detailed Lithium Valley and Salton Sea map..... 11
3. Lithium concentration process in salar (salt flat)..... 15
4. Lithium dissolved in brine in the Salton Sea Known Geothermal Resource Area..... 16
5. Overview of a geothermal plant..... 17
6. Proposed and operational geothermal plants in the Salton Sea Known Geothermal Resource Area .. 18
7. Flash steam geothermal plant..... 19
8. Enhanced geothermal system using hydraulic fracturing (fracking)..... 19
9. Direct lithium extraction from geothermal brine..... 20
10. Sources of air pollution in Imperial Valley..... 28
11. Particulate matter pollution from the receding Salton Sea..... 28



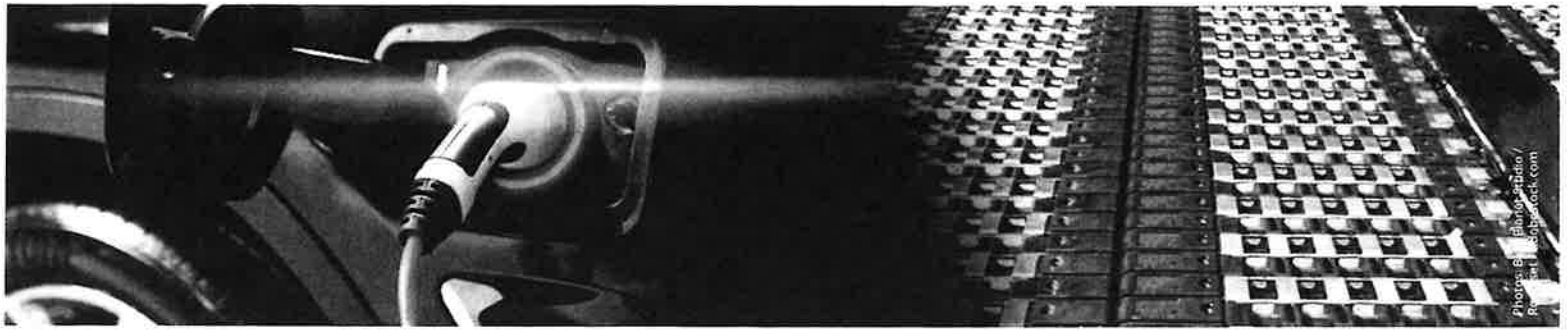
Glossary

BHER	Berkshire Hathaway Energy Renewables Company that operates ten existing geothermal plants in Imperial Valley and is piloting lithium extraction technology.
CEQA	California Environmental Quality Act California law that requires public agencies and local governments to evaluate and disclose the environmental impacts of development projects.
CTR	Controlled Thermal Resources Company proposing to build the Hell's Kitchen geothermal power plant and lithium extraction facility in Imperial Valley.
DLE	Direct Lithium Extraction Type of extraction proposed in Imperial Valley that uses a chemical or physical process to remove lithium from brine.
EIR	Environmental Impact Report A report that analyzes a proposed project's impacts on the environment and outlines ways to avoid or minimize impacts.
EGS	Enhanced Geothermal System A technique for drilling geothermal wells by injecting pressurized fluid, similar to fracking.
EPA	Environmental Protection Agency United States government agency tasked with environmental protection.
ESM	ES Minerals / EnergySource Minerals Company planning to build a lithium extraction facility at the John L. Featherstone (Hudson Ranch 1) Power Plant.
EV	Electric Vehicle Vehicle powered by an electric motor that draws energy from a battery.
FPIC	Free, Prior, and Informed Consent Internationally recognized right of Indigenous peoples regarding projects affecting their lands, territories, resources, and cultural heritage. Includes the right to say "no" to a project.
Geothermal Plant	Power plant that draws heat from the earth to produce low-carbon electricity.
HCl	Hydrochloric Acid Hazardous material used in the lithium extraction process.
ICAPCD	Imperial County Air Pollution Control District Imperial County agency that sets air quality standards and mitigation requirements for development projects.



IID	Imperial Irrigation District Irrigation district and utility that provides water to Imperial Valley, including to proposed lithium projects.
ILiAD	Integrated Lithium Adsorption Desorption Proprietary technology that EnergySource Minerals plans to use for extracting lithium from geothermal brine.
ILO	International Labor Organization United Nations agency that sets labor standards for advancing social and economic justice.
LCE	Lithium Carbonate Equivalent Standard to compare the amount of battery-grade lithium a deposit can produce, assuming 100% recovery.
LVC	Lithium Valley Commission Commission tasked with analyzing the potential for lithium extraction in California and making recommendations to the state legislature.
MW	Megawatts A unit of power equal to one million watts, used to measure the output of power plants.
PEIR	Programmatic Environmental Impact Report A report that analyzes the cumulative environmental impacts of a land use plan that includes multiple proposed projects, rather than project by project.
PM	Particulate Matter Small particles, such as dust, that contribute to air pollution and are harmful to human health.
Salar	Salt Flat A salt flat where lithium can often be found dissolved in brine
SSKGRA	Salton Sea Known Geothermal Resource Area The area on the south shore of the Salton Sea that is known to contain high potential for geothermal energy, where lithium extraction projects are being proposed.





Executive Summary

Demand for lithium, used in electric vehicle batteries, is skyrocketing. Electric vehicles are important for the transition away from fossil fuels. However, mining lithium has well-documented negative social and environmental impacts. Imperial Valley, in Southern California, is home to one of the largest lithium deposits in the world, and has been dubbed “Lithium Valley.” Lithium here is dissolved in the underground brine that is used to generate electricity at geothermal power plants on the south shore of the Salton Sea. Direct lithium extraction is being promoted as more environmentally friendly than other types of lithium mining, but it has never before been used at commercial scales, and communities in Imperial Valley have raised questions about the potential impacts to land, air, water, and public health.

The goal of this report is to educate frontline communities and the public about the potential environmental impacts of lithium extraction in Imperial Valley. This is important from an environmental justice perspective, because disadvantaged communities living near proposed lithium projects already suffer disproportionately from air pollution and other environmental health hazards. Furthermore, Indigenous communities have raised concerns about potential impacts to cultural sites at the Salton Sea.

This report is based on a review of academic literature, government documents, and publicly available documents related to specific lithium projects.

Lithium is conventionally produced from mining hardrock deposits, primarily in Australia, or evaporating brine from salt flats, primarily in South America. In Imperial Valley, lithium is found in hot brine more than 1,500 feet underground in the Salton Sea Known Geothermal Resource Area, on the south shore of the Salton Sea. There are 11 geothermal power plants currently using hot brine to generate steam and produce low-carbon electricity. Direct lithium extraction projects would use technologies such as ion exchange and adsorption to directly remove lithium from the brine before the brine is reinjected deep underground into the geothermal reservoir.

There are currently three companies at various stages of developing lithium extraction projects in Imperial Valley using proprietary technology:

- Berkshire Hathaway Energy Renewables Minerals,
- Controlled Thermal Resources, and
- EnergySource Minerals.



While potential environmental impacts at each site must be analyzed individually, our review identifies five areas of potential impacts to consider:

1 AIR QUALITY: Construction and operation of lithium and geothermal facilities in Imperial Valley may impact already degraded air quality through emissions of particulate matter, greenhouse gases, and hydrogen chloride. While these are unlikely to meet legal thresholds that require mitigation for specific projects, it will be important to analyze the cumulative impacts as “Lithium Valley” is built out, including from vehicle trips, battery plants, and other associated infrastructure.

2 FRESHWATER CONSUMPTION: Lithium extraction projects will consume Colorado River water for cooling and processing. For example, EnergySource Minerals estimates that its operations will consume 3,400 acre-feet of water to produce 19,000 metric tons of lithium hydroxide per year for 30 years. This is roughly the amount it would take to cover nine football fields, one foot deep with water, every day. While the industry often makes favorable comparisons of how little water direct lithium extraction will use compared to South American operations, these comparisons are difficult to verify, due to lack of transparent data sources. Regardless, freshwater consumption needs to be analyzed in the context of climate change and possible cuts to Imperial Valley’s Colorado River allocation. If the lithium industry expands to its planned capacity, it will exceed the freshwater currently allocated by the Imperial Irrigation District for non-agricultural use.

It will be important to analyze the cumulative impacts and cumulative pollution as “Lithium Valley” is built out, including from vehicle trips, battery plants, and other associated infrastructure.

3 SALTON SEA DEGRADATION: The Salton Sea is a terminal lake—a lake without an outlet—fed by drainage from agricultural fields. Due to water transfers from Imperial Valley to urban areas, evaporation now exceeds inflow, and the Sea is rapidly shrinking, exposing harmful dust contaminated by pesticides and fertilizers. If water is diverted from agriculture to lithium production, it may speed up the shrinking of the Sea. Freshwater consumption by lithium extraction projects may also limit restoration options for the Salton Sea, such as the voluntary transfer of Colorado River water recommended by a panel of independent experts. In this context, water consumption by lithium projects should be carefully analyzed and planned for in order to prevent an indirect contribution to worsening air quality through exposure of the Salton Sea lake-bed.

4 HAZARDOUS WASTE AND MATERIALS: Currently, geothermal operations in the region minimize waste by reinjecting spent brine back underground into the geothermal reservoir where it came from, and this practice will continue with the addition of direct lithium extraction technology. However, other elements besides lithium are dissolved in brine and will concentrate on filters, forming “filter cakes” that need to be disposed of. There is potential for this waste to include heavy metals harmful to human health such as arsenic, lead, and cadmium. For example, EnergySource Minerals estimates that 90% of its waste will be non-hazardous and disposed of in California, while 10% of its waste will be hazardous waste that will be disposed of in Arizona. Testing and disclosing of waste content, and proper storage and transport, will be critical.



5

SEISMIC ACTIVITY: Lithium extraction itself is unlikely to have an impact on seismic activity in the area. However, commercially successful lithium projects may lead to further geothermal development in this seismically active area. There is disagreement in the scientific literature about how geothermal development impacts seismicity, so this is an area that requires further study. New wells drilled using enhanced geothermal systems, similar to fracking, may have an impact on inducing seismic activity. Imperial Valley is already living with a baseline risk of earthquakes, so lithium extraction infrastructure should be designed with high standards for earthquake safety.

The potential environmental impacts of direct lithium extraction in Imperial Valley may prove to be less harmful than hardrock or evaporation mining. However, there are still potential adverse impacts that should be avoided and mitigated. In order to promote environmental justice, communities should be aware of these potential impacts and be able to fully participate in the environmental review process.

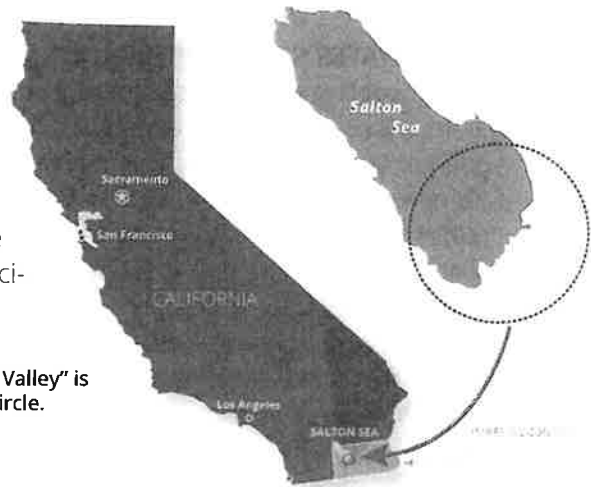


FIGURE 1: At right, "Lithium Valley" is shown in the dotted red circle.



Remote meeting of the Lithium Valley Commission in Calipatria, California. Remote meetings were hosted to allow the engagement of residents of the Lithium Valley and other surrounding communities in the Commission hearings.

Photo: Comité Civico del Valle

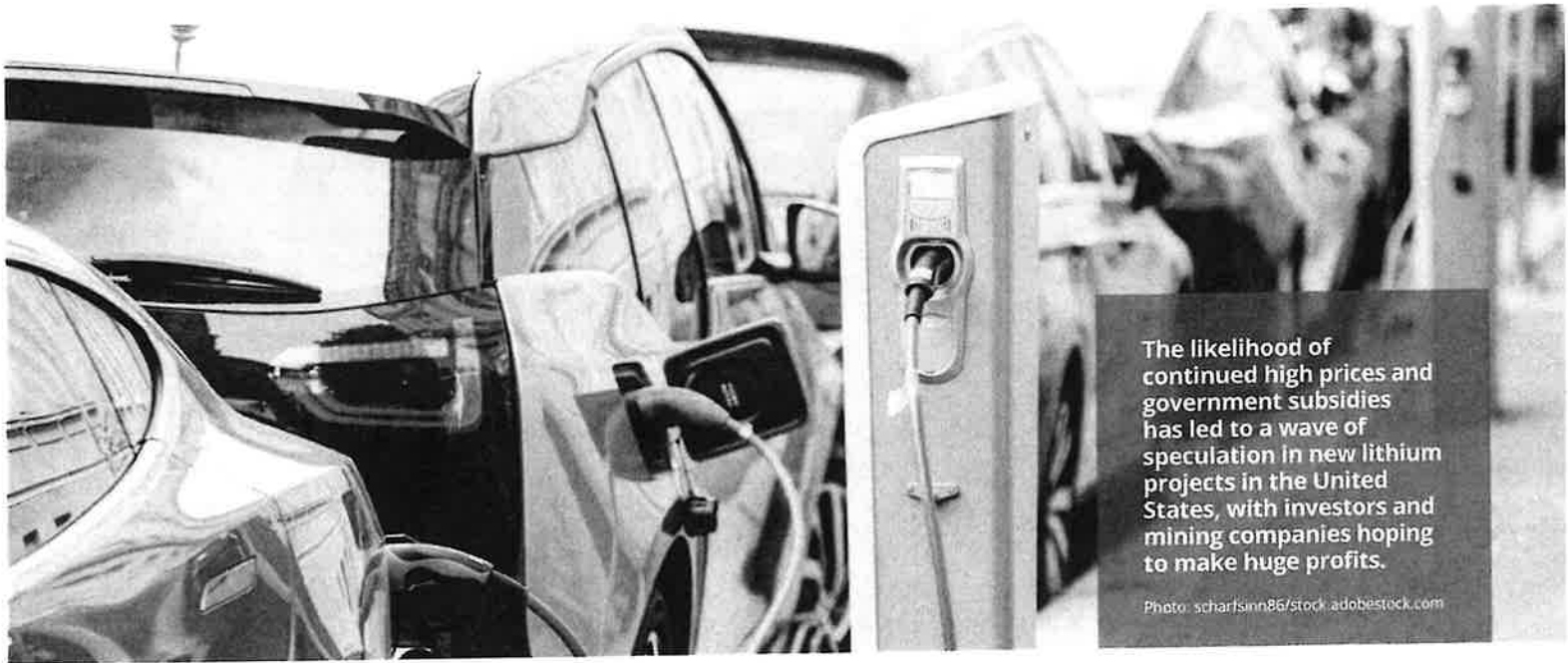


Introduction

Demand for lithium is expected to increase dramatically in the coming years, in large part because of its use in batteries for electric vehicles (EVs), which are booming. The need for lithium also stems from California's goal to have all new cars be zero-emission vehicles by 2035. Lithium demand is projected to grow to 280% of current reserves by 2050, with supply primarily coming from new extraction (Dominish et al., 2019). This projection is not set in stone. Improved recycling has the potential to **offset new lithium mining** by 25% (Dominish et al., 2021), and **demand for mined lithium could be reduced even more dramatically** by shifts to smaller batteries and away from private car ownership (Riofrancos et al., 2023).

New lithium extraction is being promoted aggressively around the world and in the United States, which has just one active lithium operation, at the Silver Peak mine in Nevada. Most of the lithium mined today comes from Australia and Chile, then is largely refined and manufactured into batteries in China. For this reason, the United States has designated lithium a "critical mineral" for national security, promoting new domestic lithium mining as a way to decrease the risk of supply chain disruptions (Riofrancos, 2023). For example, the 2022 Inflation Reduction Act contains provisions that make EV tax credits dependent on lithium sourced in the United States (or free trade agreement countries). The likelihood of continued high prices and government subsidies has led to a wave of speculation in new lithium projects in the United States, with investors and mining companies hoping to make huge profits.

The U.S. has designated lithium a "critical mineral" for national security, promoting new domestic lithium mining as a way to decrease the risk of supply chain disruptions. The 2022 Inflation Reduction Act contains provisions that make EV tax credits dependent on lithium sourced in the United States.



The likelihood of continued high prices and government subsidies has led to a wave of speculation in new lithium projects in the United States, with investors and mining companies hoping to make huge profits.

Photo: scharlsinn86/stock.adobe.com



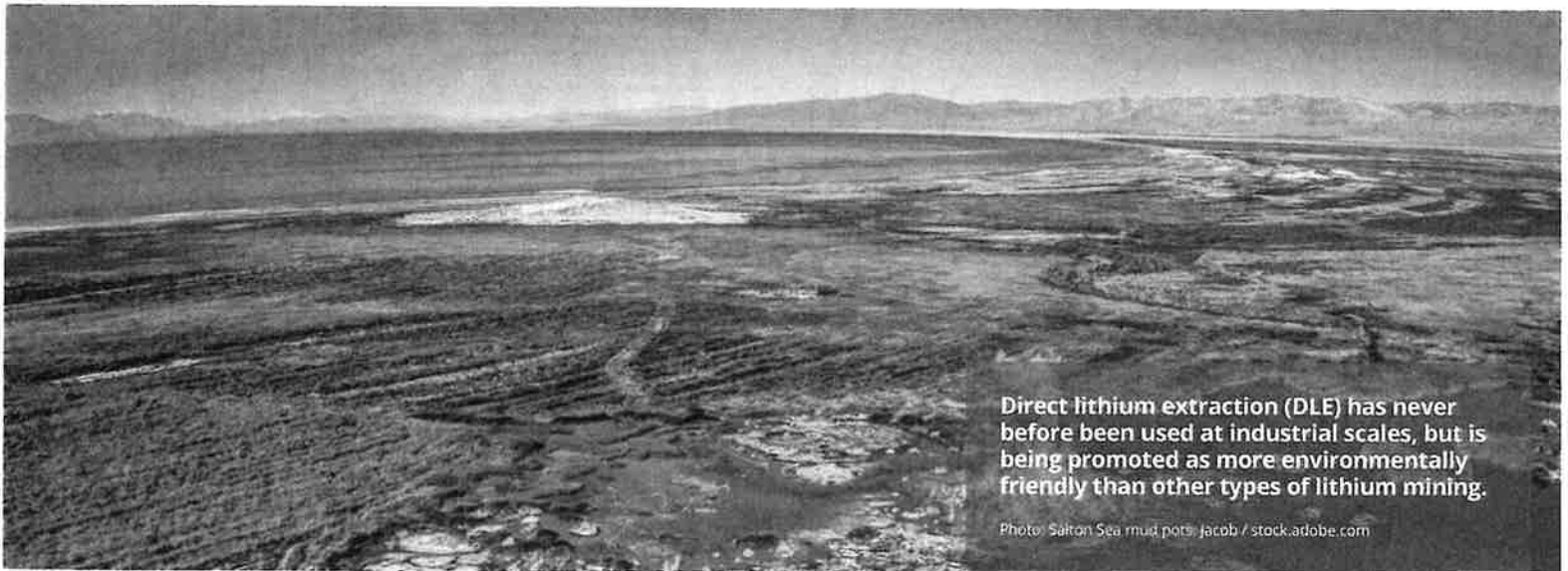
EVs are considered an important part of the solution mix for making the transition away from fossil fuels to a low-carbon economy, and for the most part, EV batteries are lithium-ion based. Lithium extraction, both hardrock mining and brine evaporation, has well-documented negative social and environmental impacts (Blair et al., 2022; Earthworks, 2021a):

- 1 Creating water stress in arid environments, resulting in the pollution of air and water,**
- 2 Violating the rights of Indigenous Peoples by not respecting their right to Free, Prior and Informed Consent (FPIC), and**
- 3 Desecrating sacred landscapes.**

Inadequate and antiquated mining governance complicates this further. For example, hardrock mining on public lands in the United States is governed by the severely outdated and flawed 1872 Mining Law. The law, which was passed to encourage western settlement on Indigenous lands, includes no environmental provisions, demands no royalties, and establishes mining as the highest and best use of public lands (Earthworks, 2021b).

Imperial Valley, in Southern California, is home to one of the largest lithium deposits in the world, leading investors and prospective developers to dub the area “Lithium Valley.”

This lithium, along with many other elements, is dissolved in hot brine deep below ground. This brine is currently extracted through geothermal wells to generate electricity at 11 power plants, and then reinjected back underground into the geothermal reservoir where it came from. Three companies are developing projects to extract lithium at existing and new geothermal plants by using direct lithium extraction (DLE) technologies. DLE refers to a set of physical and chemical processes that would directly remove lithium from brine, similar to how a water softener removes minerals from water. DLE, which has never before been used at industrial scales, is being promoted as more environmentally friendly than other types of lithium mining (Paz et al., 2022).



Direct lithium extraction (DLE) has never before been used at industrial scales, but is being promoted as more environmentally friendly than other types of lithium mining.

Photo: Salton Sea mud pots. Jacob / stock.adobe.com



However, very little information is publicly available about how these technologies work, and their potential environmental impacts. What information is available is highly technical and written by the lithium industry itself. The Blue Ribbon Commission on Lithium Extraction in California met over 20 times between 2021 and 2022, and heard repeated questions from the public about the potential impacts of DLE on land, air, and water. Some of these questions were answered in the Report of the Blue Ribbon Commission Lithium Extraction in California published in December 2022. However, many uncertainties remain that will need to be addressed in the upcoming Salton Sea Renewable Resource Programmatic Environmental Impact Report (PEIR).

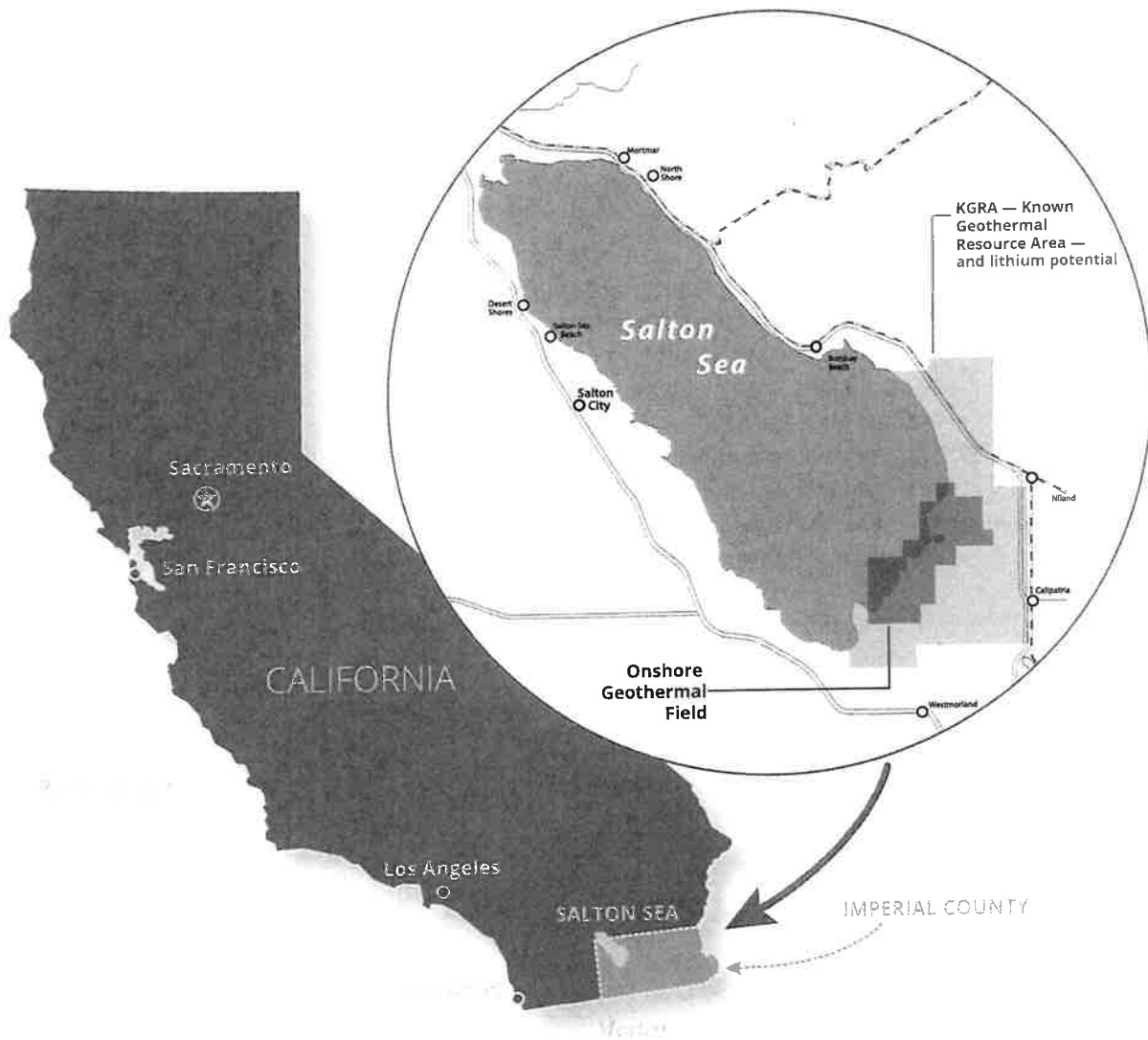


FIGURE 2. In the circle inset map, the shaded pink area is the KGRA, the Known Geothermal Resource Area, with high lithium potential. The shaded purple is the geothermal field that has 11 geothermal plants, which have the capacity to produce about 414 MW of electricity per year.

The Purpose of this Document

This literature review attempts to fill some of the information gaps about DLE, and is meant to serve as an educational tool for frontline communities and the public. It is intended to educate the reader about lithium, geothermal wells, and DLE technologies. It reviews potential environmental impacts of DLE from geothermal brine in the Salton Sea Known Geothermal Resource Area (SSKGRA). It is not a comprehensive assessment of all potential impacts, nor a comprehensive recounting of specific extraction technologies used by companies. The authors hope that communities will find this document a useful starting point for better understanding the potential impacts of lithium extraction so they can be informed participants in the PEIR review process.

Environmental Justice and Community Engagement

It is crucially important that communities understand the potential impacts of lithium extraction in order to advance environmental justice in the region. Disadvantaged, high-poverty Latinx communities living near the area proposed for lithium extraction in Imperial County already suffer adverse impacts from pollution from the Salton Sea and industrial agriculture. This includes high rates of asthma, likely to increase due to airborne dust from the receding Salton Sea's exposed lake-bed (Farzan et al., 2019). According to CalEnviro Screen data accessed in 2023, the census tract closest to proposed lithium extraction ranks in the 82nd percentile of communities most impacted by environmental health burdens in California. Throughout the life of the Lithium Valley Commission, these communities have raised questions about the potential impacts of lithium extraction, and voiced concerns over further exposure to environmental health hazards. Analyzing the potential benefits and risks of lithium extraction in Imperial Valley cannot be separated from the underlying context and history of disproportionate environmental impacts, as fence-line communities work towards the goal of advancing environmental justice through informed participation in decision-making about "Lithium Valley." The community's right to know about the full range of consequences of lithium extraction proposals is a key pillar of environmental justice.



Indigenous Rights

In the United States and around the world, mining impacts disproportionately fall on vulnerable and marginalized communities, particularly Indigenous Peoples (Earthworks, 2021b). These impacts can range from destruction of sacred, cultural, and religious sites, infringement of tribal sovereignty and violation of treaty rights, and increased gender-based violence associated with “man camps” to house workers for extractive projects. Many of these impacts are irreversible, and in the case of impacts to sacred sites, impossible to mitigate. Globally, roughly 85% of lithium resources and reserves are located on or near the territories and lands of Indigenous Peoples (Owen et al., 2022). In the United States, 79% of lithium deposits are located within 35 miles of Native American reservations (Block, 2021). Even lithium deposits more distant from present-day reservations are located on ancestral territories that may hold great cultural importance for Native communities. In the United States and around the world, the projected increase in lithium mining will likely have a disproportionate impact on Indigenous communities.

The UN Declaration on the Rights of Indigenous Peoples enshrines the right to Free Prior and Informed Consent, including the right to say no to development.

Proposed lithium extraction in Imperial Valley is located in the footprint of the ancient Lake Cahuilla, ancestral lands of the Cahuilla, Kamia, Quechan, Kumeyaay, and other Indigenous Peoples (Voyles, 2021). In public comments to the Lithium Valley Commission meetings, tribal leaders raised concerns about the absence of legally required government-to-government consultation on lithium projects, possible environmental impacts, and impacts to cultural sites in the area. Of particular concern is protecting Obsidian Butte, a volcanic outcropping on the shore of the Salton Sea held sacred by multiple tribes in the area. According to Quechan and Kamia elder Preston J. Arrow-Weed, Obsidian Butte is a sacred place that should be left undisturbed (Arrow-Weed, 2022). Similarly, Carmen Lucas (Kwaaymii Laguna Band of Indians) urged protection of cultural resources at the Southeast Lake Cahuilla Active Volcanic Cultural District (Lucas, 2022). A 2010 report prepared for the California Energy Commission found that Obsidian Butte is eligible for listing on the national and state historic registers, and that expansion of geothermal development would “diminish the integrity of the adjacent sacred site” (Gates & Crawford, 2010).

The UN Declaration on the Rights of Indigenous Peoples, and other international human rights standards such as the International Labor Organization (ILO) 169 Convention, enshrine Indigenous Peoples’ right to Free, Prior, and Informed Consent (FPIC) on projects affecting their lands, territories, resources, and cultural heritage. This includes the right to meaningful dialogue and the right to say “yes,” “no,” or “yes with conditions” to a project, and to revoke consent at any time. Thus, understanding the possible environmental impacts of lithium extraction in Imperial Valley is crucial for upholding Indigenous rights.

A report prepared for the California Energy Commission found that Obsidian Butte is eligible for listing on the national and state historic registers, and that expansion of geothermal development would “diminish the integrity of the adjacent sacred site.”

Photo: CC Kevin Key



Literature Review

To better understand the potential environmental impacts of direct lithium extraction (DLE) in Imperial Valley, the authors reviewed academic literature, government documents, and publicly available documents related to specific lithium projects. The review that follows summarizes key findings, including background on the lithium brines found at the Salton Sea, an explanation of geothermal energy, how DLE technologies work, and an overview of potential impacts. We cover:

- Lithium Brines in General
- Salton Sea Geothermal Lithium Brines
- Geothermal Power Plants
- Direct Lithium Extraction, and
- Direct Lithium Extraction at the Salton Sea

Lithium Brines in General

Lithium is the lightest metal element and has a high electrochemical potential, meaning it can store a lot of energy in a battery. Lithium is a highly reactive material that does not exist in its elemental form in nature. Lithium readily forms bonds, forming lithium salts that easily dissolve in water. These elemental characteristics of lithium make it an important part of industrial processes (Evarts, 2015). Lithium is used for a variety of purposes, such as ceramic and glass production, but an estimated 80% of global lithium produced today goes to rechargeable lithium-ion batteries (U.S. Geological Survey, 2023).

Electrification of transportation and energy storage is increasing the demand for high-efficiency lithium-ion batteries worldwide (Bridge & Faigen, 2022). In the United States, lithium is classified as a “critical mineral” for strategic, consumer, and commercial industries, and a priority for the development of domestic resources (U.S. Department of Energy, 2021). Identifying and extracting lithium from national



Here is an example of evaporation ponds used to extract lithium from brine in Chile's Atacama desert.

Photo: freedom_wanted / stock.adobe.com



lithium reserves is a major focus of federal and state governments. To date, lithium production in the United States has been minimal and most lithium has been imported from Chile and Argentina (U.S. Geological Survey, 2022). Major resources of lithium are held in pegmatite deposits (a type of igneous rock), sedimentary (clay) deposits, or in brines.

Brines are increasingly important for global lithium production (Bradley et al., 2017). Continental lithium brines are found in salars, or salt flats. They are created in endorheic basins (basins from which there is no outflow to other waterbodies) where evaporation is much greater than precipitation (Munk et al., 2016). In general, these lithium brines form when water transports dissolved lithium into an endorheic basin, and then the water evaporates, leaving behind lithium and other salts. This process is repeated over lengthy periods leading to increasing salinity and lithium content within the basin, as shown in see Figure 3 (Rossi et al., 2022). The lengthy periods (thousands to millions of years) required to generate economically viable lithium deposits make this a non-renewable resource over human time-scale. Currently, lithium is extracted from salars in South America and Nevada using large evaporation ponds. New processes in lithium extraction have opened non-traditional resources for exploitation including geothermal and oilfield brines (Kesler et al., 2012).

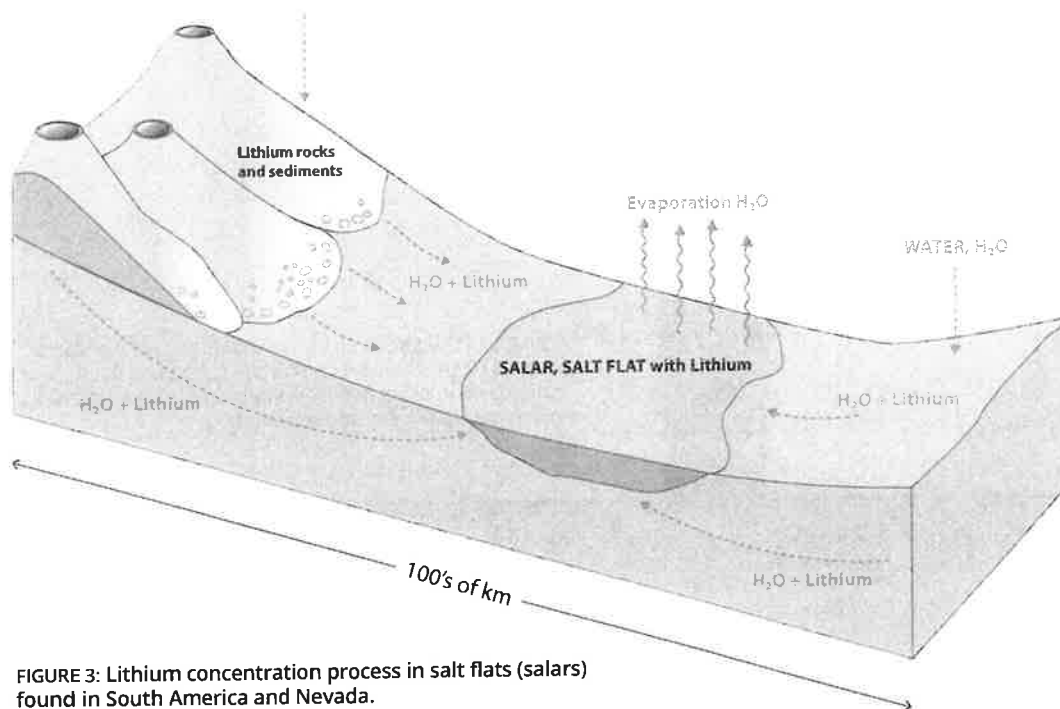


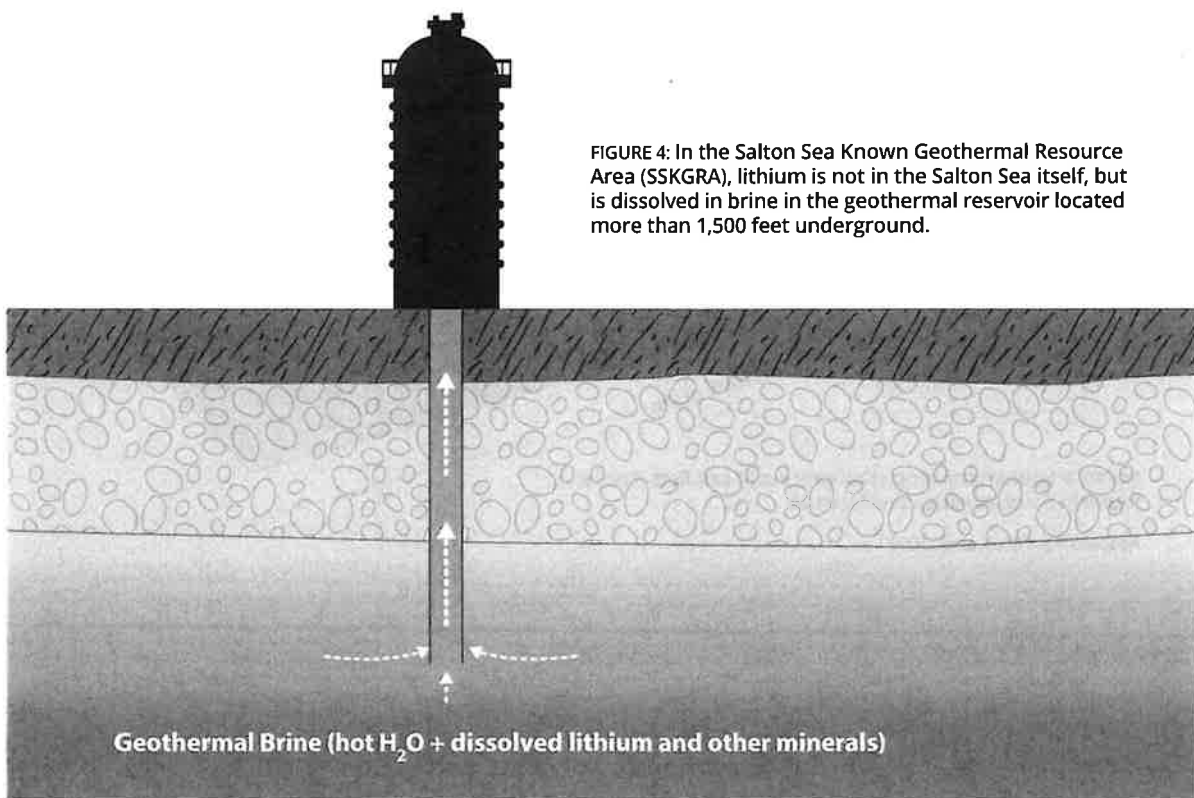
FIGURE 3: Lithium concentration process in salt flats (salar) found in South America and Nevada.

Adapted from Rossi et al., 2022.

Salton Sea Geothermal Lithium Brines

It is important to note that the source of lithium in the SSKGRA is not the Salton Sea itself. Rather, the lithium is dissolved in brine in the geothermal reservoir located more than 1,500 feet underground (Paz et al., 2022). The Salton Sea geothermal brine is estimated to contain lithium at concentrations ranging from 90–440 parts per million, a very high concentration compared to other geothermal fields in the United States (Stringfellow & Dobson, 2021). The portion of the brine reservoir currently exploited for geothermal energy is estimated to hold 2 million metric tons of lithium, making it one of the largest lithium reserves in the world (McKibben et al., 2021). If fully exploited, the SSKGRA is expected to be able to produce more than 600,000 metric tons of lithium carbonate equivalent (LCE) per year (Ventura et al., 2020). For reference, in 2022 global production was estimated at 737,000 metric tons of LCE, and demand is expected to grow rapidly. Because lithium can take a variety of forms, converting to LCE is the industry standard for making comparisons about the amount of battery-grade lithium a deposit can produce, assuming 100% recovery.

Research is underway to better understand how much lithium can be extracted from the reservoir, which source rocks it comes from, and how quickly it regenerates, with some estimating that the deposit could support 50–100 years of lithium production (Chao, 2022). The geothermal brine found in the SSKGRA also contains economically exploitable levels of magnesium, zinc, and high concentrations of other metals and minerals (Chao, 2020).



Geothermal Power Plants

Proposed lithium extraction from SSKGRA brines would be connected to existing or newly constructed geothermal plants that extract brine from geothermal wells. In general, geothermal wells draw hot water from the earth for heating, cooling, or electrical production. The first geothermal power plant in Imperial Valley was constructed in 1982. As of 2023, there are 11 geothermal power plants operating in the SSKGRA. They are located primarily on private land, though some lease state land. These power plants have the capacity to produce 414 megawatts (MW) of electricity, roughly enough to power 300,000 homes (Paz et al., 2022). It is estimated that with new power plants, this could increase by more than six times, up to 2,950 MW, including on land that will be exposed by the receding Salton Sea (DiPippo & Lippmann, 2017).

Developing new geothermal power plants is a priority for the State of California, because they provide low-carbon, renewable, reliable energy. There are about 28 production wells in the field producing over 265 billion pounds of brine annually, and 41 injection wells reinjecting just over 220 billion pounds of produced brine (California State Lands Commission, n.d.). The difference is likely due to release of steam and removal of silica (disposed of as waste). Now, there is interest in extracting lithium from this brine before it is reinjected, both at existing and new geothermal power plants.

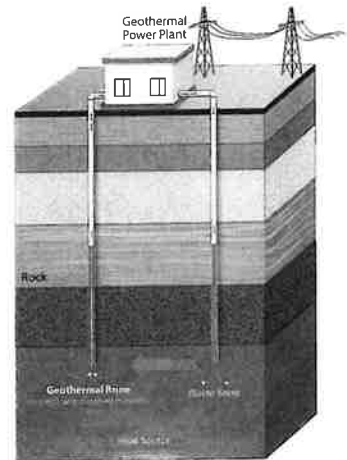


FIGURE 5: A simple overview of a geothermal plant, where wells (production wells) bring hot water or steam to the power plant to generate electricity, then the cooled water is injected back into the geothermal reservoir.

Adapted from [istock.com/ttsz](https://www.istock.com/ttsz)



One of the geothermal facilities in operation in the Lithium Valley region.

Photo: Comité Cívico del Valle

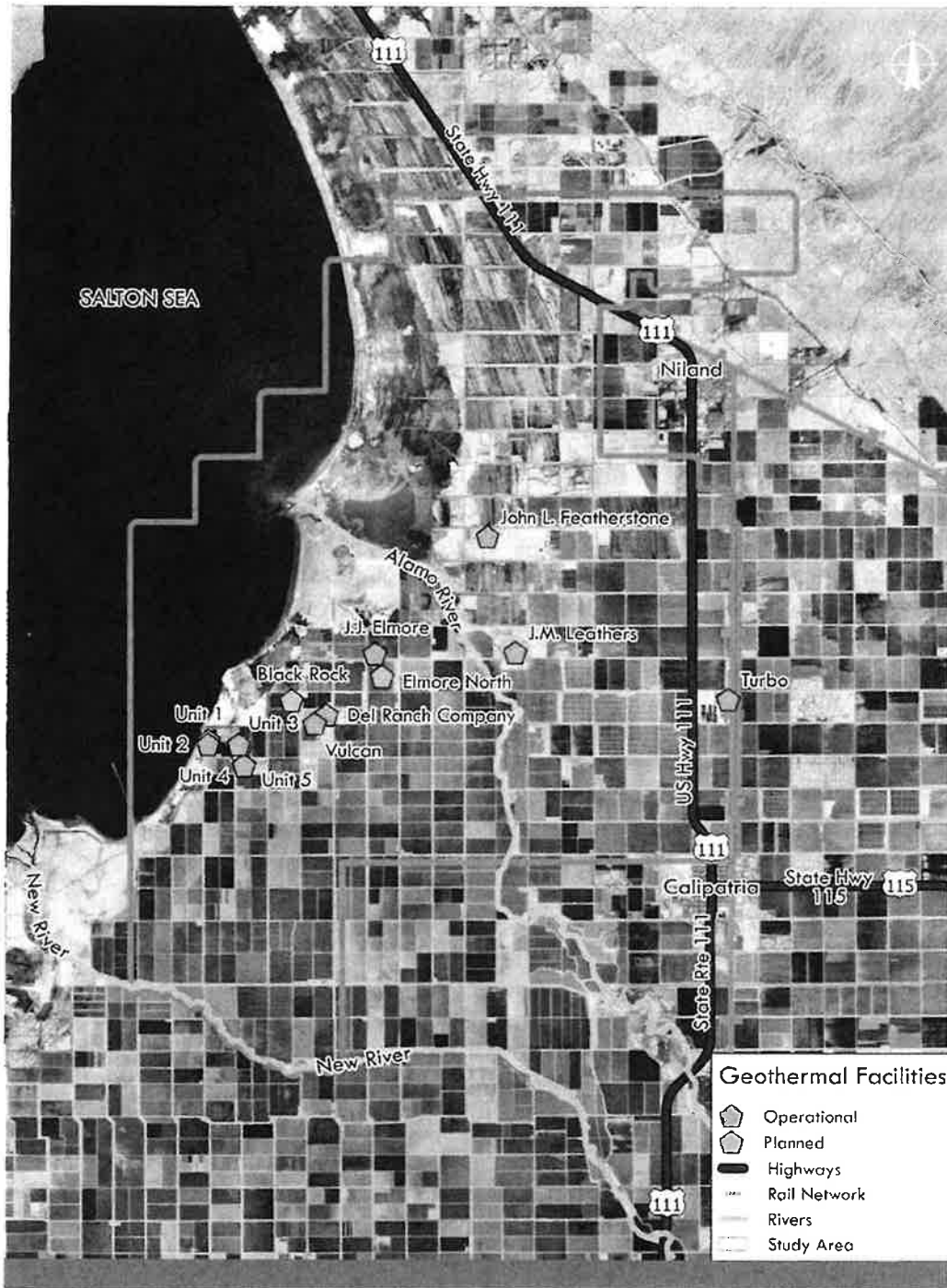


FIGURE 6: Proposed and operational geothermal plants. There are 11 operating geothermal plants as of July 2023, generating 414 megawatts (MW) of electricity, roughly enough to power 300,000 homes. It is estimated that with new power plants, this could increase by more than six times, up to 2,950 MW.

From a presentation by Imperial County, California, July 2023.

There are three main types of geothermal electrical generation systems:

- Flash steam, (used in the Salton Sea geothermal plants),
- Dry steam, and
- Binary cycle

The Salton Sea geothermal plants are exclusively flash steam power systems, as shown in Figure 7. Geothermal wells allow high-temperature water from deep underground to rise from the production well to a tank on the Earth's surface. The change from high to low pressure causes the water to “flash” to steam. This steam then drives the turbine to generate electricity. The spent brine is then injected back into the geothermal reservoir, with some solid waste being sent to a landfill. Operating these wells at the SSKGRA requires electricity purchased from the Imperial Irrigation District (IID).

Brine production and power generation from geothermal wells can decline over time for a variety of reasons, including loss of permeability from mineral build up. To restore and improve permeability in geothermal wells, geothermal plants often employ a form of hydraulic fracturing (fracking) where pressurized fluids are injected into the subsurface to create cracks in the rock. This process, shown in Figure 8 is called an Enhanced Geothermal System (EGS) (National Renewable Energy Laboratory, n.d.). While EGS is not currently used at the SSKGRA, it may be used in the future (Roth, 2014).

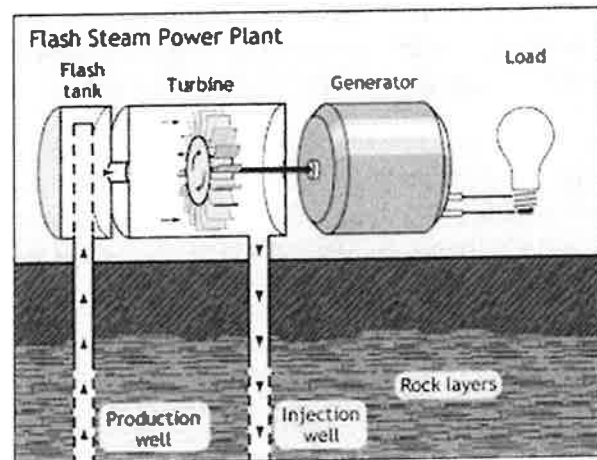
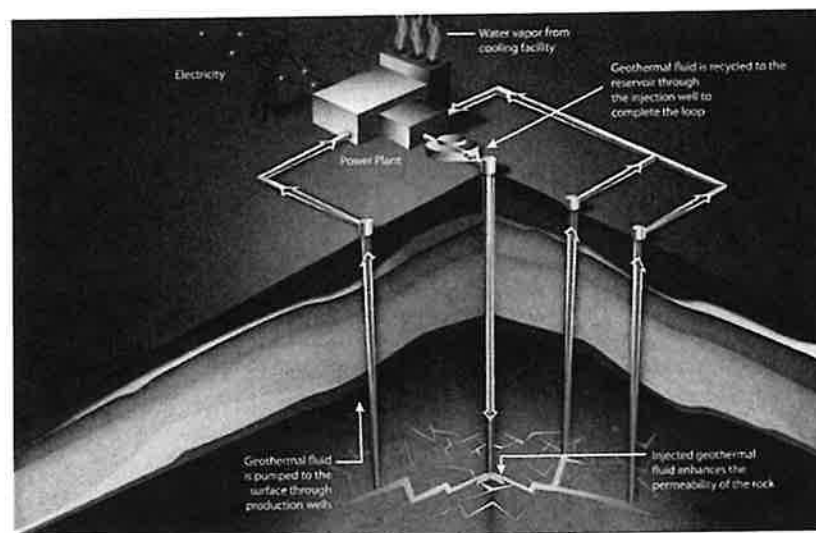


FIGURE 7: Flash steam geothermal plant. High temperature water is pumped out from high to low pressure, causing the water to “flash” to steam, which then drives a turbine to generate electricity. The cooled, condensed water is reinjected into the geothermal reservoir.

From U.S. Energy Information Administration, 2022.

FIGURE 8: Enhanced Geothermal System uses hydraulic fracturing (fracking) to to increase/restore the permeability of the rock allowing the water to flow more freely.

From National Renewable Energy Laboratory, n.d.



Direct Lithium Extraction Overview

Unlike hardrock or evaporation mining, DLE does not require major disturbance of land, and has a much smaller physical footprint, so it is touted as a more environmentally friendly approach to lithium extraction (Stringfellow & Dobson, 2021). Based on the proposals at the Salton Sea to date, ion exchange in combination with adsorption are the most likely DLE technologies that will be deployed. Ion exchange technology uses a material designed to attract cations (positively charged particles) or anions (negatively charged particles). Attached selected ions are then removed, using a solvent, acid, or other transfer fluid.

Ion exchange itself is not a recent technology, but it has never been used to remove lithium from geothermal brine at commercial scales.

A familiar example of this is a water softener, which removes calcium and magnesium from water. Calcium and magnesium-rich water are passed through a “bed” that contains ion exchange resin beads which are charged with sodium ions. Calcium and magnesium replace the sodium attached to the ion exchange beads, releasing the sodium into the water.

The major difference between ion exchange used for a water softener and for lithium extraction is that the ion exchange beads need to be highly selective to lithium. The makeup of these lithium-attracting materials is generally patented and proprietary, but they would follow the same general principle (Stringfellow & Dobson, 2021). Once attached to this ion exchange bead, the lithium would be removed using an acid or base, most likely hydrochloric acid. The lithium is then transferred for further processing and filtration. The benefit of ion exchange technology is the way it selectively collects lithium, allowing anything unused to be directly disposed into the geothermal reservoir when the brine is reinjected.

Ion exchange itself is not a recent technology, but it has never been used to remove lithium from geothermal brine at commercial scales. An important application of ion exchange technologies to lithium extraction is the implementation of ion sieve technology. Ion sieves function in the same way as ion exchange beads. The major difference is the special material used to attract the lithium forms a structure that only accepts particles of a specific size or smaller (Weng et al., 2020). A simple diagram of DLE from geothermal brine is shown in Figure 9 (Stringfellow & Dobson, 2021).

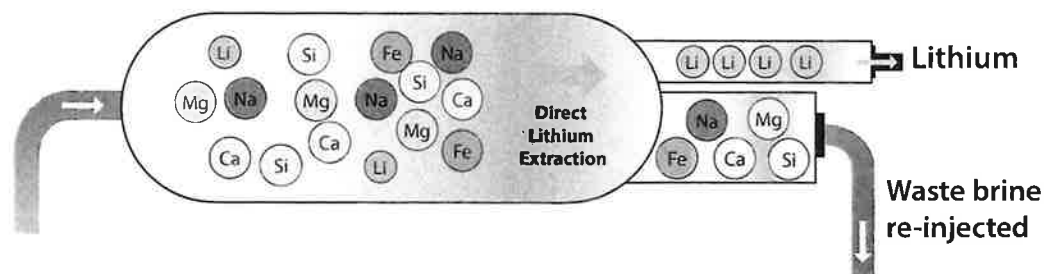


FIGURE 9: Direct lithium extraction from geothermal brine.

Adapted from Stringfellow & Dobson 2021.

Direct Lithium Extraction Proposals at the Salton Sea

Starting in 2008, Simbol Inc. in partnership with EnergySource operated multiple pilot-scale experiments at the John L. Featherstone (Hudson Ranch I) Power Plant (Harrison, 2014). The project, funded by the U.S. Department of Energy and the California Energy Commission, ceased in 2016 due to Simbol's financial troubles and a failed acquisition deal with Tesla (Roth, 2017). This, in turn, has resulted in a prolonged dispute over lithium extraction patents (Scott, 2021).

As of June 2023, there are three companies at various stages of developing lithium extraction projects near the Salton Sea:

- 1 BERKSHIRE HATHAWAY ENERGY RENEWABLES MINERALS (BHER MINERALS)** wholly owned subsidiary CalEnergy operates 10 geothermal power plants in the SSKGRA. BHER Minerals started a one-tenth scale lithium demonstration project at one of their plants in 2022. According to California Environmental Quality Act (CEQA) documents, BHER planned to use ion exchange technology developed by Lilac Solutions (California Energy Commission, 2020). They are also building a demonstration plant to process lithium chloride into battery grade compounds (Scheyder, 2022). Depending on the results of these demonstrations, BHER will consider building commercial-scale DLE plants at existing, and possibly new, geothermal facilities. BHER is proposing to build three new geothermal plants: Black Rock (77 MW), Elmore North (140 MW), and Morton Bay (140 MW). These proposals do not currently include plans for lithium extraction, but such plans may be added in the future.
- 2 CONTROLLED THERMAL RESOURCES (CTR)** is proposing to build a new geothermal power plant, combined with a DLE plant, in a project called "Hell's Kitchen." An Initial Study & Environmental Analysis was completed in March 2022, finding potentially significant impacts that need to be analyzed in an Environmental Impact Report (EIR). A draft EIR was published in August 2023. Previously, CTR had planned to use Lilac Solution's ion exchange technology, but Lilac pulled out due to concerns about how their technology would be able to handle the hot, corrosive brine (Ohnsman, 2022). CTR has said they are moving forward with adsorption rather than ion exchange technology (Controlled Thermal Resources, 2022b). While often used in combination, adsorption relies on a physical separation of lithium rather than depending on exchange of charged particles. According to media reports, CTR is now partnering with Koch Separation Solutions, a subsidiary of Koch Industries, for its DLE technology (Scheyder, 2022). On its website, Koch Separation Solutions describes its Li-Pro DLE technology as using adsorption beds to extract lithium, requiring fewer chemical and water inputs than other methods (Koch Separation Solutions, 2023).
- 3 ENERGYSOURCE MINERALS (ES MINERALS)** is developing Project ATLiS to extract lithium at the John L. Featherstone (Hudson Ranch 1) Power Plant. The project completed its CEQA review and received a conditional use permit from Imperial County in 2021. Aiming to be operational by 2024, ES Minerals is the furthest along of the Salton Sea DLE projects. In its EIR, ES Minerals states that the lithium extraction process is proprietary (Chambers Group, Inc., 2021). Its website states it will use their proprietary Integrated Lithium Adsorption Desorption (ILiAD) processing platform (EnergySource Minerals LLC, n.d.-b).

ES Minerals holds a patent issued in 2020 valid through 2038 for a lithium removal process that details the extraction of lithium carbonate, lithium hydroxide, zinc, and manganese from Salton Sea geothermal brines (Featherstone et al., 2020). It is likely that this patented process is the ILiAD process that ES Minerals will employ in their ATLiS project. In general, ILiAD works in three steps on geothermal brine after it generates steam in the power plant, and before reinjection.

1. Remove impurities such as iron, silica, zinc, and manganese.
2. Extract lithium chloride from the brine.
3. Convert lithium chloride to lithium carbonate or lithium hydroxide.

While the ILiAD lithium extraction process is proprietary and specific to ES Minerals, all proposed DLE projects in the SSKGRA will likely follow the same general steps.



One of the new test sites developed for lithium extraction outside of Calipatria. This site is operated by Controlled Thermal Resources (CTR).

Photo: Comité Civico del Valle



Potential Environmental Impacts

This section reviews potential impacts of DLE in Imperial Valley related to:

- Air Quality,
- Freshwater Consumption,
- Salton Sea Degradation,
- Hazardous Waste and Materials, and
- Seismicity.

It draws on the general scientific literature, proceedings of the Lithium Valley Commission, and also information about specific projects from CEQA documents.

Air Quality

Imperial Valley has degraded air quality that is negatively impacting human health. Recently, air quality in Imperial Valley has exceeded Clean Air Act standards for Ozone, PM_{2.5} (particulate matter smaller than 2.5 microns), and PM₁₀ (particulate matter smaller than 10 microns) (California Air Resources Board, 2022). Exposure to PM₁₀ and PM_{2.5} has been linked to a variety of health problems including asthma, chronic coughing, difficulty breathing, irregular heartbeat, heart attacks, and premature death for those with heart and lung disease (U.S. EPA, 2016).

Lithium extraction is anticipated to have some direct impacts to air quality, though it is not likely to meet legal thresholds that require mitigation. Of the lithium projects under development while this report was being written, only ES Minerals had published an EIR, which can be used as an example to better understand the potential impacts to air quality.

The ES Minerals EIR estimates that the project will average 16,650.91 metric tons of carbon dioxide equivalent per year. These emissions will likely be front-loaded due to construction, which are averaged over the 30-year projected lifetime of the project. These are below thresholds defined by the U.S. Environmental Protection Agency (25,000 metric tons/year) and Imperial County Air Pollution Control District (ICAPCD) (20,000 metric tons/year). This means there is no mitigation required under those regulations. Even so, estimated emissions make up 83% of the permissible emissions without mitigation, and have an impact on global climate change, which must be considered.

Imperial Valley has degraded air quality that is negatively impacting human health. Recently, air quality in Imperial Valley has exceeded Clean Air Act standards for Ozone, PM_{2.5} (particulate matter smaller than 2.5 microns), and PM₁₀ (particulate matter smaller than 10 microns).

ES Minerals will use hydrochloric acid (HCl), injecting it into the brine as part of the mineral extraction process, which could lead to hazardous air emissions. HCl is a gas under normal temperatures, and the acid is a result of dissolving this gas in water. Thus, industrial grade HCl commonly releases hydrogen chloride gas. ES Minerals estimates it will release 7,440 pounds per year of HCl aerosols. This is below the 10,000 pounds per year threshold for reporting requirements under Section 313 of the Emergency Planning and Community Right-to-Know Act of 1986. However, according to the EIR, exposure to



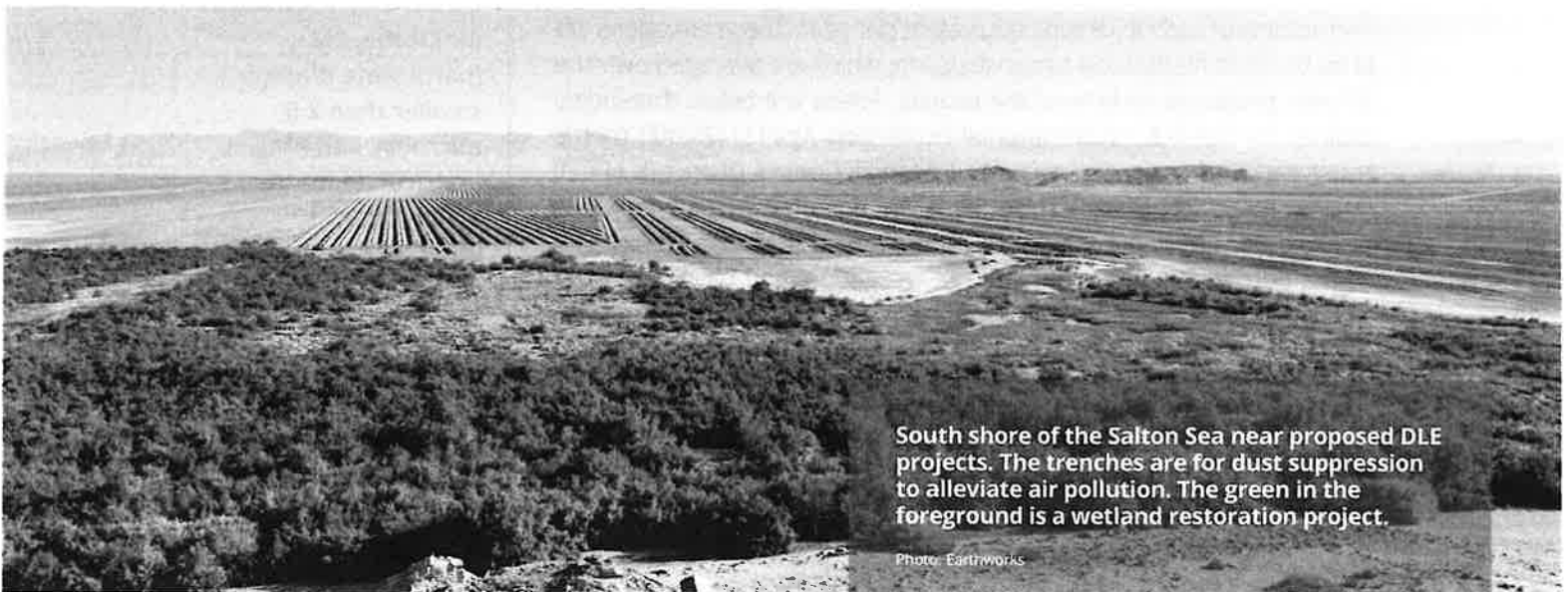
HCl can cause a range of health impacts, including difficulty breathing. It is likely that other lithium projects will also use HCl. For example, CTR states in its initial study that it will use HCl as part of a process to manage silica in the brine to prevent scaling (County of Imperial Planning & Development Services Department, 2022).

Lithium facilities will also impact air quality through day-to-day operations. For example, the ES Minerals facility will require an estimated 179 vehicle trips in and out of the plant per day during normal operations, contributing to air emissions. The model used in the ES Minerals EIR assumes that all roads for operational processes and work commuting to the site will be paved at the time of operation. However, these roads are not currently paved, and there may be additional air quality impacts from road construction or vehicle trips on unpaved roads.

Lithium production can avoid major direct impacts on air quality by limiting exposure of brine, lithium, and waste solids to wind. ES Minerals has stated they are enclosing much of their system and implementing filter processes for lithium handling and processing to avoid these impacts. However, special attention should be given to any project proposal that contains mention of exterior storage of waste materials, finished products, evaporation ponds, and brine storage ponds. Winds will blow across any exposed waste, picking up contaminants, transporting them across the valley, and exposing surrounding communities and the environment to those wind-blown contaminants.

While the estimated air emissions from ES Minerals are below thresholds for significant impact on air quality, they are close to those thresholds. Expansion of the lithium industry may have a significant additive impact on the already poor air quality in the region. The cumulative impacts on air quality from lithium extraction should also be analyzed in conjunction with potential impacts from other aspects of the lithium supply chain, such as proposed battery manufacturing in the region.

The cumulative impacts on air quality from lithium extraction should also be analyzed in conjunction with potential impacts from other aspects of the lithium supply chain, such as proposed battery manufacturing in the region.



South shore of the Salton Sea near proposed DLE projects. The trenches are for dust suppression to alleviate air pollution. The green in the foreground is a wetland restoration project.

Photo: Earthworks



Water Consumption

Freshwater is required for geothermal power plants. Water pulled from the geothermal brine is reinjected back into the reservoir with small losses from transport and cooling. Often, make-up water from other sources is injected into the aquifer to limit the amount of water loss in the geothermal reservoir and prevent subsidence.

Adding DLE will consume additional freshwater as part of the lithium separation process. It is difficult to predict exactly how much water Imperial Valley DLE projects will require when they reach commercial scale, but we can estimate based on what each company has stated:

- ES Minerals estimates in its EIR that operations will consume 3,400 acre-feet of water to produce 19,000 metric tons of lithium hydroxide per year over a lifetime of 30 years (Chambers Group, Inc., 2021).
- CTR estimates in its initial study that their Hell's Kitchen project will consume 6,700 acre-feet of water per year to produce 25,000 metric tons of lithium hydroxide per year (County of Imperial Planning & Development Services Department, 2022).
- BHER has not yet estimated water consumption in environmental planning documents. However, they have stated to the Lithium Valley Commission that they plan to limit freshwater usage to 50,000 gallons per metric ton of lithium carbonate equivalent (Paz et al., 2022).

For reference, an acre-foot of water is about the amount of water it would take to flood a football field (roughly one acre in size) one foot deep. An average household in California uses ½–1 acre-foot of water per year (Water Education Foundation, 2020). For comparison, growing one acre of alfalfa in Imperial Valley can use as much as 10 acre-feet of water per year (Bland, 2023).

TABLE 1: Estimated freshwater consumption of Imperial Valley direct lithium extraction projects.

Project	Metric tons of lithium hydroxide produced / year ¹	Metric tons of LCE produced / year ²	Acre-feet of water / year	Acre-feet water / metric ton of LCE	Gallons of water / metric ton of LCE	m ³ of water / metric ton of LCE
BHER Minerals³	Unknown	Unknown	Unknown	0.15	50,000	189
ES Minerals	19,000	16,720	3,400	0.20	65,170	247
CTR	25,000	22,000	6,700	0.30	97,755	370

¹Both CTR and ES Minerals estimate their lithium production in terms of metric tons of lithium hydroxide. After extraction and refining, this is the final battery grade compound that will be sold to a buyer.

²To convert lithium hydroxide to lithium carbonate equivalent (LCE), the industry standard, you multiply by a factor of .880 (see <https://casetext.com/statute/california-codes/california-revenue-and-taxation-code/division-2-other-taxes/part-25-lithium-extraction-tax-law/chapter-2-the-lithium-extraction-excise-tax/section-47015-conversion-to-to-lithium-carbonate-equivalent>).

³BHER's estimate of freshwater consumption is from testimony to the Lithium Valley Commission, not from environmental analysis of a DLE project. This estimate may change in the future. As of 2023, BHER is demonstrating lithium extraction at one-tenth scale, and has not proposed commercial-scale extraction. No information is available on how much lithium BHER would produce per year at commercial scales in the future.

Note that these estimates only account for operation of lithium extraction facilities, not construction, or other steps of the lithium refining and battery production process. The majority of this water would be provided by canals managed by the IID. Some projects may use steam condensate from the geothermal process to help meet freshwater needs for lithium extraction. However, this may end up requiring additional make-up water (McKibben, 2023).

As the lithium industry in Imperial Valley expands, it may be limited by water supply. IID manages an entitlement of 3.1-million-acre feet of Colorado River water for Imperial Valley, 97% of which is used for agriculture (Imperial Irrigation District, 2023). IID has reserved up to 25,000-acre feet of water per year for non-agricultural use, which would supply proposed lithium projects. If the ES Minerals project is used as a best guess for water use, this IID allocation could support 100,200 metric tons of LCE production per year. According to the Lithium Valley Commission, proposed lithium production is projected to reach 210,000 metric tons of LCE per year, meaning water demand would exceed available non-agricultural supply as currently planned by IID (Paz et al., 2022).

According to the Lithium Valley Commission, proposed lithium production is projected to reach 210,000 metric tons of LCE per year, meaning water demand would exceed available non-agricultural supply as currently planned by the Imperial Irrigation District.

Addressing questions around water consumption is especially urgent given the impact of climate change on Colorado River water supplies. Drought, over-allocation of water resources, and historically low water levels in critical reservoirs (Lake Mead and Lake Powell) will result in re-adjusted water allocation in the near and long-term for Imperial Valley. In 2022 the Bureau of Reclamation called for cutting 2–4 million acre-feet of Colorado River water use (Short and Long Term Solutions to Extreme Drought in the Western United States, 2022). As of May 2023, California has agreed to conserve 1.6 million acre-feet by 2026, the majority of which would come from Imperial Valley (Wilson, 2023). Further cuts will likely be necessary in the future.

Proponents of DLE projects in Imperial Valley often make favorable comparisons about water consumption to lithium evaporation facilities in South America:

- BHER told the Lithium Valley Commission it will use 90% less freshwater than what is used in South America (Paz et al., 2022).
- ES Minerals’ website shows it will deplete just a fraction of the water depleted at Chilean brine operations (EnergySource Minerals LLC, n.d.-a).
- CTR’s brochure emphasizes it uses the most environmentally-friendly lithium production process on the planet but provides no information on water consumption (Controlled Thermal Resources, 2022a).

It is difficult to verify these comparisons due to lack of transparent data from South America. However, a recent academic review found that “many DLE technologies might require larger freshwater volumes than current evaporative practices” (Vera et al., 2023). **In fact, if we look strictly at freshwater consumption, proposed DLE projects in Imperial Valley would actually consume more water than the current evaporation mining at Salar de Olaroz in Argentina, which requires an estimated 50 cubic meters per metric ton of LCE (Vera et al., 2023).**



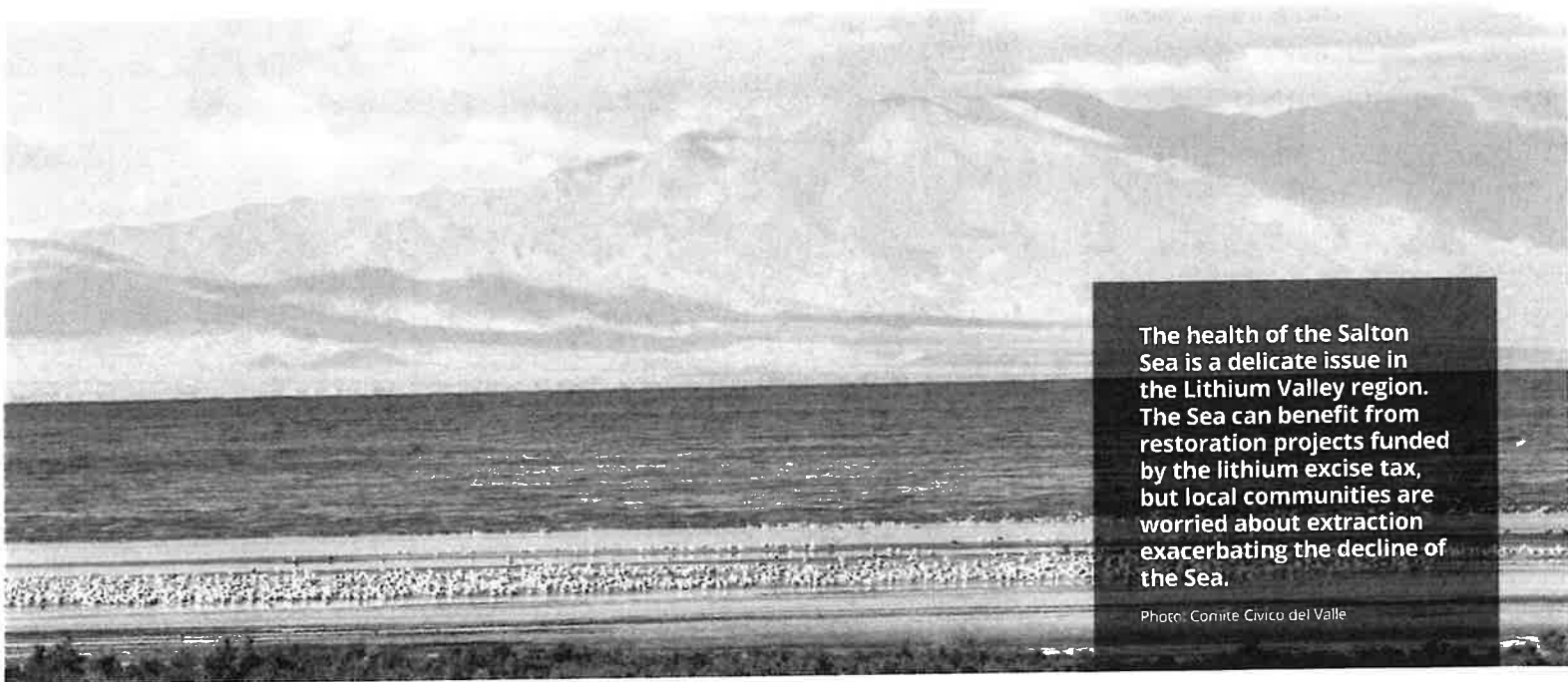
There is an ongoing debate about how much water is lost at South America lithium operations, not only due to freshwater consumption, but from brine evaporation itself, and the poorly understood interaction of brine with the freshwater aquifer. Some have estimated water lost through evaporation to be as much as 2,000 cubic meters per metric ton of LCE (Blair et al., 2022). When this is taken into account, DLE at the Salton Sea can be expected to deplete significantly less water.

No matter how direct lithium extraction compares to other types of lithium extraction, Imperial Valley will likely need to make tough decisions about how much freshwater to allocate to DLE and geothermal energy, agricultural use, and Salton Sea restoration.

Salton Sea Degradation

Freshwater consumption for lithium extraction may also have an impact on the Salton Sea. The lake we now call the Salton Sea has always been in the process of forming or disappearing, depending on when naturally occurring Colorado River floods filled the low-lying area known as the Salton Sink (Voyles, 2021). The current Salton Sea was formed in 1905, filling with Colorado River water often attributed to an accidental irrigation dam breach (Salton Sea Authority, n.d.). Due to the 2003 Quantification Settlement Agreement, which transferred water from Imperial Irrigation District to San Diego, the Salton Sea has been rapidly shrinking (Foruzan, n.d.). The Salton Sea currently receives 1.1 million acre-feet of water per year, primarily through drainage from agricultural fields, and this will likely continue to decrease (Salton Sea Management Program, 2022). If Colorado River water is diverted from agriculture to lithium extraction, this would contribute to the shrinking of the sea.

Freshwater consumption for lithium may also limit Salton Sea restoration options, such as the voluntary transfer of Colorado River water to the sea by incentivizing fallowed agricultural fields (Suri et al., 2022). It is also important to note that CTR holds mineral leases beyond the current shoreline, meaning future



The health of the Salton Sea is a delicate issue in the Lithium Valley region. The Sea can benefit from restoration projects funded by the lithium excise tax, but local communities are worried about extraction exacerbating the decline of the Sea.

Photo: Comité Civico del Valle



expansion of lithium projects may, to some extent, depend on the continued shrinking of the sea (Imperial Irrigation District, 2016).

Reduced inflow to the Salton Sea would likely have an indirect impact on air quality. As previously noted, Imperial Valley already faces many natural and anthropogenic (human caused) sources of air pollution, as shown in Figure 10 (Frie et al., 2019). As the Salton Sea shrinks, exposed lake bed (playa) represents an increased threat to air quality in the valley, as shown in Figure 11 (Frie et al., 2017). Years of agricultural runoff have deposited chemicals from pesticides and fertilizers in the playa sediment, and further reduction in surface water in the Salton Sea will increase emissions from exposed playa, namely, magnesium, sulfates, calcium, and strontium. These represent potential indirect emissions from lithium extraction, which should be analyzed and mitigated in a cumulative impacts analysis.

However, it is possible that some of these impacts to the Salton Sea could be offset through restoration projects funded by California's lithium excise tax, 20% of which goes towards the Salton Sea Restoration Fund.

Some of the pollution impacts to the Salton Sea could be offset through restoration projects funded by California's lithium excise tax, 20% of which goes towards the Salton Sea Restoration Fund.

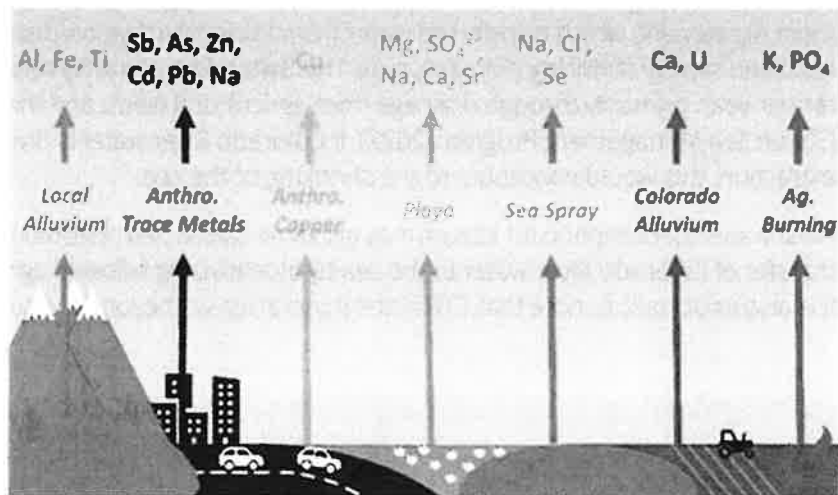


FIGURE 10: Sources of air pollution in Imperial Valley.

From Frie et al., 2019

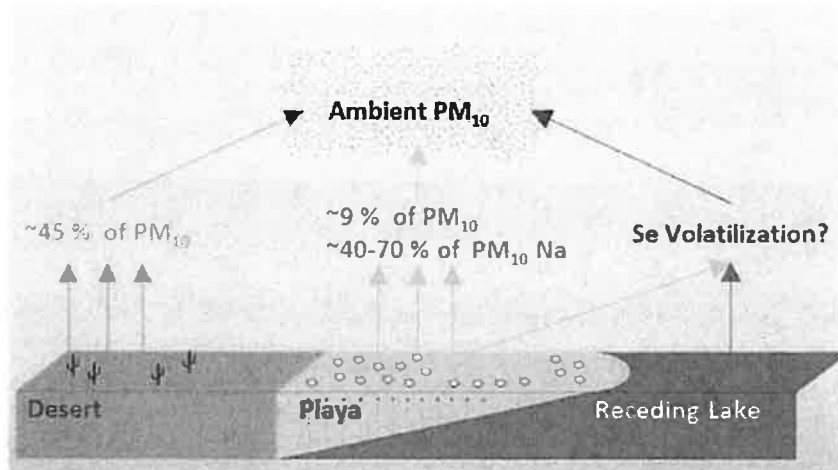


FIGURE 11: As the Salton Sea shrinks, the exposed lake bed (playa) allows contaminated dust to pollute the air with particulate pollution (PM₁₀).

From Frie et al., 2017

Hazardous Waste and Materials

Waste produced from geothermal power generation and DLE can be minimized by reinjecting spent brine deep underground back into the geothermal reservoir, in what project proponents refer to as a “closed loop.” However, some solid wastes need to be managed, including arsenic, lead, iron, and silica.

Currently, geothermal operations at the Salton Sea remove iron and silica from brine before it is reinjected to prevent clogging injection wells. Iron and silica are precipitated as solid waste on filter cakes, which may also include hazardous elements from the brine such as arsenic and lead. This solid waste is tested to determine whether it is hazardous or not. BHER sends non-hazardous waste from its 10 geothermal plants to the Desert Valley Company Monofill in Imperial Valley, roughly 15 miles west of Westmorland. The 180-acre facility accepts 750 tons of Class II non-hazardous waste per day, and was recently approved to expand its disposal capacity, extending its lifetime from 2025 to 2080 (BRG Consulting, 2021). While the majority of geothermal waste is considered non-hazardous, BHER operations have been fined for improper storage, treatment, and disposal of hazardous waste, as well as discharge of wastewater with elevated levels of lead, arsenic, and copper into the Salton Sea (Cagle, 2010).

Though solid waste is tested to determine if it is hazardous, operations have been fined for improper storage, treatment, and disposal of hazardous waste, and for discharge of wastewater with elevated levels of lead, arsenic, and copper into the Salton Sea.

The addition of lithium extraction and processing on-site at geothermal plants will introduce other waste and hazardous materials.

While waste products from each DLE project will be different, the ES Minerals project can be used to better understand potential impacts. Five waste streams are identified in the ES Minerals ATLiS project EIR and associated patent:

- 1. Iron (Fe) / Silica (Si) filter cake** — The Fe/Si filter cake is currently produced as part of the flash steam process and clarification (primary and secondary) of the geothermal brine. This occurs independent of lithium extraction and is a necessary step to prevent scaling and maintain power plant equipment. The Fe/Si filter cake can also contain arsenic, barium, and lead, which are harmful to human health.
- 2. Calcium (Ca) / Magnesium (Mg) filter cake** — The Ca/Mg filter cake would be added as part of the process of lithium extraction. Calcium and magnesium represent a major part of the dissolved minerals in the Salton Sea geothermal brine and must be removed as part of the lithium extraction process. This is done using caustic soda (sodium hydroxide) to remove calcium and magnesium which are filtered out as hydroxides. The fate of this waste is not explicitly stated. Calcium and magnesium hydroxides can be a source of water pollution impacting pH and water hardness.
- 3. Boron Ion Exchange** — Boron (B) is removed using ion exchange. The resulting waste is cycled back through the Ca/Mg precipitation process and the countercurrent ion exchange. However, the fate of the boron waste is not specified. In high concentrations boron can be toxic to plants and animals.
- 4. Manganese (Mn) / Zinc (Zn) filter cake** — The Magnesium and zinc filter cake is related to the mineral extraction process and may or may not be a waste stream. Magnesium and zinc can be separated from the brine, but during the process, there are removals of other unidentified “impurities” that need to be accounted for.



5. Residual Brine — Residual brine is currently a waste stream of geothermal energy exploitation, but its composition would be modified with the addition of lithium extraction to the process. The residual brine would be reinjected into the geothermal reservoir.

ES Minerals plans to minimize waste by selling the Iron/Silica and Magnesium/Zinc byproducts to third-party buyers for other industrial processes. However, it is not clear if they currently have a feasible market for these products. If not sold, they will have to be managed as waste.

Some of these waste streams will contain hazardous materials. The ES Minerals EIR states that it will test materials before disposal and any hazardous materials will be disposed of at the appropriate disposal sites. They expect 90% of their waste (37,602 cubic yards) to be disposed of at the Burrtec non-hazardous landfill in Salton City. The hazardous remaining 10% (4,178 cubic yards) would be disposed of at the Copper Mountain Landfill in Wellton, Arizona. If the waste does not meet Arizona standards, it will be disposed of at an unspecified site in Nevada.

Recently, California has been criticized by environmental justice advocates for the practice of transporting hazardous waste to dump in non-hazardous facilities in states with lower standards, such as Arizona (Lewis, 2023). Greater waste transportation distances should also be factored into emissions accounting. Published values of the filter cake mineral concentrations and totals should be available and easily accessible to the public.

Waste streams from the other DLE projects will likely be similar to ES Minerals, but will require their own analysis. The Salton Sea geothermal brine contains a wide range of elements. Until waste stream concentrations and total mass are published by companies or regulatory agencies, it should be assumed that any one of these constituents could be found in the waste stream. In theory, the dissolved minerals would be reinjected back into the geothermal reservoir, and certain processes (crystallizers, clarifiers, and refining) would create solid wastes. While most of the minerals are not a direct threat to human health when dissolved in the geothermal brine, the extraction and refining processes could increase the concentration levels.

The concentrations of heavy metals such as arsenic, lead, and cadmium are of particular concern, as well as any naturally occurring radioactive materials.

The concentrations of heavy metals such as arsenic, lead, and cadmium are of particular concern, as well as any naturally occurring radioactive materials. Naturally occurring radioactive minerals do exist at low levels in the SSKGRA (Finster et al., 2015). The ES Minerals patent refers to a process for preventing the precipitation of radioactive earth metal salts (Featherstone et al., 2020). While this process is expected to continue, the addition of the Ca/Mg precipitation (both alkaline earth metals) may cause other alkaline earth metals to precipitate as they chemically react in ways similar to Ca/Mg. This is a theoretical risk pathway that has not been fully explored but could pose a risk primarily to plant, transportation, and disposal workers who work closely with this waste material for extended periods. This risk should be monitored and mitigated if lithium extraction moves forward.

In addition to waste streams, DLE projects will use other hazardous materials in the process, such as organic solvents and sulfuric acid. Industrial complexes can work with and responsibly manage hazardous wastes and materials, but transparency and accountability are essential.

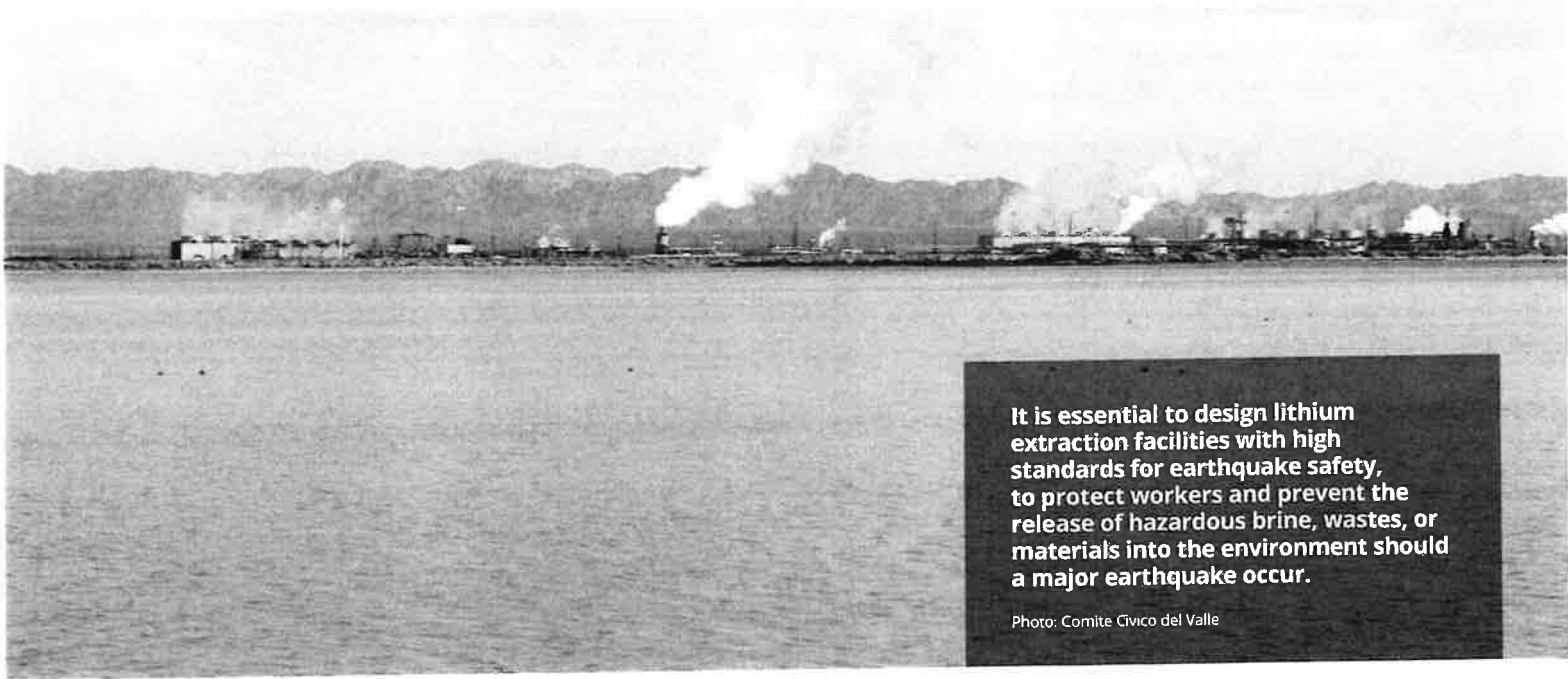


Seismic Activity

DLE from geothermal brine using current technologies, according to the best available science, will not directly affect seismic activity. However, successful lithium extraction may make geothermal power more profitable, leading to an expansion of geothermal wells throughout the SSKGRA. If drilling and maintenance of additional wells uses EGS, then it may have an impact on seismic activity. The science behind seismic risk assessment of geothermal exploitation is growing and improving, but there is still uncertainty and disagreement among scientists about the actual hazards and risks associated with EGS.

Evidence supports the theory that EGS increases the frequency of earthquakes lower than magnitude 4, also known as microquakes (Majer et al., 2007). There is emerging evidence that EGS-induced microquakes can actually reduce overall seismic risk by helping to release shear stress on the fault, thus reducing the number of high-magnitude earthquakes (Im & Avouac, 2021). There is also some evidence showing that EGS can cause earthquakes up to magnitude 5.5 with the potential for larger earthquakes (Woo et al., 2019). However, **EGS and geothermal exploitation occur** in areas that **are already** prone to earthquakes. Regardless of **geothermal exploration**, the areas **are** already at risk of earthquakes, and proximity to major faults will still be the major risk factor, with or without EGS.

Geothermal power plants have been operating safely in Imperial Valley for more than 40 years. While the exact impact of geothermal exploitation on inducing seismic activity requires more research, it is important to put this in context. Imperial Valley is currently living with a risk of major earthquakes given its proximity to the San Andreas Fault, and this risk is present with or without new lithium extraction and geothermal energy. This means it will be essential to design lithium extraction facilities with high standards for earthquake safety, to protect workers and prevent the release of hazardous brine, wastes, or materials into the environment should a major earthquake occur.



It is essential to design lithium extraction facilities with high standards for earthquake safety, to protect workers and prevent the release of hazardous brine, wastes, or materials into the environment should a major earthquake occur.

Photo: Comité Cívico del Valle



Conclusion

The potential environmental impacts of DLE from geothermal brine in Imperial Valley reviewed in this report may prove to be less detrimental than traditional hardrock and evaporative lithium extraction processes. However, there are still potential adverse impacts that should be avoided and mitigated.

- 1 Air pollution from direct lithium extraction will likely be below legal thresholds, but cumulative impacts still need to be addressed to protect public health.**
- 2 Freshwater consumption may be a limiting factor on the lithium industry, and contribute to Salton Sea degradation and poor air quality from the exposed lake bed.**
- 3 Hazardous and non-hazardous solid wastes need to be managed properly.**
- 4 Facilities should be designed with high standards for seismic safety.**

Poor air quality already poses a health risk to the community and the release of additional pollutants should be addressed within this context. While emissions of air pollutants from DLE are likely to be below legal thresholds of significance that require mitigation, they may approach these thresholds. Emissions should be continually monitored, and air quality plans should be adapted as needed to protect public health. Of particular concern will be monitoring the cumulative impacts to air quality of building out the entirety of "Lithium Valley," including not just construction and operation of geothermal lithium extraction facilities but also vehicle trips, battery plants, and other associated infrastructure.

DLE and new geothermal power plants will consume significant amounts of freshwater, and the growth of the industry may be limited by availability of Colorado River water. If water is prioritized for lithium development instead of agriculture or Salton Sea restoration, this could lead to an indirect effect on air quality by speeding up the shrinking of the Sea and leading to an increase in airborne playa dust, which is harmful to human health. Given the impacts of climate change, it will be important for Imperial County and Imperial Irrigation District to plan for a future of reduced Colorado River use, and the trade-offs involved in how water is allocated should be carefully considered.

DLE projects may minimize waste by reinjecting spent brine into the geothermal reservoir and successfully marketing other brine components, such as silica, manganese, and zinc. However, both hazardous and non-hazardous solid wastes will be produced that need to be managed properly. Measures should be taken to prevent spills and contamination. Waste contents should be monitored closely, and the practice of transporting hazardous waste out of state scrutinized from an environmental justice perspective.

DLE projects are unlikely to have a direct impact on seismic activity. However, if new geothermal wells are drilled using EGS, that may have an effect on inducing seismicity that requires further study and regulation. Imperial Valley is already living with a significant risk of earthquakes, and so facilities should be designed with high standards for seismic safety.

For far too long, the Salton Sea has been written off as an unsolvable disaster, with Imperial Valley as a perpetual sacrifice zone. This cannot be the case moving forward.



To address climate change, we must transition as quickly as possible to renewable energy. But in order to achieve a just and equitable energy transition, we cannot create new sacrifice zones for lithium mining.

Past harms must be remedied, Indigenous communities' right to FPIC respected, and frontline communities must have a seat at the decision-making table, and receive benefits, rather than continued harm, from any new development.

Policies to boost recycling of lithium and require smaller battery size can help reduce the burden on mining-impacted communities. Where new lithium extraction does occur, we have an opportunity to avoid repeating the harms of the past, and instead meet the highest standards for human rights and environmental protection. Imperial Valley has an opportunity to be a leader by pursuing DLE with due diligence, responsibly heeding the concerns of frontline communities, and ensuring they equitably benefit from this transition.



Photo: Comité Ciudadano del Valle



References

- Arrow-Weed, P. J. (2022, July 26). *Letter to Lithium Valley Commission from AhMut Pipa Foundation*. <https://efiling.energy.ca.gov/Lists/DocketLog.aspx?docketnumber=20-LITHIUM-01>
- Blair, J. J. A., Balcázar, R. M., Barandiarán, J., & Maxwell, A. (2022). *Exhausted: How we can stop lithium mining from depleting water resources, draining wetlands, and harming communities in South America*. (R: 21-10-A). Natural Resources Defense Council. <https://www.nrdc.org/resources/exhausted-how-we-can-stop-lithium-mining-depleting-water-resources-draining-wetlands-and>
- Bland, A. (2023, January 17). Growers brace to give up some Colorado River water. *CalMatters*. <http://calmatters.org/environment/2023/01/colorado-river-water/>
- Block, S. (2021). *Mining Energy-Transition Metals: National Aims, Local Conflicts*. <https://www.msci.com/www/blog-posts/mining-energy-transition-metals/02531033947>
- Bradley, D. C., Stillings, L. L., Jaskula, B. W., Munk, L., & McCauley, A. D. (2017). Lithium. In *Lithium* (USGS Numbered Series 1802-K; Professional Paper, Vols. 1802-K, p. 34). U.S. Geological Survey. <https://doi.org/10.3133/pp1802K>
- BRG Consulting. (2021). *Draft Environmental Impact Report Vol. 1 Desert Valley Company Monofill Expansion Project, Cell 4*.
- Bridge, G., & Faigen, E. (2022). Towards the lithium-ion battery production network: Thinking beyond mineral supply chains. *Energy Research & Social Science*, 89, 102659. <https://doi.org/10.1016/j.erss.2022.102659>
- Cagle, F. (2010). Geothermal Power in Imperial Valley. *Desert Report*.
- California Air Resources Board. (2022). *Imperial County Air Quality Plans*. <https://ww2.arb.ca.gov/our-work/programs/california-state-implementation-plans/nonattainment-area-plans/imperial-county>
- California Energy Commission. (2020). *Notice of Exemption: Salton Sea Geothermal Lithium Recovery Demonstration Project*.
- California State Lands Commission. (n.d.). *Geothermal Energy*. Retrieved January 31, 2023, from <https://www.slc.ca.gov/renewable-energy/geothermal-energy/>
- Chambers Group, Inc. (2021). *Draft Environmental Impact Report for the Energy Source Mineral ATLiS Project*.
- Chao. (2022, February 16). Quantifying California's Lithium Valley: Can It Power Our EV Revolution? *News from Berkeley Lab*. <https://newscenter.lbl.gov/2022/02/16/quantifying-californias-lithium-valley-can-it-power-our-ev-revolution/>
- Chao, J. (2020, August 6). Geothermal Brines Could Propel California's Green Economy. *Berkeley Lab Energy Technologies Area*. <https://eta.lbl.gov/news/geothermal-brines-could-propel>
- Controlled Thermal Resources. (2022a). *Lithium + Renewable Energy powerfully combined*. https://static1.squarespace.com/static/5bbc837993a6324308c97e9c/t/651a1e606ce64165830e716d/1696210536239/CTR+Brochure_September+2023.pdf
- Controlled Thermal Resources. (2022b, October 10). *CTR Q3 Update*. <https://www.cthermal.com/latest-news/ctr-q3-update>
- County of Imperial Planning & Development Services Department. (2022). *Initial Study & Environmental Analysis For: Hell's Kitchen PowerCo 1 and LithiumCo 1 Project*.



- DiPippo, R., & Lippmann, M. (2017). The Shrinking Salton Sea and its Impact on Geothermal Development. *GRC Bulletin*.
- Dominish, E., Florin, N., & Teske, S. (2019). *Responsible Minerals Sourcing for Renewable Energy*. Institute for Sustainable Futures, University of Technology Sydney.
- Dominish, E., Florin, N., & Wakefield-Rann, R. (2021). *Reducing new mining for electric vehicle battery metals: Responsible sourcing through demand reduction strategies and recycling*. Institute for Sustainable Futures, University of Technology Sydney.
- Earthworks. (2021a). *Recharge Responsibly: The Environmental and Social Footprint of Mining Cobalt, Lithium, and Nickel for Electric Vehicle Batteries*. <https://earthworks.org/resources/recharge-responsibly/>
- Earthworks. (2021b). *Just Minerals: Safeguarding Protections for Community Rights, Sacred Places, and Public Lands from the Unfounded Push for Mining Expansion*. <https://earthworks.org/resources/just-minerals/>
- EnergySource Minerals LLC. (n.d.-a). ATLiS. EnergySourceMinerals. Retrieved May 4, 2023, from <https://www.esminerals.com/atlis>
- EnergySource Minerals LLC. (n.d.-b). ILiAD. EnergySourceMinerals. Retrieved April 24, 2023, from <https://www.esminerals.com/iliad>
- Evarts, E. C. (2015). Lithium batteries: To the limits of lithium. *Nature*, 526(7575), Article 7575. <https://doi.org/10.1038/526S93a>
- Farzan, S. F., Razafy, M., Eckel, S. P., Olmedo, L., Bejarano, E., & Johnston, J. E. (2019). Assessment of Respiratory Health Symptoms and Asthma in Children near a Drying Saline Lake. *International Journal of Environmental Research and Public Health*, 16(20), Article 20. <https://doi.org/10.3390/ijerph16203828>
- Featherstone, J. L., Hanson, P. J., Garska, M. J., & Marston, C. R. (2020). *Process for Recovery of Lithium From a Geothermal Brine* (Patent US20200189925A1).
- Finster, M., Clark, C., Schroeder, J., & Martino, L. (2015). Geothermal produced fluids: Characteristics, treatment technologies, and management options. *Renewable and Sustainable Energy Reviews*, 50, 952–966. <https://doi.org/10.1016/j.rser.2015.05.059>
- Foruzan, S. (n.d.). *Exposing the Desert: Environmental justice in California's Desert Wetland*. ArcGIS StoryMaps. Retrieved March 30, 2023, from <https://storymaps.arcgis.com/stories/b0eafb481a3a48c7943fa4164ebfaadf>
- Frie, A. L., Dingle, J. H., Ying, S. C., & Bahreini, R. (2017). The Effect of a Receding Saline Lake (The Salton Sea) on Airborne Particulate Matter Composition. *Environmental Science & Technology*, 51(15), 8283–8292. <https://doi.org/10.1021/acs.est.7b01773>
- Frie, A. L., Garrison, A. C., Schaefer, M. V., Bates, S. M., Botthoff, J., Maltz, M., Ying, S. C., Lyons, T., Allen, M. F., Aronson, E., & Bahreini, R. (2019). Dust Sources in the Salton Sea Basin: A Clear Case of an Anthropogenically Impacted Dust Budget. *Environmental Science & Technology*, 53(16), 9378–9388. <https://doi.org/10.1021/acs.est.9b02137>
- Gates, T., & Crawford, C. (2010). *Ethnographic Assessment of the Importance of Obsidian Butte to the Native American Community, Imperial County, California*. California Energy Commission.
- Geothermal Technologies Office. (n.d.). *Electricity Generation*. Energy.Gov. Retrieved January 31, 2023, from <https://www.energy.gov/eere/geothermal/electricity-generation>



- Harrison, S. (2014). *Technologies for Extracting Valuable Metals and Compounds from Geothermal Fluids* (Grant Report DE-EE0002790). Department of Energy Geothermal Technologies Program. <https://www.osti.gov/servlets/purl/1171706>
- Im, K., & Avouac, J.-P. (2021). On the role of thermal stress and fluid pressure in triggering seismic and aseismic faulting at the Brawley Geothermal Field, California. *Geothermics*, 97, 102238. <https://doi.org/10.1016/j.geothermics.2021.102238>
- Imperial Irrigation District. (2016). *Geothermal and Mineral Lease to Controlled Thermal Resources*. https://imperialid.granicus.com/MetaViewer.php?view_id=9&clip_id=155&meta_id=14883
- Imperial Irrigation District. (2023). *Water*. <https://www.iid.com/water>
- Kesler, S. E., Gruber, P. W., Medina, P. A., Keoleian, G. A., Everson, M. P., & Wallington, T. J. (2012). Global lithium resources: Relative importance of pegmatite, brine and other deposits. *Ore Geology Reviews*, 48, 55–69. <https://doi.org/10.1016/j.oregeorev.2012.05.006>
- Koch Separation Solutions. (2023). *Li-PRO™ Lithium Extraction*. Koch Separation Solutions. <https://www.kochseparation.com/technologies/ion-exchange/li-pro-lithium-extraction/>
- Lewis, R. (2023, January 25). California Toxics: Out of state, out of mind. *CalMatters*. <http://calmatters.org/environment/2023/01/california-toxic-waste-dumped-arizona-utah/>
- Lucas, C. (2022, September 21). *Kwaaymii Laguna Band of Indians Comments on the Draft Report of the Blue Ribbon Commission on Lithium Extraction in California*. <https://efiling.energy.ca.gov/Lists/DocketLog.aspx?docketnumber=20-LITHIUM-01>
- Majer, E. L., Baria, R., Stark, M., Oates, S., Bommer, J., Smith, B., & Asanuma, H. (2007). Induced seismicity associated with Enhanced Geothermal Systems. *Geothermics*, 36(3), 185–222. <https://doi.org/10.1016/j.geothermics.2007.03.003>
- McKibben, M. (2023, March 2). *The Promise and Challenges of Geothermal Lithium*. <https://lirric.lbl.gov/2023/03/march-15-michael-mckibben-usriverside/>
- McKibben, M., Elders, W., & Raju, A. S. (2021). Lithium and Other Geothermal Mineral and Energy Resources Beneath the Salton Sea. In *Crisis at the Salton Sea: The vital role of science* (pp. 74–85).
- Munk, L., Hynek, S., Bradley, D. C., Boutt, D., Labay, K. A., & Jochens, H. (2016). *Lithium brines: A global perspective*. 18, 339–365. <https://doi.org/10.5382/Rev.18.14>
- National Renewable Energy Laboratory. (n.d.). *Sedimentary and Enhanced Geothermal Systems*. Retrieved September 28, 2023, from <https://www.nrel.gov/geothermal/sedimentary-egs.html>
- Ohnsman, A. (2022, August 31). California's Lithium Rush For EV Batteries Hinges On Taming Toxic, Volcanic Brine. *Forbes*. <https://www.forbes.com/sites/alanohnsman/2022/08/31/californias-lithium-rush-electric-vehicles-salton-sea/>
- Owen, J. R., Kemp, D., Lechner, A. M., Harris, J., Zhang, R., & Lèbre, É. (2022). Energy transition minerals and their intersection with land-connected peoples. *Nature Sustainability*, 1–9. <https://doi.org/10.1038/s41893-022-00994-6>
- Paz, S., Kelley, R., Castaneda, S., Colwell, R., Dolega, R., Flores, M., Hanks, J., Lopez, A., Olmedo, L., Reynolds, A., Scott, M., Soto, T., & Weisgall, J. (2022). *Report of the Blue Ribbon Commission on Lithium Extraction in California* (CEC-300-2022-009-F). California Energy Commission.
- Riofrancos, T. (2023). The Security–Sustainability Nexus: Lithium Onshoring in the Global North. *Global Environmental Politics*, 23(1), 20–41. https://doi.org/10.1162/glep_a_00668



- Riofrancos, T., Kendall, A., Dayemo, K. K., Haugen, M., McDonald, K., Hassan, B., Slattery, M., & Lillehei, X. (2023). *Achieving Zero Emissions with More Mobility and Less Mining*. Climate and Community Project. <https://www.climateandcommunity.org/more-mobility-less-mining>
- Rossi, C., Bateson, L., Bayaraa, M., Butcher, A., Ford, J., & Hughes, A. (2022). Framework for Remote Sensing and Modelling of Lithium-Brine Deposit Formation. *Remote Sensing*, 14(6), Article 6. <https://doi.org/10.3390/rs14061383>
- Roth, S. (2014). At Salton Sea, geothermal hopes persist. *The Desert Sun*. <https://www.desertsun.com/story/tech/science/energy/2014/09/13/geothermal-energy-salton-sea/15613995/>
- Roth, S. (2017). Salton Sea geothermal plant would use lithium tech that caught Tesla's eye. *The Desert Sun*. <https://www.desertsun.com/story/tech/science/energy/2017/02/10/salton-sea-geothermal-plant-would-use-lithium-tech-caught-teslas-eye/97743092/>
- Salton Sea Authority. (n.d.). *History*. Retrieved May 4, 2023, from <https://saltonsea.com/get-informed/history/>
- Salton Sea Management Program. (2022). Salton Sea Long Range Plan Public Draft. California Natural Resources Agency.
- Scheyder, E. (2022, October 5). U.S. steps away from flagship lithium project with Buffett's Berkshire. Reuters. <https://www.reuters.com/markets/us/us-steps-away-flagship-lithium-project-with-berkshire-2022-10-05/>
- Scheyder, E. (2022, September 7). Standard Lithium retools operations after short seller's attacks. Reuters. <https://www.reuters.com/business/sustainable-business/standard-lithium-retools-operations-after-short-sellers-attacks-2022-09-07/>
- Scott, A. (2021). *Gnarly Brine* (Season 1 Episode 5). Retrieved February 14, 2023, from <https://www.marketplace.org/shows/how-we-survive/gnarly-brine/>
- Short and Long Term Solutions to Extreme Drought in the Western United States*. (2022). <https://www.doi.gov/ocl/western-us-drought-0>
- Stringfellow, W. T., & Dobson, P. F. (2021). Technology for the Recovery of Lithium from Geothermal Brines. *Energies*, 14(20), Article 20. <https://doi.org/10.3390/en14206805>
- Suri, R., Burgi, P., Glennon, R., Kenny, S. D., Lockwood, J., Paytan, A., & Raucher, R. (2022). *Evaluation of Water Importation Concepts for Long-Term Salton Sea Restoration* [Independent Review Panel Summary Report]. Salton Sea Management Program.
- U.S. Department of Energy. (2021). *Critical Minerals and Materials*. <https://www.energy.gov/eere/amo/doe-critical-minerals-materials-strategies>
- U.S. Energy Information Administration. (2022). Geothermal power plants. <https://www.eia.gov/energyexplained/geothermal/geothermal-power-plants.php>
- U.S. EPA. (2016, April 26). *Health and Environmental Effects of Particulate Matter (PM)* [Overviews and Factsheets]. <https://www.epa.gov/pm-pollution/health-and-environmental-effects-particulate-matter-pm>
- U.S. Geological Survey. (2022). *Mineral Commodity Summaries*. <https://pubs.usgs.gov/publication/mcs2022>
- U.S. Geological Survey. (2023). *Lithium* (Mineral Commodities Summary). <https://pubs.usgs.gov/periodicals/mcs2023/mcs2023-lithium.pdf>

- Ventura, S., Bhamidi, S., Hornbostel, M., & Nagar, A. (2020). *Selective Recovery of Lithium from Geothermal Brines* (CEC-500-2020-020). California Energy Commission.
- Vera, M. L., Torres, W. R., Galli, C. I., Chagnes, A., & Flexer, V. (2023). Environmental impact of direct lithium extraction from brines. *Nature Reviews Earth & Environment*, 4(3), 149–165. <https://doi.org/10.1038/s43017-022-00387-5>
- Voyles, T. B. (2021). *The Settler Sea: California's Salton Sea and the Consequences of Colonialism*. University of Nebraska Press.
- Water Education Foundation. (2020, June 22). *What's an Acre-foot?* Water Education Foundation. <https://www.watereducation.org/aquapedia/acre-foot>
- Weng, D., Duan, H., Hou, Y., Huo, J., Chen, L., Zhang, F., & Wang, J. (2020). Introduction of manganese based lithium-ion Sieve-A review. *Progress in Natural Science: Materials International*, 30(2), 139–152. <https://doi.org/10.1016/j.pnsc.2020.01.017>
- Wilson, J. (2023, May 22). Colorado River basin states reach historic deal on water cutbacks to stave off crisis. *The Desert Sun*. <https://www.desertsun.com/story/news/environment/2023/05/22/colorado-river-basin-states-reach-landmark-deal-on-water-cuts/70243520007/>
- Woo, J.-U., Kim, M., Sheen, D.-H., Kang, T.-S., Rhie, J., Grigoli, F., Ellsworth, W. L., & Giardini, D. (2019). An In-Depth Seismological Analysis Revealing a Causal Link Between the 2017 MW 5.5 Pohang Earthquake and EGS Project. *Journal of Geophysical Research: Solid Earth*, 124(12), 13060–13078. <https://doi.org/10.1029/2019JB018368>



Attachment D
Water Supply Assessment - Resolution

RESOLUTION NO.

A RESOLUTION OF THE BOARD OF SUPERVISORS OF THE COUNTY OF IMPERIAL, CALIFORNIA, FOR THE DENIAL OF APPEAL #23-0004 AND APPROVAL OF THE WATER SUPPLY ASSESSMENT FOR THE HELL'S KITCHEN POWER & LITHIUM PROJECT.

WHEREAS, the Hell's Kitchen Power Co. 1 LLC (Applicant) Project qualifies as a "project" under the Water Code triggering the need to prepare a Water Supply Assessment because it proposed to a demand of water equivalent to, or greater than, the amount of water required by a 500 dwelling unit project; and/or because it is a proposed industrial use occupying more than 40 acres of land. The Water Supply Assessment (WSA) has been prepared in accordance with Water Code 10912(c) (4); and,

WHEREAS, the Imperial County Board of Supervisors has the authority and responsibility for approving the WSA; and,

WHEREAS, the duty to prepare a Water Supply Assessment ("WSA") falls to the County of Imperial ("County") because Imperial Irrigation District ("IID") is not a public water system within the meaning of the Water Code 10912(c); and,

WHEREAS, the County, in consultation with an expert engineering firm and IID prepared the WSA, which includes any and all WSA addendums; and,

WHEREAS, the County has independently reviewed and considered the WSA and the entire administrative record; and,

WHEREAS, public notice of said application has been given, and the Board of Supervisors has considered evidence presented by the Imperial County Planning & Development Services Department and other interested parties at a public hearing held with respect to this item on January 23, 2024; and,

NOW THEREFORE, the Board of Supervisors of the County of Imperial **DOES HEREBY DENY APPEAL #23-0004** and **APPROVE THE WATER SUPPLY ASSESSMENT** as follows:

SECTION 1. The Board of Supervisors has considered the Hell's Kitchen Power Co. 1 LLC Project's WSA prior to making a decision for approval of the proposed WSA. The Board of Supervisors finds and determines that the WSA is adequate and prepared in accordance with the requirements of Water Code, Section 10912(c)(4). The analysis of the WSA demonstrates, that the total projected water supplies, determined to be available by the County for the Project during normal, single dry, and multiple dry water years, will meet the projected water demand associated with the proposed project and based upon the following findings and determinations:

SECTION 2. That in accordance with State Planning and Zoning law, the County Planning Commission makes the following findings for the approval of the Hell's Kitchen Power Co. 1 LLC project:

1. This Water Supply Assessment has determined that IID has adequate polices, programs and projects in place to provide water to agricultural, commercial, industrial and municipal users in the Imperial Unit. Adequate supply is currently available as well as during normal water years. Conservation plans and measures are available to reduce the probability of Supply Demand Imbalance ("SDI") from occurring. Adequate agreements, plans and policies are in place that enable the Imperial Unit water supply to be considered reliable for 20 years.
2. IID serves as the regional water supplier, importing raw Colorado River water and delivering it, untreated, to agricultural, municipal, and industrial water users within its Service Area.
3. IID is a raw water retailer and a domestic raw water wholesaler and does not supply potable drinking water.
4. This WSA has shown that IID water supply is adequate for this Project. IID's IWSP for Non-Agricultural Projects dedicates 25,000 AFY of IID's annual water supply to serve new projects.
5. As urban growth continues in Imperial County, agricultural water use may decline due to the transfer of water consumption to other land uses.
6. In the case of a SDI, IID's EDP gives water delivery priority to municipal and industrial users over agricultural users.
7. The IWSP sets aside 25,000 acre-feet per year (AFY) of IID's Colorado River water supply to serve new non-agricultural projects. To date, a balance of 19,620 AFY remains available under the IWSP ensuring reasonably sufficient supplies for such projects. The proposed Project water estimated demand is 6,500 AF per year of the project. Thus, the proposed Project's demand would not appear to affect IID's ability to provide water to other users in IID's water supply area (Imperial Unit).

NOW, THEREFORE, based on the above findings, the Imperial County Board of Supervisors **DOES HEREBY DENY APPEAL #23-0004** and **APPROVE** the **WATER SUPPLY ASSESSMENT**.

PASSED, ADOPTED AND APPROVED by the Board of Supervisors of the County of Imperial on this 23rd day of January 2024.

AYES:

NOES:

ABSENT:

BOARD OF SUPERVISORS RESOLUTION FOR

WSA

Page 3 of 4

ABSTAIN:

Luis A. Plancarte, Chairman
Imperial County Board of Supervisors

ATTEST: _____
BLANCA ACOSTA, Clerk of the
Board of Supervisors, County of
Imperial, State of California

David Black

From: Gamboa-Arce, Justina <jgamboarce@IID.com>
Sent: Thursday, December 7, 2023 3:51 PM
To: David Black
Cc: Jim Minnick; Pacheco, Mike; Shields, Tina L; 'Thomas Strand'; 'Sergio Cabanas'; 'Jim Turner'; 'Rob Moore'; Smith Hoff, Joanna
Subject: Water Supply Assessment for HKP1 and HKL1
Attachments: Hell's Kitchen Draft WSA Final_12.7.23.pdf

CAUTION: This email originated outside our organization; please use caution.

Dear Mr. David Black,

Imperial Irrigation District Water Department has completed the technical review of the Water Supply Assessment for the proposed Hell's Kitchen Power Company 1 and Hell's Kitchen Lithium Company 1 Project(s). Technical comments by IID have been incorporated into the Project WSA, as attached.

IID-Water finds the attached Draft WSA to be acceptable for incorporation into the Final EIR as part of the CEQA process, pending lead agency action for SB 610 compliance.

These technical findings are solely related to water supply and do not represent IID's opinion of FEIR adequacy, particularly as it relates to assessment of potential impacts to IID facilities and/or consistency with any existing contractual requirements.

Best Regards,

Justina Gamboa-Arce

Justina Gamboa Arce
Senior Water Resources Planner
760.339.9085 cell: 760.791.1888



"Never put off till tomorrow what you can do today." - Thomas Jefferson

SB 610 – Draft Water Supply Assessment
For
Hell’s Kitchen PowerCo 1 and LithiumCo 1 Project

Prepared For:

Imperial County Planning and Development Services

**801 Main Street
El Centro, California 92243**

Prepared by:

Chambers Group, Inc.

**3151 Airway Avenue, Suite F208
Costa Mesa, California 92626**

December 2023

(This page Intentionally left blank)

Hell’s Kitchen PowerCo 1 and LithiumCo 1 Project

Contents

PURPOSE OF WATER SUPPLY ASSESSMENT.....	7
Project Determination According to SB 610 - Water Supply Assessment.....	8
EXECUTIVE SUMMARY.....	9
PROJECT DESCRIPTION.....	11
HKP1 Facilities.....	13
HKL1 Facilities.....	16
HKP1 and HKL1 Shared Facilities and Design.....	17
Project Operations.....	18
Water Requirements.....	24
Description of IID Service Area.....	29
Climate Factors.....	29
Imperial Valley Historic and Future Land and Water Uses.....	32
Imperial Integrated Regional Water Management Plan (October 2012).....	33
IID Interim Water Supply Policy for Non-Agricultural Projects (September 2009).....	36
IID Temporary Land Conversion Following Policy (May 2012).....	37
IMPERIAL IRRIGATION DISTRICT’S WATER RIGHTS.....	38
California Law.....	38
Law of the River.....	38
IMPERIAL IRRIGATION DISTRICT WATER SUPPLY AND DEMAND.....	48
WATER AVAILABILITY – NORMAL YEAR.....	48
EXPECTED WATER AVAILABILITY – SINGLE DRY AND MULTIPLE DRY YEARS.....	51
Water Management under a Suspended Inadvertent Overrun Payback Policy (IOPP).....	51
Equitable Distribution Plan (EDP) History.....	54
Projected Water Supplies.....	55
PROJECT WATER AVAILABILITY FOR A 20-YEAR PERIOD TO MEET PROJECTED DEMANDS.....	56
EXPECTED WATER DEMANDS FOR THE PROPOSED PROJECT.....	59
IID’S ABILITY TO MEET DEMANDS WITH WATER SUPPLY.....	61
Expanding Water Supply Portfolio.....	65
IID Near Term Water Supply Projections.....	67
IMPERIAL COUNTY PLANNING AND DEVELOPMENT SERVICES (LEAD AGENCY) FINDINGS.....	68
ASSESSMENT CONCLUSION.....	70
RESOURCES AND REFERENCES.....	72
ATTACHMENTS.....	73

Figures

Figure 1. Project Site Regional Location 26

Figure 2. Aerial Map of Project Vicinity 27

Figure 3. Project Layout/Site Plan **Error! Bookmark not defined.**

Figure 4. IID Imperial Unit Boundary and Canal Network 30

Figure 5. Major Colorado River Reservoir Storage Facilities and Basin Location Map 44

Figure 6. Lake Mead Water Elevation Levels November 2023 47

Figure 7. Lake Mead Schematic (June 15, 2022) 53

Tables

Table 1. Climate Characteristics, Imperial, CA 100-Year Record, 1923-2022 31

Table 2. IID Areawide Annual Precipitation (In), (1990-2022) 31

Table 3. Monthly Mean Temperature (°F) – Imperial, CA 10-Year, 30-Year & 100-Year (2013-2022, 1993-2022, 1923-2022) 31

Table 4. Monthly Mean Rainfall (In) – Imperial, CA 10-Year, 30-Year & 100-Year (2013-2022, 1993-2022, 1923-2022) 32

Table 5. Non-Agricultural Water Demand within IID Water Service Area, 2015-2055 (KAFY) 34

Table 6. Historic and forecasted Agricultural Water Consumptive Use and Delivery Demand within IID Water Service Area, 2015-2055 (KAFY) 35

Table 7. IID System Operations Consumptive Use within IID Water Service Area and from AAC at Mesa Lateral 5 to Imperial Dam, (KAF), 2020 36

Table 8. Interim Water Supply Policy 2023 Annual Non-Agricultural Water Supply Development Fee Schedule 37

Table 9. CRWDA Annual 4.4 MAF Apportionment (Priorities 1 to 4) for California Agencies (AFY) 42

Table 10. Unregulated Inflow to Lake Powell, Percent of Historic Average, 2000-2022 45

Table 11. IID Historic and Forecast Net Consumptive Use for Normal Year, Single-Dry Year and Multiple-Dry Year Water Supply, 2003-2037, et seq. (CRWDA Exhibit B) 50

Table 12. IID Annual Rainfall (In), Net Consumptive Use and Underrun/Overrun Amounts (AF), 1988-2022 52

Table 13. IID Inadvertent Overrun Payback to the Colorado River under the IOPP, 2012-2022 53

Table 14. Project Operational Water Uses (AFY) 59

Table 15. Ten-Year Historic Delivery (AFY), 2013-2022 59

Table 16. IID System Operations Consumptive Use within IID Water Service Area and from AAC at Mesa Lateral 5 to Imperial Dam, (KAF), 2022 61

Table 17. IID Historic and Forecasted Consumptive Use vs CRWDA Exhibit B IID Net Available Consumptive Use, volumes at Imperial Dam (KAFY), 2015-2055 62

Table 18. 2020 Approved Water Order, Actual CU (Decree Accounting Report) and IID Underrun, KAF at Imperial Dam 63
Table 19. IID Capital Project Alternatives and Cost (May 2009 price levels \$)..... **Error! Bookmark not defined.**

Attachments

- Attachment A: IID Interim Water Supply Policy for Non-Agricultural Projects
- Attachment B: IID Equitable Distribution Plan

DRAFT

Acronyms

AF	Acre-Foot or Acre-Feet
AFY	Acre-Feet per Year
AOP	Annual Operations Plan
CAP	Central Arizona Project
CDCR	California Department of Corrections and Rehabilitation
CDPH	California Department of Public Health
CDWR	California Department of Water Resources
CEQA	California Environmental Quality Act
CRRWQCB	Colorado River Basin Regional Water Quality Control Board
CRWDA	Colorado River Water Delivery Agreement
CTR	Controlled Thermal Resources (US), Inc. (the Applicant)
CUP	Conditional Use Permit
CVWD	Coachella Valley Water District
CWC	California Water Code
EDP	IID Equitable Distribution Plan
EIS	Environmental Impact Statement
HCl	Hydrochloric Acid
HDPE	High Density Polyethylene
HKL1	Hell's Kitchen LithiumCo 1
HKP1	Hell's Kitchen PowerCo 1
H ₂ S	Hydrogen Sulfide
ICAPCD	Imperial County Air Pollution Control District
ICPDS	Imperial County Planning and Development Services
ICPHD	Imperial County Public Health Department
ICS	Intentionally Created Surplus
IID	Imperial Irrigation District
IOPP	Inadvertent Overrun Payback Policy
ISG	Interim Surplus Guidelines
IRWMP	Integrated Regional Water Management Plan
IWSP	Interim Water Supply Policy
KAF	Thousand Acre Feet
LAFCO	Local Agency Formation Commission
LCR	Lower Colorado Region
LiCl	Lithium Chloride
LiOH	Lithium Hydroxide
MCI	Municipal, commercial, industrial
MGD	Million Gallons per Day
MW	Megawatt
MWD	Metropolitan Water District of Southern California
NAF	Naval Air Facility
NCG	Incondensable Gas
PVID	Palo Verde Irrigation District
QSA/	Quantification Settlement Agreement and Related Agreements
RO	Reverse Osmosis
ROW	Right-of-Way
Transfer Agreements	
SB	Senate Bill
SDCWA	San Diego County Water Authority
SNWA	Southern Nevada Water Authority
SO ₄ ⁻²	Sulfate
TLCFP	Temporary Land Conversion Fallowing Policy
USBR	United States Bureau of Reclamation
USEPA	United States Environmental Protection Agency
WSA	Water Supply Assessment

PURPOSE OF WATER SUPPLY ASSESSMENT

This Water Supply Assessment (WSA) was prepared for the Imperial County Planning and Development Services (Lead Agency) by Chambers Group, Inc. (Chambers Group), regarding Controlled Thermal Resources (US), Inc. (CTR) (the "Applicant") Hell's Kitchen PowerCo 1 and LithiumCo 1 Project (the "Project"; HKP1 and HKL1, respectively). This study is a requirement of California law, specifically Senate Bill 610 (referred to as SB 610). SB 610 is an act that amended Section 21151.9 of the Public Resources Code, and Sections 10631, 10656, 10910, 10911, 10912, and 10915 of the Water Code. SB 221 is an act that amended Section 11010 of the Business and Professions Code, while amending Section 65867.5 and adding Sections 66455.3 and 66473.7 to the Government Code. SB 610 was approved by the Governor and filed with the Secretary of State on October 9, 2001, and became effective January 1, 2002.¹ SB 610 requires a lead agency, to determine that a project (as defined in CWC Section 10912) subject to California Environmental Quality Act (CEQA), to identify any public water system that may supply water for the project and to request the applicants to prepare a specified water supply assessment.

This study has been prepared pursuant to the requirements of CWC Section 10910, as amended by SB 610 (Costa, Chapter 643, Stats. 2001). The purpose of SB 610 is to advance water supply planning efforts in the State of California; therefore, SB 610 requires the Lead Agency, to identify any public water system or water purveyor that may supply water for the project and to prepare the WSA after a consultation. Once the water supply system is identified and water usage is established for construction and operations for the life of the project, the lead agency is then able to coordinate with the local water supplier and make informed land use decisions to help provide California's cities, farms, and rural communities with adequate water supplies.

Under SB 610, water supply assessments must be furnished to local governments for inclusion in any environmental documentation for certain projects (as defined in California Water Code (CWC) Section 10912 [a]) that are subject to the California Environmental Quality Act (CEQA). Due to increased water demands statewide, this water bill seeks to improve the link between information on water availability and certain land use decisions made by cities and counties. This bill takes a significant step toward managing the demand placed on California's water supply. It provides further regulations and incentives to preserve and protect future water needs. Ultimately, this bill will coordinate local water supply and land use decisions to help provide California's cities, farms, rural communities, and industrial developments with adequate long-term water supplies. The WSA will allow the lead agency to determine whether water supplies will be sufficient to satisfy the demands of the project, in addition to existing and planned future uses.

¹SB 610 amended Section 21151.9 of the California Public Resources Code, and amended Sections 10631, 10656, 10910, 10911, 10912, and 10915, repealed Section 10913, and added and amended Section 10657 of the Water Code. SB 610 was approved by California Governor Gray Davis and filed with the Secretary of State on October 9, 2001.

Project Determination According to SB 610 - Water Supply Assessment

With the introduction of SB 610, any project under the California Environmental Quality Act (CEQA) shall provide a Water Supply Assessment if the project meets the definition of CWC § 10912. Water Code section 10911(c) requires for that the lead agency “determine, based on the entire record, whether projected water supplies will be sufficient to satisfy the demands of the project, in addition to existing and planned future uses.” Specifically, Water Code section 10910(c)(3) states that “If the projected water demand associated with the proposed project was not accounted for in the most recently adopted urban water management plan, or the public water system has no urban water management plan, the water supply assessment for the project shall include a discussion with regard to whether the total projected water supplies, determined to be available by the city or county for the project during normal, single dry, and multiple dry water years during a 20 year projection, will meet the projected water demand associated with the proposed project, in addition to the public water system’s existing and planned future uses, including agricultural and manufacturing uses.”

After review of CWC § 10912a, and Section 10912 (a)(5)(B), it was determined that the proposed Hell’s Kitchen PowerCo 1 and LithiumCo 1 Project is deemed a project as it is considered an industrial use that will occupy more than 40 acres of land and will have more than 650,000 square feet of floor area.

EXECUTIVE SUMMARY

The Imperial County Planning and Development Services in coordination with Imperial Irrigation District has requested a WSA as part of the environmental review for the proposed Hell's Kitchen PowerCo 1 and LithiumCo 1 Project ("Project"). This study is intended for use by Imperial County Planning and Development Services and Imperial Irrigation District in its evaluation of water supplies for existing and future land uses. The evaluation examines the following water elements:

- Water availability during a normal year
- Water availability during a single dry year, and multiple dry water years
- Water availability during a 20-year projection to meet existing demands
- Expected 30-year water demands of the Project
- Reasonably foreseeable planned future water demands to be served by the Imperial Irrigation District under Equitable Distribution Plan apportionment

The proposed Project site is located within undeveloped land predominantly owned by IID, land partially owned by Hell's Kitchen Geothermal LLC, and a right-of-way (ROW) corridor for the gen-tie and power line to the IID Davis Switching Station which has not been constructed. The Project would be located within Sections 11 and 12, Township 11 North, Range 13 East in Imperial County near the eastern shore of the Salton Sea. The Project is approximately 3.6 miles west of the town of Niland. The majority of the proposed HKP1 and HKL1 facilities are located immediately west of Davis Road, with administrative buildings and warehouses located east of Davis Road. The 230-kilovolt (kV) gen-tie line for HKP1 will run from Noffsinger Road approximately 2 miles south to McDonald Road and then will run approximately 0.3 miles east to Hudson Ranch. The gen-tie line would be located east of Davis Road and north of McDonald Road, within the IID's transmission ROW and within new ROW. The power line to supply power to the HKL1 facilities would be collocated on the HKP1 transmission structures/poles. The proposed Project is within IID's Imperial Unit and district boundary and as such is eligible to receive water service. Water infrastructure capacity is not a part of this analysis. Hell's Kitchen Geothermal LLC is responsible for contacting IID Water Engineering Department for an infrastructure capacity assessment. Any infrastructure improvements, costs and environmental compliance associated with improvements to accommodate the Project or for the conservation of the water supply needed for the Project is the sole responsibility of Hell's Kitchen Geothermal LLC.

IID adopted an Interim Water Supply Policy (IWSP) in 2009 for new Non-Agricultural Projects, under which water supplies may be contracted to serve new developments within IID's water service area. For applications processed under the IWSP, applicants shall be required to pay a processing fee and, after IID board approval of the corresponding water supply agreement, will be required to pay a reservation fee(s) and annual water supply development fees. The water supply development fees are collected for the development of water supply projects, such as water conservation projects, water storage projects and/or water augmentation projects.

Under the IWSP, IID may set aside up to 25,000 acre-feet annually (AFY) of IID's Colorado River water supply to serve new non-agricultural projects with water created from IID efficiency conservation projects and programs. As of November 2023, a balance of 18,620 AFY remain available under the IWSP for new non-agricultural projects, providing a mechanism for the development of reasonably sufficient water supplies for such projects. The proposed Project water demand of approximately 6,500 AFY represents 34.9 % of the annual unallocated supply that may be created and set aside for new non-agricultural projects.

Imperial County Planning and Development Services anticipates non-agricultural project water supply demand within their jurisdiction, as the land use authority, is likely to exhaust the 18,620 AFY available under the IWSP within the foreseeable 20-year planning period. Thus, the proposed Project's estimated water demand, combined with other development anticipated in the area is likely to adversely affect IID's ability to provide water to other users in IID's water service area unless mitigation is incorporated. This industrial water use project will need to enter into a water supply agreement with IID under which water conservation and augmentation commitments will be required of Hell's Kitchen Geothermal LLC.

In efforts to address any potential water supply/demand imbalances, on June of 2022, IID adopted a revised Equitable Distribution Plan for the apportionment of water to all water user categories including for commercial/industrial water uses such as the proposed Project. Implementation of the EDP initiates every January 1st and continues throughout the year unless the IID Board of Directors takes specific action. Under the EDP, water supplies may be restricted to Hell's Kitchen PowerCo 1 and LithiumCo 1 Project as described under the IID Water Supply & Demand Section, Equitable Distribution Plan sub-section of this WSA.

IID's EDP implementation efforts in 2022 and 2023 coincide with efforts communicated by the U.S. Bureau of Reclamation to all Colorado River Basin contractors during the same time period. In June 2022, Commissioner Camille Touton testified before a congressional committee and called for the Basin states to develop a plan before the end of the year to reduce demands by 2-4 million acre-feet per year, through 2026, or the Secretary of the Interior would take regulatory action to force these reductions in order to protect the Colorado River system in light of the prolonged drought conditions and climate change impacts.

California has submitted a voluntary conservation proposal to Reclamation to conserve up to 400,000 AFY through 2026 as the state's commitment to Lake Mead and the Colorado River System, as of the date of this WSA. IID is working diligently with federal agencies and Colorado River contractors to minimize impacts to the local community while simultaneously ramping up water conservation programs in an effort to augment local water supplies, to some degree, should Basin-wide cuts be unavoidable. In the interim, IID has gone on record that its share of the California proposal under a voluntary plan would not exceed 250,000 AFY (through 2026) as long as there are no obligatory reductions imposed.

PROJECT DESCRIPTION

CTR is proposing to build, operate, and maintain a geothermal power plant (HKP1) and mineral extraction and processing facilities (HKL1) on approximately 65.0 acres of predominantly public lands (leased from IID) in the Imperial Valley in Imperial County. More specifically, the Project is located within undeveloped land owned by IID and a right-of-way (ROW) corridor for the gen-tie and power line to the IID Davis Switching Station which has not been constructed. The Project would be located within Sections 11 and 12, Township 11 North, Range 13 East in Imperial County near the eastern shore of the Salton Sea. Section 11 is being leased with a purchase negotiation underway. The 2.5 acres on Section 12 is owned Hell's Kitchen LLC. The Project is approximately 3.6 miles west of the town of Niland. The majority of the proposed HKP1 and HKL1 facilities are located immediately west of Davis Road, with administrative buildings and warehouses located east of Davis Road. The 230-kV gen-tie line for HKP1 will run from Noffsinger Road approximately 2 miles south to McDonald Road and then will run approximately 0.3 miles east to Hudson Ranch. The gen-tie line would be located east of Davis Road and north of McDonald Road, within the IID's transmission ROW and within new ROW. The power line to supply power to the HKL1 facilities would be collocated on the HKP1 transmission structures/poles. A majority of the development area is zoned S-1-G (open space/geothermal overlay zone) with a portion zoned S-2-G (open space/preservation/geothermal overlay) and is entirely within the renewable energy/geothermal map overlay zone in the 2015 Renewable Energy and Transmission Element update to the County General Plan. The gen-tie and power line ROW is zoned S-1-G and M-2-G-PE (medium industrial/geothermal overlay). The General Plan Land Use designation for the entire Project is Agriculture. Individual Assessor Parcel Numbers (APNs) and associated zoning designations are as follows: Zoning Designation S-1-G and S-2-G, 020-010-012; Zoning Designation S-1-G, 020-010-013, 020-070-060, 020-010-042, 020-060-001, 020-060-002, 020-060-039, 020-060-040, 020-070-026, 020-070-025, 020-070-029, 020-070-055, 020-010-031, 020-010-032; Zoning Designation M-2-G-PE, 020-010-035, 020-100-044. Please refer to Figure 1 for the Project's Regional Location (Figure 1. Site Regional Location), and Figure 2 for the Project Site and Vicinity (Figure 2. Aerial View of Project Site and Vicinity).

In general, the Project can be described as follows:

HKP1 will include construction of the following structures: three production wells, four injection wells and associated well pads; geothermal fluid production and injection pipelines; a brine processing facility; a brine pond; 49.9-MW net geothermal turbine generator facility; a cooling tower; material and equipment storage; a control building; administrative and warehouse buildings; a water storage pond and water storage tank; an on-site substation; and a 230-kV gen-tie line to the IID Davis Switching Station to be constructed. HKL1 will include construction of the following structures: geothermal pipelines to transfer brine from HKP1; a cooling tower; truck entrance security; a cooling tower and flocculation facilities; brine crystallizers, clarifiers, thickeners, and filter presses; a lithium-recovery resin vessel and systems; raw water filtration, fire-water storage, and reverse osmosis (RO) facilities; electrical buildings to house electric power switchgear and electrical metering; a substation; reagent storage and

preparation buildings; two motor-control centers and a control room building; lithium product handling and packaging buildings (that will house the filtration and drying equipment for the lithium products and bagging and palletizing of finished products); polymetallic product handling facilities; bulk sulfide product handling facilities; silica product manufacturing facilities; bulk boron product handling facilities; two lime silos; hydrochloric acid (HCl) offloading and storage tanks; and an RO water treatment facility. Please refer to Figure 3 for the conceptual project layout and tentative site plan. (Figure 3. Project Layout/Site Plan).

The geothermal power plant (HKP1) and mineral extraction and processing facilities (HKL1) will require regional, State, and federal permits as follows, Lead Agency required permits: CUP, Zoning Variance, Development Agreement (if needed), Building and Grading Permit, and Encroachment Permit; Reviewing Federal Agency required permits: USFWS Incidental Take Permit (ITP, if needed) and USACE Individual Permit under Section 404 of the Clean Water Act; Reviewing State Agency required permits: California Department of Transportation (Caltrans) Encroachment Permit, CDFW Lake or Streambed Alteration Agreement and ITP (if needed), California Department of Toxic Substances/Certified Unified Program Agency (CUPA) Hazardous Materials/Environmental Protection Agency Approvals and Permits, and CalGEM Permit(s) to drill; Reviewing Regional Agency required permits: CRRWQCB Waste Discharge Requirement and 401 Water Quality Certification, IID Encroachment Permit, Imperial County Air Pollution Control District Permit to Construct and Permit to Operate; Use of Generators (if needed), Imperial County Public Health Department Nontransient-Noncommunity Water System Permit, Imperial County Building Department Building and Grading Permits, Imperial County Public Works Department Encroachment Permit(s), and any requirements set forth by Imperial County Fire Department and Office of Emergency Services. These permits and agreements will allow for the Project operations and outputs described below.

The potable water provider for the Project will be onsite. Facilities construction will include installation of an on-site potable water treatment system provided by a qualified supplier (e.g., Water Treatment Services Inc, El Centro) and conforming to the permit requirements of the Imperial County Public Health Department.

The proposed Project owner will need to contract with IID to deliver up to 6,500 AFY of untreated water, via the Q and R laterals. The proposed Project is anticipated to use approximately 6,500 AFY of water for geothermal and lithium operations, including 0 AFY necessary for periodic dust control while in operation.

Construction of HKP1 facilities will occur over a period of about 22 months. The engineering and construction of HKL1 facilities lags that of HKP1 by about 13 months. Construction of HKL1 facilities will occur over a period of about 19 months. The amount of water required for HKP1 and HKL1 construction during these construction periods is expected to be 50 acre-feet and 120 acre-feet, respectively.

HKP1 Facilities

Production and Injection Wells

The Project will use Well Pad 1 and a well pad adjacent and south of the Q Drain for geothermal fluid production and injection. The Project may also use Well Pad 4 for geothermal fluid production or injection. Well Pad 1 was previously approved for geothermal exploration drilling and was constructed in 2021. The geothermal production wells will be drilled at Well Pad 1, and one or two injection wells will also be drilled at Well Pad 1. The existing footprint of Well Pad 1 will be expanded during construction of the commercial facility by approximately 160 feet to the north to accommodate the wells required for commercial operation of the Project. Well Pad 4 was previously approved by the County for geothermal exploration drilling but was not constructed. The Project will include a total of seven wells, three production and four injection, including one well for injection of aerated fluids. The two previously drilled geothermal exploration wells will be used as commercial production wells for the Project. All production and injection wells will be operated in accordance with California Geologic Energy Management Division (CalGEM) regulations.

Well-Site Production and Injection Equipment

Production and injection wellhead dimensions are not expected to exceed a height of 15 feet above the ground surface or 4 feet in diameter. The wellhead will consist of control valves, warmup bypass valves, and isolation valves. The wellheads will be insulated, and the insulation cladding will be supplied with an appropriate color to blend with the area and minimize visibility. The injection wells will be located to avoid geothermal fluid interference with the production wells. Each injection well will be remotely monitored for pressure, temperature, and flow rate. Injection pumps located at the power plant site will pump the geothermal injection fluid through the injection pipeline system, providing sufficient pressure to inject the geothermal brine back into the geothermal reservoir. Limited electrical equipment is required at the injection well sites. A flow meter will be integrated into the injection pipeline equipment at the injection well pad and remotely operated from the control room. Overhead lighting will be constructed on the injection well pads. The injection well pad will be fenced. The geothermal production and injection wells will be drilled from the production and injection well pads using steel, titanium or titanium alloy, nickel alloy, duplex stainless steel, or equivalent as appropriate to the final well completion depth.

Geothermal Pipeline Systems

Above-ground pipelines will be constructed to interconnect the production and injection wells with the power plant site facilities. The pipelines will be constructed at ground level on pipeline supports on drilled foundations approximately every 20 to 40 feet along the pipeline routes. The pipelines will use a cattleguard type crossing at the Q and R Drains to avoid impacts on the irrigation drains, and the crossing will be constructed in collaboration with IID. Pipeline construction will be conducted concurrently with construction of the power plant. The production wellheads will be located on Well Pad 1, south of the power plant site. An above-ground pipeline will be constructed from the production wells to the brine

and steam-handling facilities on the power plant site. The production pipelines will be constructed from alloy or alloy-lined pipe designed, constructed, tested, and inspected pursuant to current industry standards for high temperature, high-pressure piping. Above-ground geothermal fluid pipelines, approximately 30-inches in diameter, will be covered with approximately 2 inches of insulation and a protective metal sheath appropriately colored to blend with the area. The brine injection pipeline will be either cement-lined carbon steel, alloy, or a combination of both. The brine injection pipeline will be approximately 24 inches in diameter and will be insulated then covered with a protective metal sheath appropriately colored to blend with the area.

Brine Processing Facility

The brine processing facility will prepare the geothermal fluid produced from the production wells for steam extraction. The geothermal fluid will be delivered through aboveground pipelines to the brine-processing facility. The spent brine will be injected back into the geothermal reservoir through injection wells (discussed below). A pH-modification system will be installed should silica management be necessary to prevent scaling in either surface equipment or injection wellbores. The pH modification system will involve injection of dilute HCl into the brine stream exiting the high-pressure separator at a rate to establish a known bulk fluid pH value. The pH modification system consists of a concentrated acid storage tank, acid transfer pumps, a diluted acid storage tank, diluted acid injection pumps, and an injection nozzle to distribute the diluted acid into the brine injection pipeline. Concentrated HCl (approximately 32% by weight) will be delivered to the Project site by truck for storage. The concentrated acid will be mixed with service water to create a diluted acid solution (approximately 4% by weight). This diluted acid solution, should it be necessary for silica management, would then be injected into the brine pipeline between the high-pressure separator and the brine-injection pumps.

Brine Pond

The brine pond will be cement-lined, with an underliner-leak detection system, and will allow for storage of brine during upset conditions and collection of brine during flow testing and plant start-up. The brine pond will be sized to accommodate two times the volume of the largest vessel and up to six hours of normal-brine-flow equivalent during system upset conditions plus two feet of freeboard. The brine pond will be constructed as a waste management unit (WMU) to meet Colorado River Regional Water Quality Control Board (CRRWQCB) surface-discharge requirements. Groundwater-monitoring wells will be constructed adjacent to the brine pond in conformance with CRRWQCB requirements.

Turbine Generator Facility

The Project will use flash-based power plant technology utilized in the Salton Sea geothermal field since 1982 to convert geothermal-based renewable steam energy into electricity. Steam from the high temperature geothermal fluid in the brine-handling facilities will be delivered to the turbine generator facility. The turbine generator facility will include a 49.9-MW (net) condensing turbine/generator set, a gas removal and emission abatement system, and a heat rejection system (i.e., condenser and cooling tower). The steam will be purified using a scrubber and demister before being admitted into the

condensing steam turbine. The turbine will be directly coupled to a totally enclosed water and air-cooled (TEWAC) synchronous-type generator. The turbine-generator unit will be fully equipped with all the necessary auxiliary systems for turbine control and speed protection, lubricating oil, gland sealing, generator excitation, and cooling. Facilities associated with the turbine generator facility include a control building, a service water storage tank, lube oil skid, and other ancillary facilities. One 3-MW diesel generator will be installed to provide black start capability and emergency site power when the steam turbine generator is shut down. An 800-kW emergency generator will also be installed to provide backup for critical instrument and equipment control power. The diesel engines will meet California Air Resources Board (CARB) air pollutant emission limits. The generators are expected to operate fewer than 600 hours per year.

Heat Rejection and Non-Condensable Gas Removal Systems

The heat rejection system will be comprised of a shell-and-tube type condenser, a counterflow cooling tower, and a noncondensable gas (NCG) removal system. The cooling tower, NCG removal system, and condenser design will be similar to those employed at other geothermal power plants at the Salton Sea. The cooling tower will be up to 40 feet tall. Steam from the turbine will be condensed in the condenser. The geothermal steam condensate from the condenser will be collected in an aeration tank and used as a source of makeup water for the cooling tower. Gases that accumulate in the condenser will be evacuated by the NCG removal system. NCG will be pressurized and vented to a hydrogen sulfide (H₂S) abatement system during normal plant operation. During plant start-up or load rejection (i.e., plant trip offline), steam to the turbine will be diverted to a rock muffler for safe venting as is currently the procedure at the existing geothermal power plants in the Salton Sea KGRA. During this time, H₂S and other NCG will be released to the atmosphere. A combination of best available control technology, management practices, and process-monitoring equipment will be used to minimize air emissions from the power plant facilities. Permits to construct and operate the facility will be obtained from the Imperial County Air Pollution Control District (ICAPCD).

Hydrogen Sulfide Abatement System

H₂S gas is a naturally occurring compound found in Salton Sea geothermal brines. To minimize H₂S from being released to the atmosphere and to meet permitted requirements during routine operations, the project will employ proven abatement systems. The H₂S abatement system effectively oxidizes the gas to a sulfate (SO₄²⁻) that is highly soluble and then returns the sulfate product to injectate streams via the cooling tower blowdown process. Non-condensable gases, including H₂S, are removed from the main condenser through a series of steam-powered air ejectors, vacuum pumps, and compressors. Once the gas stream is pressurized, it is sent to a sparging system located in the cooling tower basin, where the H₂S reacts with H₂S abatement chemicals to oxidize the sulfide to sulfate. The sulfate product is injected into the reservoir with cooling tower blowdown. Additionally, condensate flowing from the main condenser is routed to a tank where oxygen (sparged air) is introduced along with oxidizing chemicals. This process oxidizes any remaining H₂S gas to soluble sulfate. The treated condensate is then introduced to the cooling tower basin as a source of makeup water. As stated above, the sulfate product is subsequently injected into the reservoir as cooling tower blowdown.

Substation and Electrical Power Transmission

The electricity from the geothermal power plant will be converted to 230-kV in the onsite substation. The output of the turbine generator facility is connected through a generator breaker to a (13.8-kV to 230-kV) main step-up transformer in the facility substation. The transformer will be set on a concrete pad within an oil containment system. The transformer will include gas-insulated switchgear. The high voltage side of the main step-up transformer will be connected to a new gen-tie line located within IID's transmission ROW to the IID interconnect station at the IID Davis Switching Station which has not been constructed. The gen-tie line will be constructed as part of the power plant construction but turned over to IID for ownership and operation. The transmission line will be installed on steel structures that will support up to two 230-kV three-phase electrical circuits, including optical ground and static wire. The steel structures will consist of direct-bury steel poles approximately 120 feet tall and will span an average length of 800 feet.

HKL1 Facilities

Pipe Rack and Process Pipelines

A pipe rack will be constructed from the HKL1 Project's process area to the HKP1 site. A geothermal brine delivery pipeline from HKP1 will feed brine to the HKL1 Project's process area. Steam/steam-condensate pipelines will also be constructed on the pipe rack. After minerals processing, the depleted brine will be delivered to the HKP1 injection system for reinjection into the geothermal reservoir. The geothermal brine delivery and return pipelines will be constructed with minimal usage of flanged connections to reduce the potential for pipeline leaks. Automatic valves will be integrated into the pipeline system that will close or divert the geothermal brine in the event of a pipeline issue to minimize the size of any potential spill. An Emergency Response Plan will be prepared and implemented should a fluid spill event occur.

Product Extraction Facilities

The lithium extraction areas will be constructed on concrete pads with a containment curb. The lithium extraction processing areas will consist of a series of interconnected tanks, pipelines, and control valves.

Security Fence and Landscaping

A security fence will be constructed around the Project site. The fence will be constructed to meet Imperial County standards for obscured fencing around processing areas.

Power Facilities

A power line will be installed for HKL1 on the transmission structures that are being constructed for HKP1. An electrical substation will be constructed on the site to obtain power from IID. Six electrical-control buildings will be located on the site, and each will house pad-mounted transformers and

switchgear. An emergency standby diesel generator will provide emergency power supply in case of electrical outage.

HKP1 and HKL1 Shared Facilities and Design

Foundations

Buildings and equipment will be constructed on foundations consistent with the overall site plan. Deep foundations for all major equipment are expected to require subsurface improvements in the form of steel and or concrete pilings. Shallow foundations for buildings are not expecting to require piling supports.

Potable Water

During construction of the HKP1 and HKL1 facilities, potable water will be procured as needed from a local potable water vendor (e.g., El Oasis Water Company, Imperial). Facilities construction will include installation of an on-site potable water treatment system provided by a qualified supplier (e.g., Water Treatment Services Inc, El Centro) and conforming to the permit requirements of the Imperial County Public Health Department.

Water Storage

A high-density polyethylene (HDPE)-lined freshwater pond will be constructed at the southern end of the Project site and just north of the Q Drain. The pond will store and provide fresh water for Project operations. The pond will be sized to provide sufficient storage capacity to meet Project demand during foreseeable periodic interruptions in IID canal water availability. A 100,000-gallon water storage tank will be located on site water storage and 5-acre water storage pond for the facility to use would also be on site.

Stormwater Retention

Stormwater retention infrastructure will be constructed along the western boundary of the site. A berm/levee will run along the western boundary of the site to contain any stormwater runoff and prevent stormwater run on. Water accumulated in the stormwater retention basin will be allowed to evaporate or possibly used as a substitute for normal fresh water. The retention basin will be designed to meet State Water Resources Control Board requirements and will include an appropriate mosquito abatement per Imperial County guidelines. The developed Project facility pad generally will be flat but will be designed to effectively drain to the stormwater retention basin. The stormwater drainage system will be sized to accommodate 3 inches of precipitation in a 24-hour period (100-year storm event), and to comply with applicable local codes and standards. Buildings and equipment will be constructed to provide protection from a 100-year storm event. Spill containment areas and sumps subject to spills of miscible chemicals will drain to an enclosed oil/water separator and will be collected in a waste oil tank for off-site recycling. The site will be graded and constructed so that any geothermal fluid spills will be collected in sumps that drain to the brine pond rather than the stormwater retention basin.

Generation Tie Line and Power Facilities

The 230-kV gen-tie structures constructed for the HKP1 project will be used to support the new power line for the HKL1 Project. The gen-tie line will run from Noffsinger Road approximately 2 miles south to McDonald Road and then will run approximately 0.3 miles east to Hudson Ranch. The gen-tie line will be located east of Davis Road and north of McDonald Road within IID's transmission right-of-way and within new right-of-way.

Parking and Site Access

Parking will be available in the administration and control building area. The Project will be accessed from Davis Road via new ingress/egress driveways. Davis Road will be upgraded with aggregate base during construction of the HKP1 Project. Project traffic will access the site from Highway 111 via McDonald Road and Davis Road. A bridge will be constructed across the R Drain to connect the northern and southern portions of the Project site. County road ingress/egress points will be constructed in conformance with Imperial County Public Works Department and Fire Department requirements. Road access will be restricted during construction, and appropriate traffic controls will be in place during construction of the Project. Davis Road will be paved from McDonald Road to Noffsinger Road at the completion of HKL1 Project construction. All structures within IID right-of-way (ROW), including the bridge over the R Drain, will require IID ROW and approval.

Project Operations

Routine operations and maintenance of the facility will include preventative maintenance and repairs of any damaged or otherwise inoperable equipment on an as-needed basis. The operation and maintenance staff will monitor the facility operations over the project life to ensure the power plant is operating to meet design standards. The HKP1 facility will utilize geothermal brine to create geothermal energy which will be sold to IID through the gen-tie line. The HKL1 facility will utilize geothermal brine produced from the geothermal fluid management activities on the neighboring HKP1 power plant site for the commercial production of lithium hydroxide, silica, bulk sulfide, and polymetallic products. The production processing steps may be altered over time as production methods and efficiencies evolve and new or revised product lines are developed at the facility. The process includes the following steps: brine cooling; silica, bulk sulfide, and polymetallic product production; lithium and metals extraction; concentration of lithium extractant; processing of lithium extractant to lithium hydroxide; drying and packaging of lithium and polymetallic products; offsite product shipping.

Each of the general processing steps is discussed further below. After processing of the geothermal brine, the depleted brine will be returned to HKP1 for injection at the wells, developed for HKP1, south of the Q Drain.

Metal Recovery

Geothermal brine from the HKP1 will feed two parallel vacuum-flash brine cooling trains sized for the full operating flow of approximately 5 million pounds per hour (lbs./hr.) The cooled brine will be fed to the mineral extraction process. Silica, bulk sulfide, and polymetallic products will be extracted from the brine using proprietary technology. Silica, bulk sulfide, and polymetallic products will be filtered and shipped offsite in roll-off bins. A lithium chloride (LiCl) product stream will also be produced using a proprietary extraction process. The LiCl will be processed in the subsequent lithium process steps.

Lithium Production

The LiCl product stream will be concentrated and purified. The purified, concentrated LiCl will be transported via pipeline from the lithium purification/concentration operation to the lithium product production buildings. Proprietary technology will be used to convert the LiCl into a LiOH•H₂O product.

The LiOH•H₂O product stream will be crystallized and transported to a lithium product handling, production, and warehouse building, where the crystals will be separated from the lithium-rich process fluid in a filtration system. LiOH•H₂O crystals will be dried and packaged in bulk bags. Packaging is expected to be into 20-kilogram (kg) bags or into 1,000-kg super sacks.

Product Shipping to Offsite Markets

The HKL1 plant will produce multiple products for offsite shipment to market by truck. The average annual amount of product shipped out of the plant operating at 5,000,000 lbs./hr. brine flow capacity is estimated at approximately 5,100 lbs./hr. dry lithium product (LiOH•H₂O), 3,100 lbs./hr. silica, 9,800 lbs./hr. bulk sulfide and 60,000 lbs./hr. polymetallic products. All products will be transported by freight truck on existing roadways to shipping distribution point(s).

Operational Workforce, Schedule, and Traffic

The HKP1 facility will require up to 22 full-time onsite employees during operation. Operational staff will include operators, management and supervisors, maintenance technicians, and lab technicians. On a typical day, the operators will assume a two-shift, 24-hour workday, and all other personnel will assume a standard 8-hour workday. Approximately 22 worker trips, 3 vendor trips, and 1 haul-truck trip will take place during daily operations.

The HKL1 facility is expected to require 90 full-time onsite employees during operation. Facility operations will continue 24 hours per day, 7-days per week. It is projected that up to 44 employees will be on site at any given time, with 28 day-staff employees and two rotating shifts of 16 additional employees overlapping the day staff and covering nights, weekends, and holidays. Approximately 48 trucks per day will travel in and out of the Project site during normal operations. Daily truck traffic includes up to 40 trucks for product shipping. All trucks used for product shipping will be electric. Truck traffic will also include approximately eight truck deliveries of reagent chemicals, cooling tower treatment chemicals, consumptive media, product-packaging materials, and fuel. Outgoing general

waste generated on the site will be removed by truck as needed and is expected to require less than one truck per day.

Operational Water Supply and Requirements

The HKP1 will require up to approximately 200 AFY of fresh water for normal operation, including supplemental cooling tower makeup and other plant uses when operating at full plant load. Average annual demand requirements will vary, depending on the capacity factor of the overall facility. It is anticipated that steam condensate will be utilized to offset freshwater requirements.

The primary source of fresh water for the facility is anticipated to be irrigation water made available under a supply agreement and purchased through IID. Water will be obtained from the "Q" and "R" laterals adjacent to the Project site. Water will be transferred to a water storage pond, with a capacity of approximately 18 AF, located adjacent to the Q Drain. The water would then be transferred to 100,000-gallon aboveground water storage tank via an aboveground fresh-water pipeline. Additional pipelines will be constructed to transport the water from the water storage tank to the power plant facility. The water will be used for steam wash water, purged water for pump seals, and the RO potable water system, process wash water, and, at times, cooling water makeup. The project is designed to minimize reliance on external sources of water supply for process needs as well by using condensed steam from the geothermal steam condensate to the greatest extent practical.

A filtration-based or RO potable water system will be used to process IID fresh water for the non-drinking potable water needs at the site. A Nontransient-Noncommunity Water System Permit will be obtained from the Imperial County Public Health Department (ICPHD) for the onsite potable water system. Bottled drinking water will be purchased for consumption.

The HKL1 facility will require approximately 6,300 AFY of water to be purchased from the IID for project cooling water makeup and additional process water. Approximately 3 AFY of the purchased water will be treated and used for potable water purposes, including potable washbasin water, eyewash equipment water, water for showers and toilets in the administration and control buildings, and sink water in the sample laboratory.

Operational Energy Requirements

HKP1 would generate 49.9 MW of renewable energy which would be sold to IID. HKL1 would require approximately 35 MW of power and have a peak power demand of 40 MW, which would be obtained from IID. Overall, the power demand would be less than what is produced by HKP1. Additionally, HKP1 will require the use of generators for up to 600 hours per year for startups during black start situations. HKL1 generators will only be used in emergency situations and will be operated less than 50 hours per year.

Fire Protection and Safety

The fire protection system will consist of an underground fire main and surface distribution equipment, such as yard hydrants and hose houses, monitors around the perimeter of the cooling tower, automatic sprinklers for the turbine generator and auxiliary equipment, and a complete detection and alarm system. HKP1 will have a fire water storage tank with a capacity of 250,000 gallons, and HKL1 will have three 250,000 gallon tanks for a total capacity of 750,000 gallons. The firewater pumping system will include a total of eight pumps capable of a total pumping capacity of 8,000 gallons per minute. The fire protection systems will be routinely tested, with the pump discharge recycled to the fire water storage tanks. The systems will be designed in accordance with federal, State, and local fire codes, occupational health and safety regulations and other jurisdictional codes, requirements, and standard practices.

Spent Fluid and Wastewater

Under normal operation, the spent brine will be pumped via the main injection system. Spent geothermal brine will be injected into the subsurface geothermal reservoir via the primary injection wells. Geothermal brine will be discharged into the bring pond during upset conditions or maintenance activities (start up and shut down). The fluids from the bring pond also will be injected into the subsurface geothermal reservoir via the dedicated aerated brine injection well. All subsurface fluid injection will conform with CalGEM requirements.

Wastewater including non-process wash water and sanitary waste, will be generated during operations. Sanitary drains will collect all sanitary waste and non-process wash water and discharge to an appropriately sized and County-approved septic system. The septic system will be engineered and operated to meet County Environmental Health requirements.

Hazardous Materials and Waste

Hazardous Material Management

The Project will develop and implement a Hazardous Materials Business Plan (HMBP), in compliance with California Health and Safety Code, Division 20, Chapter 6.95, Sections 25500-25519 and California Code of Regulations, Title 19, Division 2, Chapter 4. The HMBP will be provided to the California Office of Emergency Services, the Imperial County Fire Department, and the Certified Unified Program Agency for Imperial County (the local California Department of Toxic Substances Control office), for review and approval before plant operation. The HMBP will include, at a minimum, procedures for: hazardous materials handling, use and storage; emergency response; spill control and prevention; employee training, and reporting and record keeping.

Portable bins or other storage containers will be on site for storage of maintenance lube oils, chemicals, paints, and other construction materials, as needed. Secondary containment will be provided in all petroleum hydrocarbon and hazardous material storage areas, and all brine processing areas. Safety showers and eyewash stations will be provided in or adjacent to chemical storage and use areas. Safety equipment will be provided for staff use if required during chemical containment and cleanup

activities. All staff working with chemicals will be trained in proper handling and emergency response to chemical spills or accidental releases. Water hose connections will be provided near the chemical storage and feed areas, to flush spills and leaks, and absorbent materials will be stored on site for spill cleanup.

The HKP1 facility may include transformer oil for transformer operation, lube oil for the turbine generator operation, diesel for generator fueling, and HCl (32% by weight). The transformer oil will be contained within the transformers; the lube oil will be stored on a skid. Diesel will be stored in a diesel storage tank with a capacity of approximately 3,000 gallons. Two polymer or fiber-reinforced plastic HCl tanks, with capacities of approximately 20,000 and 75,000 gallons, will store the HCl for the acid modification process. The HCl tanks will be fitted with scrubbers. All chemicals will be stored outdoors on impervious surfaces in above-ground storage tanks with secondary containment. The secondary containment areas for the bulk storage tanks will not have drains. Any chemical spill occurring in these areas will be removed with portable equipment and re-used or disposed properly. Other chemicals will be stored and used in their delivery containers.

Hazardous materials that are expected to be used during construction of HKP1 will include: unleaded gasoline, diesel fuel, oil, hydraulic fluids, lubricants, solvents, adhesives, and paint materials. Hazardous materials that are expected to be used during operation of HKL1 will include: unleaded gasoline, diesel fuel, transformer oil, hydraulic fluid, HCl (32% by weight), calcium oxide, sodium sulfide, sodium hydroxide, and manganese.

No feasible alternatives exist to avoid use of these materials for construction or operation of construction vehicles and equipment, or for painting and caulking buildings and equipment. HCl, calcium oxide, sodium hydroxide, and sodium sulfide will be required for the mineral extraction process. Manganese will be produced for commercial sale. Manganese will be stored in indestructible containers for shipping.

Hazardous Materials Transportation

Hazardous material carriers and hazardous waste transporters are required by law to adhere to applicable local, State, and federal regulations regarding proper truck signage, indicating the materials being transported, carrying a shipping/waste manifest of the types and concentrations of materials being transported, and other appropriate measures. Hazardous material carriers also are responsible for their loads, reporting spills, and initiating appropriate emergency response to releases of any transported hazardous materials, from the point of origin up to the destination of the hazardous material delivery.

HKL1 will communicate with the locally responsible emergency response agencies before shipment of any bulk hazardous materials to or from the Project site. Continuing coordination and communications with these agencies relevant to hazardous material shipments will be undertaken as required by the agencies. HKL1 will also develop an Emergency Action Plan for responding to spills or releases of hazardous substances by hazardous material carriers in the Project area. This plan will conform to all

applicable federal, State, and local requirements for notifications, reporting, and emergency response of hazardous substance release incidents. The plan also will describe cleanup of spilled substances and site reclamation, if required. In the unlikely event of a hazardous materials spill during transportation of materials to or from the plant site, HKL1 will cooperate with the responsible agencies and provide all available information and knowledge about the materials to facilitate the spill response cleanup and spill site remediation.

Solid Waste

Construction and operation of the facility will generate both nonhazardous and hazardous wastes described below.

Nonhazardous Wastes

Solid waste from construction activities may include **lumber**, **excess concrete**, metal, glass scrap, empty nonhazardous containers, and waste generated **by workers**. Management of these wastes will be the responsibility of the construction contractor(s). Typical management practices required for nonhazardous waste management will include recycling, when possible, proper storage of waste and debris to prevent wind dispersion, and **weekly pickup and disposal** of wastes to local Class III landfills.

The primary source of solid waste during **operation** will be office waste and other waste generated by workers. Non-hazardous waste will be collected in **appropriate on-site storage receptacles**, designated for waste and recycling. **Recyclable materials will be brought to a recycling center**, and non-recyclable waste will be removed and taken to a Class III landfill.

Hazardous Wastes

Hazardous wastes may be generated over the course of construction from spills of hazardous materials used during construction, empty hazardous material containers, or spill cleanup wastes. Hazardous materials that are expected to be used during construction include paints, oil and lubricants, solvents, and welding materials. Used oil will be recycled, and oil or heavy metal contaminated materials (e.g., filters) requiring disposal will be transported to an off-site waste disposal facility that is authorized to accept such wastes. Scale from pipe and equipment cleaning operations will be disposed in a similar manner.

All hazardous wastes generated during construction and operation will be handled and disposed in accordance with applicable laws, ordinances, regulations, and standards. Any hazardous wastes generated during construction will be collected in hazardous waste accumulation containers near the point of generation and moved daily to the contractor's 90-day hazardous waste storage area on site. The accumulated wastes subsequently will be delivered to an authorized waste management facility, which may be as far as Yuma, Arizona. Hazardous wastes will be managed and disposed properly in a licensed Class I waste disposal facility that is authorized to accept the waste.

The Geothermal Power Plant and mineral extraction and processing facility involves a CUP, Zoning Variance, Development Agreement (if needed), Building and Grading Permit, and Encroachment Permit that will allow for HKP1 will be permitted for 49.9MW. Other products include: 5,100 lbs./hr. dry lithium product (LiOH•H₂O), 3,100 lbs./hr. silica, 9,800 lbs./hr. bulk sulfide, and 60,000 lbs./hr. polymetallic products.

Water Requirements

The Project will require domestic water and there is not a domestic water delivery system currently available on the Project site. Therefore, an on-site water treatment system procured from a qualified provider will be installed to process water for the non-drinking potable water needs at the site. A Nontransient-Noncommunity Water System Permit will be obtained from ICPHD for the onsite potable water system. Bottled drinking water will be purchased for consumption.

The proposed Project owner will need to contract with IID to deliver up to 6,500 AFY of untreated water, via the "Q" and "R" laterals adjacent to the project site, specifically gates Q-28 and R-24. The proposed Project is anticipated to use approximately 6,500 AFY of water for steam wash water, brine dilution, purge water for pump seals, process wash water, cooling water makeup, lithium processing and additional water processes. About 170 AFY of raw water will be needed for earthworks and dust control while in construction. Approximately 3 AFY of the purchased water will be treated and used for potable water purposes, including potable washbasin water, eyewash equipment water, water for showers and toilets in the administration and control buildings, and sink water in the sample laboratory.

Water Use Efficiency Best Management Practices Incorporated Into the Project

The Project incorporates an integrated, comprehensive water system designed to extensively measure, recycle and maximize the efficiency of water usage. The primary initial use of raw water is for cooling tower makeup. Cooling tower water is cycled 12-16 times, depending on seasonal conditions, with about 75% of water lost to evaporation. All remaining cooling tower blowdown is recycled to other uses in the brine conditioning and lithium refining process. Geothermal steam is used for electric power generation and evaporation of lithium-rich solutions. All steam condensate produced from these processes is recycled to the lithium extraction process for formulation of chemical reagents, filtration, and final production of lithium hydroxide. Effective water recycling consumes about 95% of the raw water supply, leaving only 5% residual. This residual water is then injected into the geothermal reservoir to provide pressure support for maximizing resource productivity.

Additional Project Measures Under Potential Curtailment

Should reductions to IID's water supply be ordered or directed from a governmental authority having appropriate jurisdiction, the Hell's Kitchen PowerCo 1 and LithiumCo 1 Project may be required to reduce its water supply demand by a proportionate reduction of the total volume of water available to IID. Additional operational changes may be implemented by the Project under these unpredictable conditions may include:

- Produce groundwater at property;
- Explore temporary use of recycled drain water; and/or
- Reduce production rates in line with water supply reductions

Incorporation of these additional measures is anticipated to conserve an estimated 945 AFY of water supply demand for HKL1 if operating under curtailment which is approximately 15 percent of overall water supply demand for the Project.

DRAFT

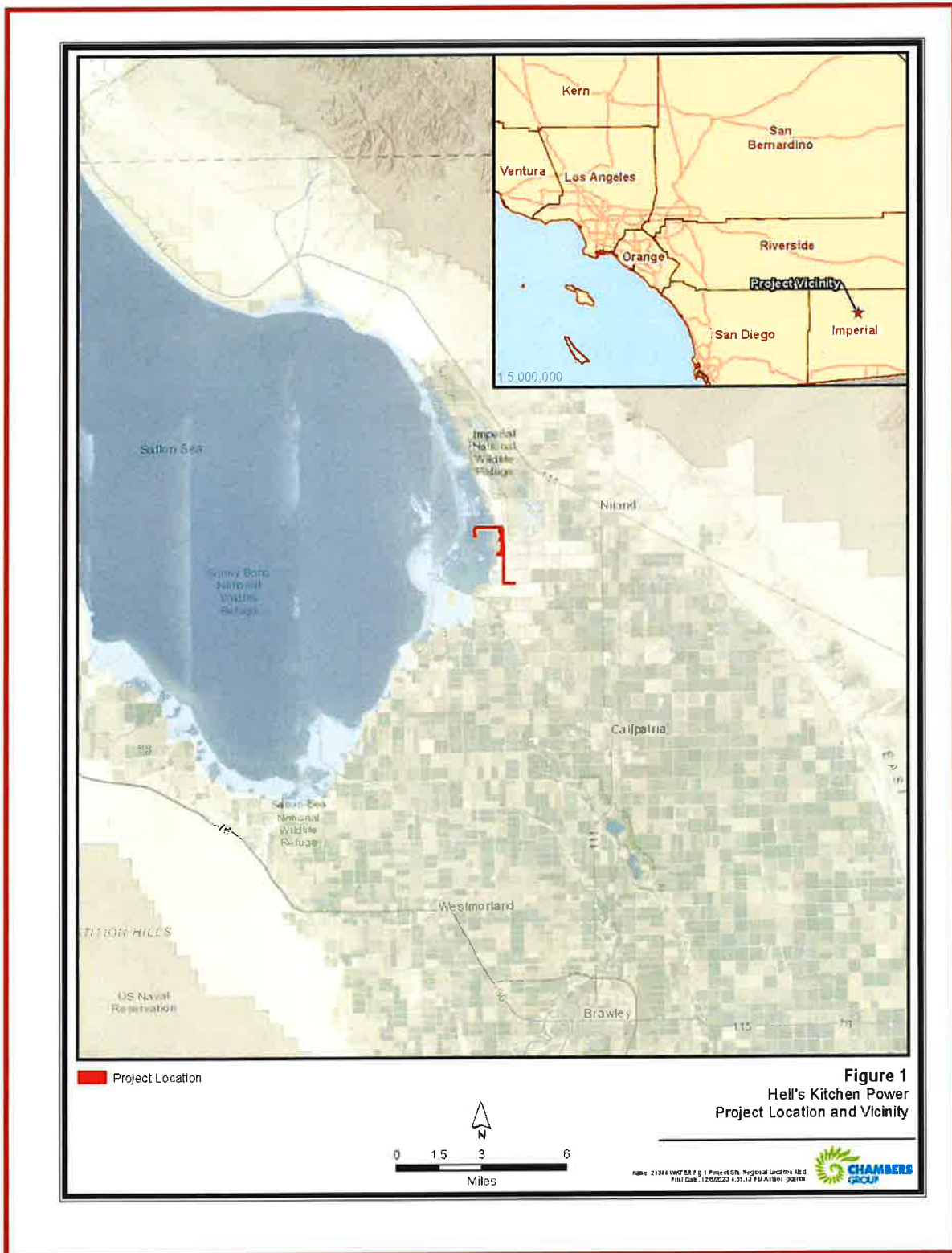


Figure 1. Project Site Regional Location

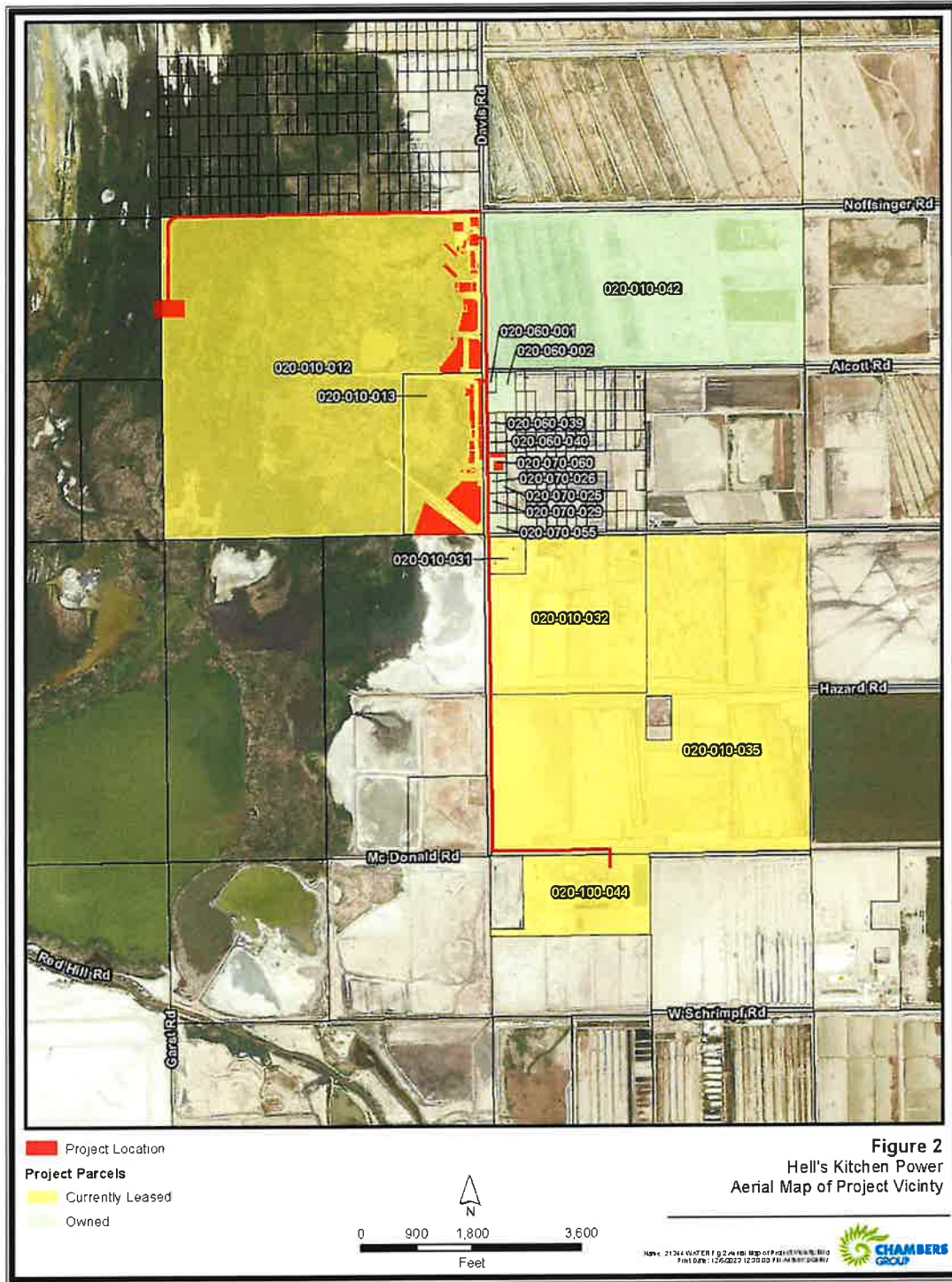
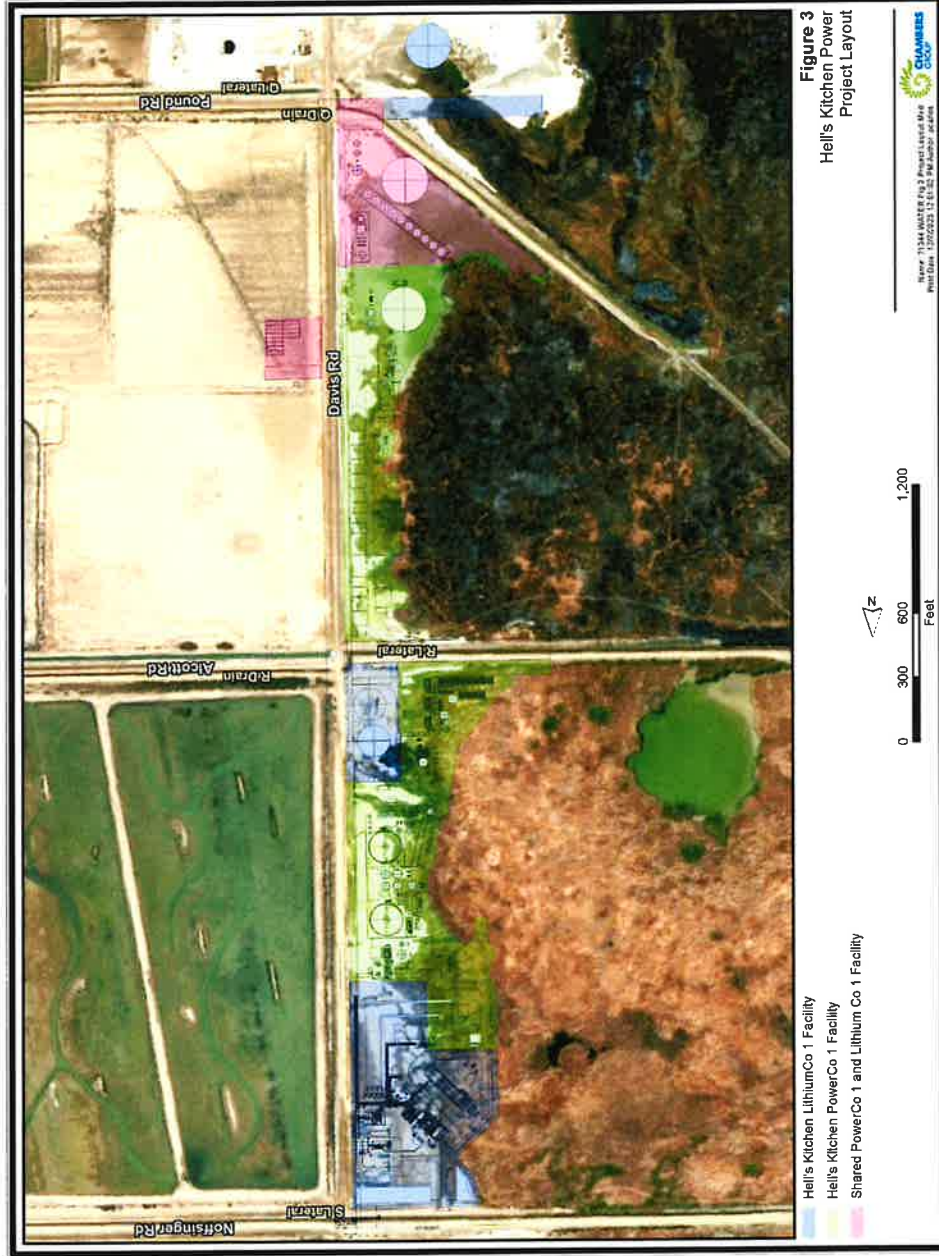


Figure 2. Aerial Map of Project Vicinity

Figure 3. Project Layout/Site Plan



Description of IID Service Area

The proposed Project site is located in Imperial County in the southeastern corner of California. The County is comprised of approximately 4,597 square miles or 2,942,080 acres.² Imperial County is bordered by San Diego County to the west, Riverside County to the north, the Colorado River/Arizona boundary to the east, and 84 miles of International Boundary with the Republic of Mexico to the south. Approximately fifty percent of Imperial County is undeveloped land under federal ownership and jurisdiction. The Salton Sea accounts for approximately 11 percent of Imperial County's surface area. In 2022, approximately sixteen percent (16%) of the area was in irrigated agriculture (468,226 acres), including 14,676 acres of the Yuma Project, some 35 sections or 6,405 acres served by Palo Verde Irrigation District (PVID), and 447,147 acres served by IID.³

The area primarily served by IID is located in the Imperial Valley, which is generally contiguous with IID's Imperial Unit, lies south of the Salton Sea, north of the U.S./Mexico International Border, and generally in the 699,132 acre area between IID's Westside Main and East Highline Canals.⁴ In 2022, IID delivered untreated water to 495,844 net irrigated acres, predominantly in the Imperial Valley, along with small areas of East and West Mesa land, including non-agricultural uses.

The developed area consists of seven incorporated cities (Brawley, Calexico, Calipatria, El Centro, Holtville, Imperial, and Westmorland), three unincorporated communities (Heber, Niland and Seeley), and three institutions (Naval Air Facility [NAF] El Centro, Calipatria CDCR, and Centinela CDCR) and supporting facilities. **Figure 4** provides a map of the IID canal network, as well as cities, communities, and main canals.

Climate Factors

Imperial Valley, located in the Northern Sonoran Desert, which has a subtropical desert climate is characterized by hot, dry summers and mild winters. Clear and sunny conditions typically prevail, and frost is rare. The region receives 85 to 90 percent of possible sunshine each year, the highest in the United States. Winter temperatures are mild rarely dropping below 32°F, but summer temperatures are very hot, with more than 100 days over 100°F each year. The remainder of the year has a relatively mild climate with temperatures averaging in the mid-70s.

The 100-year average climate characteristics are provided in **Table 1**. Rainfall contributes around 50,000 AF of effective agricultural water per inch of rain. Most rainfall occurs from November through March; however, summer storms can be significant in some years. Annual areawide rainfall is shown in **Table 2**.

² *Imperial County General Plan, Land Use Element 2008 Update*

³ *USBR website: Yuma Project. PVID contact for acreage September 30, 2021.*

⁴ *IID Annual Inventory of Areas Receiving Water Years 2022, 2021, 2020*

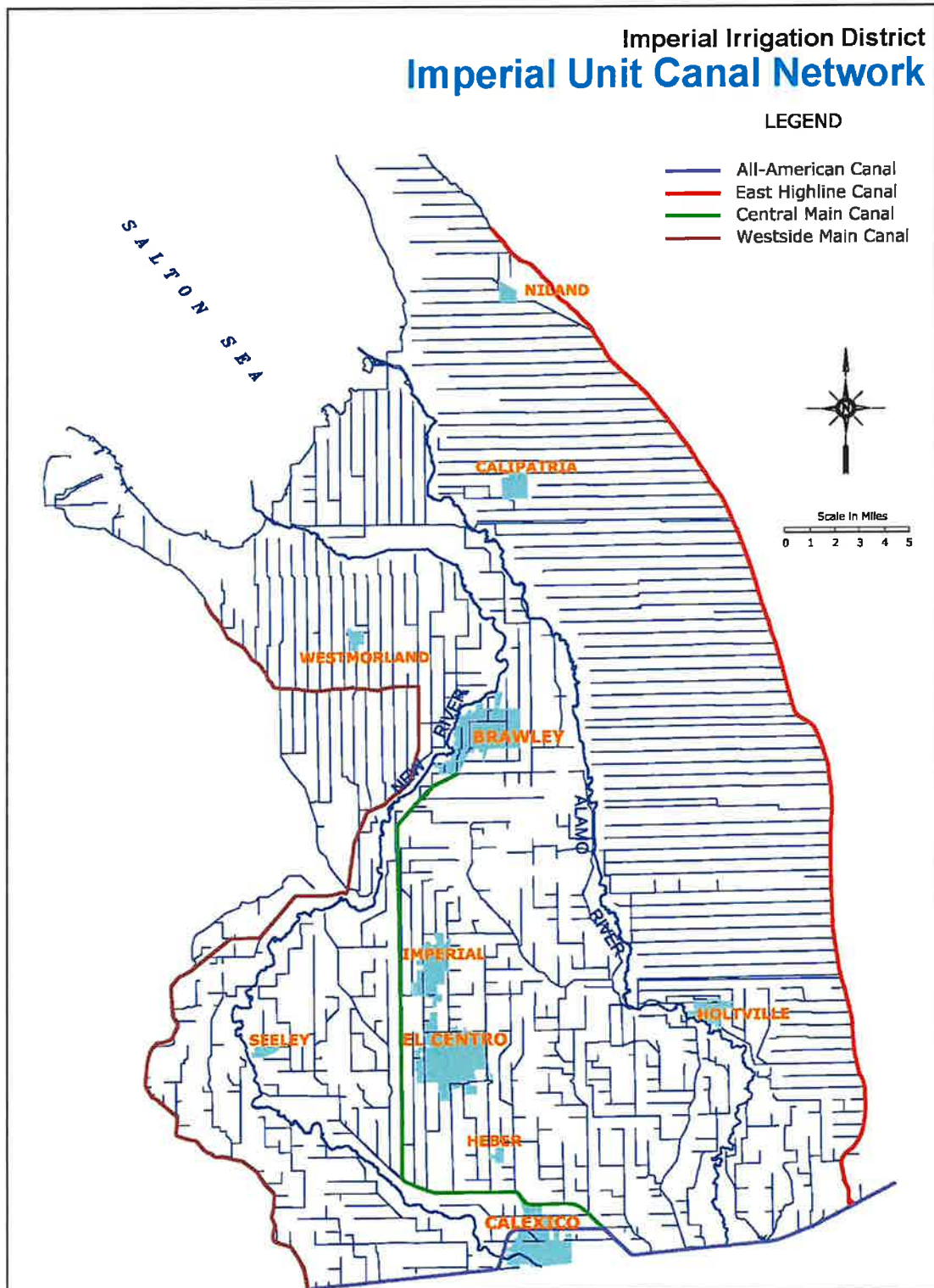


Figure 4. IID Imperial Unit Boundary and Canal Network

The thirty-year, 1993-2022, average annual air temperature was 73.95°F, and average annual rainfall was 2.51 inches, see **Table 3** and **Table 4**. This record shows that while average annual rainfall has fluctuated, the 10-year average temperatures have slightly increased over the 30-year averages.

Table 1. Climate Characteristics, Imperial, CA 100-Year Record, 1923-2022

Climate Characteristic	Annual Value
Average Precipitation (100-year record, 1923-2022)	2.75 inches (In)
Minimum Temperature, Jan 1937	16 °F
Maximum Temperature, July 1995	121 °F
Average Minimum Temperature, 1923-2022	48.4 °F
Average Maximum Temperature, 1923-2022	98.4 °F
Average Temperature, 1923-2022	73.1 °F

Source: IID Imperial Weather Station Record

Table 2. IID Areawide Annual Precipitation (In), (1990-2022)

1990	1991	1992	1993	1994	1995	1996
1.646	3.347	4.939	2.784	1.775	1.251	0.685
1997	1998	1999	2000	2001	2002	2003
1.328	2.604	1.399	0.612	0.516	0.266	2.402
2004	2005	2006	2007	2008	2009	2010
4.116	4.140	0.410	1.331	1.301	0.619	3.907
2011	2012	2013	2014	2015	2016	2017
2.261	2.752	2.772	1.103	2.000	1.867	2.183
2018	2019	2020	2021	2022		
1.305	3.017	2.685	1.688	1.265		

Source: Computation based on polygon average of CIMIS as station came online in the WIS.⁵

Table 3. Monthly Mean Temperature (°F) – Imperial, CA 10-Year, 30-Year & 100-Year (2013-2022, 1993-2022, 1923-2022)

	Jan			Feb			Mar			Apr		
	Max	Min	Avg	Max	Min	Avg	Max	Min	Avg	Max	Min	Avg
10-year	81	33	57	87	37	62	94	43	68	101	49	74
30-year	81	34	57	84	36	60	93	41	66	99	47	72
100-year	80	31	56	84	35	59	91	40	65	99	46	71
	May			Jun			Jul			Aug		
	Max	Min	Avg	Max	Min	Avg	Max	Min	Avg	Max	Min	Avg
10-year	105	55	77	116	62	89	115	72	94	114	72	93
30-year	106	54	78	113	60	87	115	69	92	114	70	92
100-year	105	53	78	113	59	86	114	68	92	113	68	91
	Sep			Oct			Nov			Dec		
	Max	Min	Avg	Max	Min	Avg	Max	Min	Avg	Max	Min	Avg
10-year	111	64	88	100	53	77	91	40	65	81	34	57
30-year	111	62	87	102	50	76	90	39	64	80	33	56
100-year	110	61	86	101	49	75	89	38	63	80	32	56

Source: IID Imperial Headquarters Station Record (Data provided by IID staff)

Notable from Table 2 (above) and Table 3 (below) is that while average annual rainfall measured at IID

⁵ From 1/1/1990-3/23/2004, 3 CIMIS stations: Seeley, Calipatria/Mulberry, Meloland; 3/24/2004-7/5/2009, 4 CIMIS stations (added Westmorland N.); 7/6/2009-12/1/2009, 3 CIMIS stations: Westmorland N. offline; 12/2/2009-2/31/2009, 4 CIMIS stations, Westmorland N. back online; 1/1/2010-9/20/2010.

Headquarters in Imperial, California, has been decreasing, monthly average temperatures are remarkably consistent.

Table 4. Monthly Mean Rainfall (In) – Imperial, CA 10-Year, 30-Year & 100-Year (2013-2022, 1993-2022, 1923-2022)

	Jan	Feb	Mar	Apr	May	Jun	Jul	Aug	Sep	Oct	Nov	Dec	Annual
10-year	0.47	0.13	0.23	0.11	0.08	0.01	0.08	0.32	0.39	0.12	0.25	0.37	2.47
30-year	0.51	0.38	0.23	0.09	0.06	0.00	0.13	0.20	0.29	0.17	0.21	0.32	2.51
100-year	0.39	0.37	0.25	0.11	0.03	0.00	0.11	0.30	0.37	0.26	0.21	0.49	2.75

Source: IID WIS: CIMIS stations polygon calculation (Data provided by IID staff).

Imperial Valley depends on the Colorado River for its water, which IID transports, untreated, to delivery gates for agricultural, municipal, industrial (including geothermal and solar energy), environmental (managed marsh), recreational (lakes), and other non-agricultural uses. IID supplies the cities, communities, institutions, and Golden State Water (which includes all or portions Calipatria, Niland, and some land adjacent within Imperial County territory) with untreated water that they treat to meet state and federal drinking water guidelines before distribution to their customers. Industries outside the municipal areas treat the water to required standards of their industry. To comply with U.S. Environmental Protection Agency (USEPA) requirements and avoid termination of canal water service, residents in the IID water service area who do not receive treated water service must obtain alternative water service for drinking and cooking from a state-approved provider. To avoid penalties that could exceed \$25,000 a day, IID strictly enforces this rule. The IID Water Department tracks nearly 3,200 raw water service accounts required by the State Water Resources Control Board’s Department of Drinking Water to have alternate state approved drinking water service. IID maintains a small-acreage pipe and drinking water database and provides an annual compliance update to the Department of Drinking Water.

Imperial Valley Historic and Future Land and Water Uses

Agricultural development in the Imperial Valley began at the turn of the twentieth century. In 2022, gross agricultural production for Imperial County was valued at \$2,612,578,000, of which approximately \$2.3 billion was produced in the IID water service area.⁶ While the agriculture-based economy is expected to continue, land use is projected to change somewhat over the years as industrial and/or alternative energy development and urbanization occur in rural areas and in areas adjacent to existing urban centers, respectively.

- The Hell’s Kitchen PowerCo 1 and LithiumCo 1 Project would provide geothermal power to the Imperial Irrigation District and would produce renewable energy jobs to the area. The Stage 1 is forecasted to generated 220 jobs. Additionally, the Project would provide a sustainable domestic source of lithium, a designated critical material identified by the U.S. Department of Energy and

⁶ [2022 Imperial County-Agricultural Crop-and Livestock Report](#)

would minimize the distance between the geothermal power plant and lithium extraction plant for production efficiency.

Imperial Valley's economy is gradually diversifying. Agriculture will likely continue to be the primary industry within the valley; however, two principal factors anticipated to reduce crop acreage are renewable energy (geothermal and solar) and urban development. Over the next twenty years, urbanization is expected to slightly decrease agriculture land use to provide space for an increase in residential, commercial, and industrial uses. The transition from agricultural land use typically results in a net decrease in water demand for municipal, commercial, and solar energy development; and a net increase in water demand for geothermal energy development. Local energy resources include geothermal, wind, biomass and solar. The County General Plan provides for development of energy production centers or energy parks within Imperial County. Alternative energy facilities will help California meet its statutory and regulatory goals for increasing renewable power generation and use and decrease water demands in Imperial County.

The IID Board has adopted the following policies and programs to address how to accommodate water demands under the terms of the QSA/ Transfers Agreements and minimize potential negative impacts on agricultural water uses:

Imperial Integrated Regional Water Management Plan: adopted by the board on December 18, 2012, and by the County, the City of Imperial, to meet the basic requirement of California Department of Water Resources (CDWR) for an IRWM plan. In all, 14 local agencies adopted the 2012 Imperial IRWMP.

Interim Water Supply Policy for Non-Agricultural Projects: adopted by the board on September 29, 2009, to ensure sufficient water will be available for new development anticipated renewable energy projects until the board selects and implements capital development projects such as those considered in the Imperial IRWMP.

Temporary Land Conversion Fallowing Policy: adopted by the board on May 8, 2012, and revised on March 29, 2016, to provide a framework for a temporary, long-term fallowing program to work in concert with the IWSP and IID's coordinated land use/water supply strategy.

Equitable Distribution Plan: adopted by the board on July 26, 2023, to provide a mechanism for IID to administer apportionment of the district's quantified annual supply of Colorado River water.

In addition, water users within the IID service area are subject to the statewide requirement of reasonable and beneficial use of water under the California Constitution, Article X, section 2.

Imperial Integrated Regional Water Management Plan (October 2012)

The Imperial IRWMP serves as the governing document for regional water planning to meet present and future water resource needs and demands by addressing such issues as additional water supply options,

demand management and determination and prioritization of uses and classes of service provided. In November 2012, the Imperial County Board of Supervisors approved the Imperial IRWMP, and the City of Imperial City Council and the IID Board of Directors approved it in December 2012. Approval by these three (3) stakeholders met the basic requirement of California Department of Water Resources (CDWR) for an IRWMP at that time. IID presented to the region stakeholders options in the event long-term water supply augmentation is needed, such as water storage and banking, recycling of municipal wastewater, and desalination of brackish water.⁷ As discussed herein, long term water supply augmentation is not anticipated to be necessary to meet proposed Project demands.

Chapter 5 of the 2012 Imperial IRWMP addresses water supplies (Colorado River and groundwater), demand, baseline and forecasted through 2050; and IID water budget. Chapter 12 addresses projects, programs and policies, and funding alternatives. Chapter 12 of the IRMWP lists, and Appendix N details, a set of capital projects that IID might pursue, including the amount of water that might result (AFY) and cost (\$/AF) if necessary. These also highlight potential capital improvement projects that could be implemented in the future.

Table 5. Non-Agricultural Water Demand within IID Water Service Area, 2015-2055 (KAFY)

	2015	2020	2025	2030	2035	2040	2045	2050	2055
Municipal	30.0	30.9	36.8	39.8	41.5	46.3	51.7	57.8	61.9
Industrial	26.4	28.7	39.8	46.5	53.2	59.9	66.6	73.3	80.0
Other	5.5	5.5	5.5	5.5	5.5	5.5	5.5	5.5	5.5
Feedlots/Dairies	17.8	19.0	20.0	20.0	20.0	20.0	20.0	20.0	20.0
Envr. Resources	8.3	9.5	12.0	12.0	12.0	12.0	12.0	12.0	12.0
Recreation	7.4	9.5	10.0	10.0	10.0	10.0	10.0	10.0	10.0
Service Pipes	12.0	12.0	12.0	12.0	12.0	12.0	12.0	12.0	12.0
Total NonAg	107.4	115.1	136.1	145.8	154.2	165.7	177.8	190.6	201.4

Notes: 2015 non-agricultural water demands are from IID 2015 Provisional Water Balance rerun 01/25/2021 2020-2055 demands are modified from 2012 Imperial IRWMP Chapter 5, Table 5-22 p 5-50 based on IID 2015 Provisional Water Balance. 2020 non-agricultural water demands are from IID 2020 Provisional Water Balance rerun on 01/31/2022. 2025-2055 demands are modified from 2012 Imperial IRWMP Chapter 5, Table 5-22 p 5-50 based on IID 2020 Provisional Water Balance. Industrial Demand includes geothermal, but not solar, energy production.

Imperial Valley historic 2015 and 2020 and the forecasted future for 2025 to 2055 non-agricultural water demand, are provided in Table 5 in five-year increments. Total water demand for non-agricultural uses is projected to be 201.4 KAF in the year 2055. This is a forecasted increase in the use of non-agricultural water of 94 KAF from 107.4 KAF for the period of 2015 to 2055. These values were modified from Chapter 5 of the Imperial IRWMP to reflect updated conditions from the IID Provisional Water Balance for calendar year 2015 and 2020. Due to the recession in 2009, state policies affecting municipal water use in relation to the drought and other factors, non-agricultural growth projections have lessened since the 2012 Imperial IRWMP. Projections in Table 5 have been adjusted (reduced by 3% for Municipal and Industrial uses and applied a flat 0.5 AF increase for Recreation use) to reflect IID 2015 and 2020 delivery

⁷ October 2012 Imperial Integrated Regional Water Management Plan, Chapter 12.

data adjustments. Even with these adjustments, the Table 5 projections for non-agricultural water demand within the IID water service area continue to reflect an unlikely aggressive growth.

Agricultural evapotranspiration (ET) demand of approximately 1,476.4 KAF in 2015, decreased in 2020 to approximately 1,442.2 KAF. The termination of fallowing programs provided 103.5 KAF of water for Salton Sea mitigation in 2017. Forecasted agricultural ET remains constant, as reductions in water use are to come from efficiency conservation not reduction in agricultural production. Market forces and other factors may impact forecasted future water demand.

Table 6 provides the 2015 and 2020 historic and 2025-2055 forecasted agricultural consumptive use and delivery demand within the IID water service area. When accounting for agriculture ET, tailwater and tilewater, total agricultural consumptive use (CU) demand ranges from 2,157.9 KAF in 2015 to 2,208.5 KAF in 2055. Forecasted total agricultural delivery demand is around 1 KAFY higher than the CU demand, ranging from 2,158.9 KAF in 2015 to 2,209.5 KAF in 2055.

Table 6. Historic and forecasted Agricultural Water Consumptive Use and Delivery Demand within IID Water Service Area, 2015-2055 (KAFY)

	2015	2020	2025	2030	2035	2040	2045	2050	2055
Ag ET from Delivered & Stored Soil Water	1,476.4	1,442.2	1,567.5	1,567.5	1,567.5	1,567.5	1,567.5	1,567.5	1,567.5
Ag Tailwater to Salton Sea	282.9	312.9	268.0	218.0	218.0	218.0	218.0	218.0	218.0
Ag Tilewater to Salton Sea	398.6	410.2	423.0	423.0	423.0	423.0	423.0	423.0	423.0
Total Ag CU Demand	2,157.9	2,165.4	2,258.5	2,208.5	2,208.5	2,208.5	2,208.5	2,208.5	2,208.5
Subsurface Flow to Salton Sea	1.0	1.0	1.0	1.0	1.0	1.0	1.0	1.0	1.0
Total Ag Delivery Demand	2,158.9	2,166.4	2,259.5	2,209.5	2,209.5	2,209.5	2,209.5	2,209.5	2,209.5

Notes: 2015 record from IID 2015 Provisional Water Balance rerun 06/28/2019; 2020 record from IID 2020 Provisional Water Balance rerun 01/25/2021; 2020-2055 forecasts from spreadsheet used to develop Figure 19, et seq. in Imperial IRWMP Chapter 5 (Data provided by IID staff).

In addition to agricultural and non-agricultural water demands, system operation demand must be included to account for operational discharge, main and lateral canal seepage, including seepage along the All-American Canal (AAC); and for AAC seepage, river evaporation and phreatophyte ET from Imperial Dam to IID's measurement site at AAC Mesa Lateral 5. These system operation demands are shown in **Table 7** for 2021. IID measures system operational uses and at All-American Canal Station 2900 just upstream of Mesa Lateral 5 Heading. Total system operational use for 2020 was 167.8 KAF, including 10 KAF of LCWSP input, 39 KAF of seepage interception input, and 40 KAF of unaccounted canal water input.

Table 7. IID System Operations Consumptive Use within IID Water Service Area and from AAC at Mesa Lateral 5 to Imperial Dam, (KAF), 2020

Delivery System Evaporation	24.4
Canal Seepage	90.8
Main Canal Spill	10.1
Lateral Spill	121.5
QSA & IID Seepage Interception	-39.0
Unaccounted Canal Water	-40.0
Total System Operational Use, In valley	167.8
Imperial Dam to AAC @ Mesa Lat 5	9.2
LCWSP	-10
Total System Operational Use in 2020	167.0
<i>Source: 2020 IID Water Balance rerun 01/25/2021</i>	

IID Interim Water Supply Policy for Non-Agricultural Projects (September 2009)

The IID IWSP provides a mechanism to address water supply requests for new non-agricultural projects being developed within the IID service area. The IWSP designates up to 25,000 AFY of water to be conserved from IID’s annual Colorado River water supply, consumptive use cap, for new non-agricultural projects. The IWSP provides a mechanism and process to develop a water supply agreement for any appropriately permitted project, and establishes a framework and set of fees to ensure the supplies used to meet new demands do not adversely affect existing users by funding water conservation or augmentation projects as needed to offset the new demand.⁸

The environmental impacts of conserving up to the 25,000 acre-feet of IWSP water were analyzed in the *Imperial Irrigation District Interim Water Supply Policy for Non-Agricultural Projects Negative Declaration*, State Clearinghouse No. 2009061103 dated June 25, 2009. The IID Board adopted this Negative Declaration on September 29, 2009.

Depending on the nature, complexity and water demands of the proposed project, new projects may be charged a one-time Reservation Fee and annual Water Supply Development Fees for the contracted water volume used solely to assist in funding new water supply projects. The applicability of the fee to certain projects will be determined by IID on a case-by-case basis, depending on the proportion of types of land uses and water demand proposed for a project. The 2023 IWSP fee schedule is shown in Table 8.

IID customers with new projects receiving water under the IWSP will be charged the appropriate water delivery rate based on measured deliveries, see [IID Water Rate Schedules](#). As of November 2023, IID has issued two water supply agreements and one “will-serve letter” under the IWSP for 6,380 AFY, leaving a balance of 18,620 AFY of potential water supply available for additional conservation and contracting under the IWSP.

⁸ IID website: [Municipal, Industrial and Commercial Customers](#).

Table 8. Interim Water Supply Policy 2023 Annual Non-Agricultural Water Supply Development Fee Schedule

Annual Demand (AF)	Reservation Fee (\$/AF)*	Development Fee (\$/AF)*
0-500	\$85.26	\$341.03
501-1000	\$120.04	\$480.17
1001-2500	\$150.74	\$602.94
2501-5000	\$186.20	\$744.81

Adjusted annually in accordance with the Consumer Price Index (CPI).

IID Temporary Land Conversion Fallowing Policy (May 2012)

Imperial County planning officials determined that renewable energy facilities were consistent with the county's agricultural zoning designation and began issuing conditional use permits (CUPs) for these projects with 30-year terms with a 10-year extension (40 years in total). These longer-term, but temporary, land use designations were not conducive to a coordinated land use/water supply policy as envisioned in the Imperial IRWMP, because temporary water supply assignments during a conditional use permit (CUP) term were not sufficient to meet the water supply verification requirements for new project approvals. Agricultural landowners also sought long-term assurances from IID that, at project termination, irrigation service would be available for them to resume their farming operations.

Based on these conditions, IID determined it had to develop a water supply policy that conformed to the local land use decision-making in order to facilitate new development and economic diversity in Imperial County which resulted in the IID Temporary Land Conversion Fallowing Policy (TLCFP).⁹ IID concluded that certain lower water use projects could still provide benefits to local water users. The resulting benefits; however, may not be to the same categories of use (e.g., municipal, commercial, and industrial) but to the district as a whole.

At the general manager's direction, IID staff developed a framework for a fallowing program that could be used to supplement the IWSP and meet the multiple policy objectives envisioned for the coordinated land use/water supply strategy. Certain private projects that, if implemented, will temporarily remove land from agricultural production within the district's water service area include renewable solar energy and other non-agricultural projects. Such projects may need a short-term water supply for construction and decommissioning activities and longer-term water service for facility operation and maintenance or for treating to potable water standards. Conserved water will be credited to the extent that water use for the new project is less than the historic water use for the project site's footprint as determined by the ten-year water use history.¹⁰

⁹ IID website: [Temporary Land Conversion Fallowing Policy \(TLCFP\)](#), and [The TLCFP](#) are the sources of the text for this section.

¹⁰ For details of how water conservation yield attributable to land removed from agricultural production and temporarily fallowed is computed, see [TLCFP for Water Conservation Yield](#).

Water demands for certain non-agricultural projects are typically less than that required for agricultural production; this reduced demand allows conserved water to be made available for other users under IID's annual consumptive use cap. This allows the district to avail itself of the ability during the term of the QSA/Transfer Agreements under CWC Section 1013 to create conserved water through projects such as temporary land fallowing conservation measures. This conserved water can then be used to satisfy the district's conserved water transfer obligation and for environmental mitigation purposes.

Under the terms of the legislation adopted to facilitate the QSA/Transfer Agreements and enacted in CWC Section 1013, the TLCFP was adopted by the IID board on May 8, 2012 and revised on March 29, 2016 to update the fee schedule for 2016. This policy provides a framework for a temporary, long-term fallowing program to work in concert with the IWSP. While conserved water generated from the TLCFP is limited by law for use for water transfer or environmental purposes, by satisfying multiple district objectives the TLCFP serves to reduce efficiency conservation and water use reduction demands on IID water users, thus providing district wide benefits.

IMPERIAL IRRIGATION DISTRICT'S WATER RIGHTS

The laws and regulations that influence IID's water supply are noted in this section. The Law of the River (as described below), along with the 2003 Quantification Settlement Agreement and Related Agreements serve as the laws, regulations and agreements that primarily influence the findings of this WSA. These agreements grant California the most senior water rights along the Colorado River and specify that IID has access to 3.1 MAF per year. These two components will influence future decisions in terms of water supply availability during periods of shortages.

California Law

IID has a longstanding right to divert Colorado River water, and IID holds legal titles to all of its water and water rights in trust for landowners within the district (CWC §20529 and §22437; *Bryant v. Yellen*, 447 U.S. 352, 371 (1980), fn.23.). Beginning in 1885, a number of individuals, as well as the California Development Company, made a series of appropriations of Colorado River water under California law for use in the Imperial Valley. The rights to these appropriations were among the properties acquired by IID from the California Development Company.

Law of the River

Colorado River water rights are governed by numerous compacts, state and federal laws, court decisions and decrees, contracts, and regulatory guidelines collectively known as the "Law of the River." Together, these documents form the basis for allocation of the water, regulation of land use, and management of the Colorado River water supply among the seven basin states and Mexico.

Of all regulatory literature that governs Colorado River water rights, the following are the specifics that impact IID:

- Colorado River Compact (1922)
- Boulder Canyon Project Act (1928)
- California Seven-Party Agreement (1931)
- Arizona v. California US Supreme Court Decision (1964, 1979)
- Colorado River Basin Project Act (1968)
- Quantification Settlement Agreement and Related Agreements (2003)
- 2003 Colorado River Water Delivery Agreement: Federal QSA for purposes of Section 5(b) Interim Surplus Guidelines (CRWDA)
- 1970 Criteria for Coordinated Long-Range Operation of Colorado River Reservoirs
- Annual Operating Plan (AOP) for Colorado River Reservoirs
- 2007 Colorado River Interim Guidelines for Lower Basin Shortages and Coordinated Operations for Lakes Powell and Mead (2007 Interim Guidelines)

Colorado River Compact (1922)

With authorization of their legislatures and urging of the federal government, representatives from the seven Colorado River basin states began negotiations regarding distribution of water from the Colorado River in 1921. In November 1922, an interstate agreement called the “Colorado River Compact” was signed by the representatives giving the Lower Basin perpetual rights to annual apportionments of 7.5 million acre-feet (MAF) of Colorado River water (75 MAF over ten years). The Upper Basin was to receive the remainder, which based on the available hydrological record was also expected to be 7.5 MAF annually, with enough left over to provide 1.5 MAF annually to Mexico.

Boulder Canyon Project Act (1928)

Provisions in the 1928 Boulder Canyon Project Act made the compact effective and authorized construction of Hoover Dam and the All-American Canal, and served as the United States’ consent to accept the Compact. Through a Presidential Proclamation on June 25, 1929, this act resulted in ratification of the Compact by six of the basin states and required California to limit its annual consumptive use to 4.4 MAF of the lower basin’s apportionment plus not less than half of any excess or surplus water unapportioned by the Compact. A lawsuit was filed by the State of Arizona after its refusal to sign. Through the implementation of its 1929 Limitation Act, California abided by this federal mandate. The Boulder Canyon Act authorized the Secretary of the Interior (Secretary) to “contract for the storage of water... and for the delivery thereof... for irrigation and domestic uses,” and additionally defined the lower basin’s 7.5 MAF apportionment split, with an annual allocation 0.3 MAF to Nevada, 2.8 MAF to Arizona, and 4.4 MAF to California. Even though the three states never formally settled or agreed to these terms, a 1964 Supreme Court decision (*Arizona v. California*, 373 U.S. 546) declared the three states’ consent to be insignificant since the Boulder Canyon Project Act was authorized by the Secretary.

California Seven-Party-Agreement (1931)

Following implementation of the Boulder Canyon Project Act, the Secretary requested that California make recommendations regarding distribution of its apportionment of Colorado River water. In August 1931, under chairmanship of the State Engineer, the California Seven-Party Agreement was developed and authorized by the affected parties to prioritize California water rights. The Secretary accepted this agreement and established these priorities through General Regulations issued in September of 1931. The first four (4) priority allocations account for California's annual apportionment of 4.4 MAF, with agricultural entities using 3.85 MAF of that total. Additional priorities are defined for years in which the Secretary declares that excess waters are available.

Arizona v. California U.S. Supreme Court Decision (1964, 1979)

The 1964 Supreme Court decision settled a 25-year disagreement between Arizona and California that stemmed from Arizona's desire to build the Central Arizona Project to enable use of its full apportionment. California's argument was that as Arizona used water from the Gila River, which is a Colorado River tributary, it was using a portion of its annual Colorado River apportionment. An additional argument from California was that it had developed a historical use of some of Arizona's apportionment, which, under the doctrine of prior appropriation, precluded Arizona from developing the project. California's arguments were rejected by the U.S. Supreme Court. Under direction of the Supreme Court, the Secretary was restricted from delivering water outside of the framework of apportionments defined by law. Preparation of annual reports documenting consumptive use of water in the three lower basin states was also mandated by the Supreme Court. In 1979, present perfected water rights (PPRs) referred to in the Colorado River Compact and in the Boulder Canyon Project Act were addressed by the Supreme Court in the form of a Supplemental Decree.

In March of 2006, a Consolidated Decree was issued by the Supreme Court to provide a single reference to the conditions of the original 1964 decrees and several additional decrees in 1966, 1979, 1984 and 2000 that stemmed from the original ruling. The Consolidated Decree also reflects the settlements of the federal reserved water rights claim for the Fort Yuma Indian Reservation.

Colorado River Basin Project Act (1968)

In 1968, various water development projects in both the upper and lower basins, including the Central Arizona Project (CAP) were authorized by Congress. Under the Colorado River Basin Project Act, priority was given to California's apportionment over (before) the CAP water supply in times of shortage. Also under the act, the Secretary was directed to prepare long-range criteria for the Colorado River reservoir system in consultation with the Colorado River Basin States.

Quantification Settlement Agreement and Related Agreements (2003)

With completion of a large portion of the CAP infrastructure in 1994, creation of the Arizona Water Banking Authority in 1995, and the growth of Las Vegas in the 1990s, California encountered increasing pressure to live within its rights under the Law of the River. After years of negotiating among Colorado

River Compact States and affected California water delivery agencies, a Quantification Settlement Agreement and Related Agreements and documents were signed on October 10, 2003, by the Secretary of Interior, IID, Coachella Valley Water District (CVWD), Metropolitan Water District of Southern California (MWD), San Diego County Water Authority (SDCWA), and other affected parties.

The Quantification Settlement Agreement and Related Agreements (QSA/Transfer Agreements) are a set of interrelated contracts that resolve certain disputes among the United States, the State of California, IID, MWD, CVWD and SDCWA, for a period of 35 to 75 years, regarding the reasonable and beneficial use of Colorado River water; the ability to conserve, transfer and acquire conserved Colorado River water; the quantification and priority of Priorities 3(a) and 6(a)¹¹ within California for use of Colorado River water; and the obligation to implement and fund environmental impact mitigation.

Conserved water transfer agreements between IID and SDCWA, IID and CVWD, and IID and MWD are all part of the QSA/Transfer Agreements. For IID, these contracts identify conserved water volumes and establish transfer schedules along with price and payment terms. As specified in the agreements, IID will transfer nearly 415,000 AF annually over a 35-year period (or longer), as follows:

- to MWD 110,000 AF [modified to 105,000 AF in 2007],
- to SDCWA 205,000 AF,
- to CVWD and MWD combined 103,000 AF, and
- to certain San Luis Rey Indian Tribes up to 11,500 AFY of water.

All the conserved water will ultimately come from IID system and on-farm efficiency conservation improvements. In the interim, IID has implemented a Fallowing Program to generate water associated with Salton Sea mitigation related to the impacts of the IID/SDCWA water transfer, as required by the State Water Resources Control Board, which is to run from 2003 through 2017. In return for its QSA/Transfer Agreements programs and deliveries, IID will receive payments totaling billions of dollars to fund needed efficiency conservation measures and to pay growers for conserved on-farm water, so IID can transfer nearly 14.5 MAF of water without impacting local productivity. In addition, IID will transfer to SDCWA 67,700 AFY annually of water conserved from the lining of the AAC in exchange for payment of lining project costs and a grant to IID of certain rights to use the conserved water. In addition to the 105,000 acre-feet of water currently being conserved under the 1988 IID/MWD Conservation Program, these more recent agreements define an additional 303,000 AFY to be conserved by IID from on-farm and distribution system conservation projects for transferred to SDCWA, CVWD, and MWD.

¹¹ Priorities 1, 2, 3(b), 6(b), and 7 of current Section 5 Contracts for the delivery of Colorado River water in the State of California and Indian and miscellaneous Present Perfected Rights within the State of California and other existing surplus water contracts are not affected by the QSA Agreement.

Colorado River Water Delivery Agreement (2003)¹²

As part of QSA/Transfer Agreements among California and federal agencies, the Colorado River Water Delivery Agreement: Federal QSA for purposes of Section 5(b) Interim Surplus Guidelines (CRWDA) was entered into by the Secretary of the Interior, IID, CVWD, MWD and SDCWA. This agreement involves the federal government because of the change in place of diversion from Imperial Dam into the All-American Canal to Parker Dam into MWD’s Colorado River Aqueduct.

The CRWDA assists California to meet its “4.4 Plan” goals by quantifying deliveries for a specific number of years for certain Colorado River entitlements so transfers may occur. In particular, for the term of the CRWDA, quantification of Priority 3(a) was effected through caps on water deliveries to IID (consumptive use of 3.1 MAF per year) and CVWD (consumptive use of 330 KAF per year). In addition, California’s Priority 3(a) apportionment between IID and CVWD, with provisions for transfer of supplies involving IID, CVWD, MWD and SDCWA are quantified in the CRWDA for a period of 35 years or 45 years (assumes SDCWA does not terminate in year 35) or 75 years (assumes SDCWA and IID mutually consent to renewal term of 30 years).

Allocations for consumptive use of Colorado River water by IID, CVWD and MWD that will enable California to stay within its basic annual apportionment (4.4 MAF plus not less than half of any declared surplus) are defined by the terms of the QSA/Transfer Agreements (Table 9). As specified in the QSA/Transfer Agreements, by 2026, IID annual use within (Imperial Valley) is to be reduced to just over 2.6 MAF of its 3.1 MAF quantified annual apportionment. The remaining nearly 500,000 AF (which includes the 67,000 AF from AAC lining) are to be transferred annually to urban water users outside of the Imperial Valley.

Table 9. CRWDA Annual 4.4 MAF Apportionment (Priorities 1 to 4) for California Agencies (AFY)

User	Apportionment (AFY)
Palo Verde Irrigation District and Yuma Project*	420,000
Imperial Irrigation District	3,100,000
Coachella Valley Water District	330,000
Metropolitan Water District of Southern California*	550,000
Total:	4,400,000

* PVID and Yuma Project did not agree to a cap; value represents a contractual obligation by MWD to assume responsibility for any overages or be credited with any volume below this value.

Notes: All values are consumptive use at point of Colorado River diversion: Palo Verde Diversion Dam (PVID), Imperial Dam (IID and CVWD), and Parker Dam (MWD). Source: IID Annual Water Report

Quantification of Priority 6(a) was effected through quantifying annual consumptive use amounts to be made available in order of priority to MWD (38 KAF), IID (63 KAF), and CVWD (119 KAF) with the provision that any additional water available to Priority 6(a) be delivered under IID’s and CVWD’s existing water delivery contract with the Secretary¹³. The CRWDA provides that the underlying water

¹² CRWDA: Federal QSA accessed 7 June 2017.

¹³ When water levels in the Colorado River reservoirs are low, Priority 5, 6 and 7 apportionments are not available for diversion.

delivery contract with the Secretary remain in full force and effect. (*Colorado River Documents 2008*, Chapter 6, pages 6-12 and 6-13). The CRWDA also provides a source of water to effect a San Luis Rey Indian Water Rights settlement. Additionally, the CRWDA satisfies the requirement of the 2001 Interim Surplus Guidelines (ISG) that a QSA be adopted as a prerequisite to the interim surplus determination by the Secretary in the ISG.

Inadvertent Overrun Payback Policy (2003)

The CRWDA Inadvertent Overrun Payback Policy (IOPP), adopted by the Secretary contemporaneously with the execution of the CRWDA, provides additional flexibility to Colorado River management and applies to entitlement holders in the Lower Division States (Arizona, California and Nevada)¹⁴ The IOPP defines inadvertent overruns as “Colorado River water diverted, pumped, or received by an entitlement holder of the Lower Division States that is in excess of the water users’ entitlement for the year.” An entitlement holder is allowed a maximum overrun of 10 percent (10%) of its Colorado River water entitlement when operating under normal conditions.

In the event of an overrun, the IOPP provides a mechanism to payback the overrun. When the Secretary has declared a normal year for Colorado River diversions, a contractor has from one to three years to pay back its obligation, with a minimum annual payback equal to 20 percent of the entitlement holder’s maximum allowable cumulative overrun account or 33.3 percent of the total account balance, whichever is greater. However, when Lake Mead is below 1,125 feet on January 1, the terms of the IOPP require that the payment of the inadvertent overrun obligation be made in the calendar year after the overrun is reported in the USBR Lower Colorado Region Colorado River Accounting and Water Use Report [for] Arizona, California, and Nevada (Decree Accounting Report).¹⁵

1970 Criteria for Coordinated Long-Range Operation of Colorado River Reservoirs

The 1970 Operating Criteria control operation of the Colorado River reservoirs in compliance with requirements set forth in the Colorado River Compact of 1922, the United States-Mexico Water Treaty of 1944, the Colorado River Storage Project Act of 1956, the Boulder Canyon Projects Act (Lake Mead) and the Colorado River Basin Project Act (Upper Basin Reservoirs) of 1968, and other applicable federal laws. Under these Operating Criteria, the Secretary makes annual determinations published in the USBR Annual Operating Plan for Colorado River Reservoirs (discussed below) regarding the release of Colorado River water for deliveries to the lower basin states. A requirement to equalize active storage between Lake Powell and Lake Mead when there is sufficient storage in the Upper Basin is included in these operating criteria. Figure 5 identifies the major storage facilities at the upper and lower basin boundaries.

¹⁴ USBR, 2003 CRWDA ROD Implementation Agreement, IOPP and Related Federal Actions Final EIS. Section IX. Implementing the Decision A. Inadvertent Overrun and Payback Policy. Pages 16-19 of 34.

¹⁵ 2003 CRWDA ROD. Section IX. A.6.c, page 18 of 34.

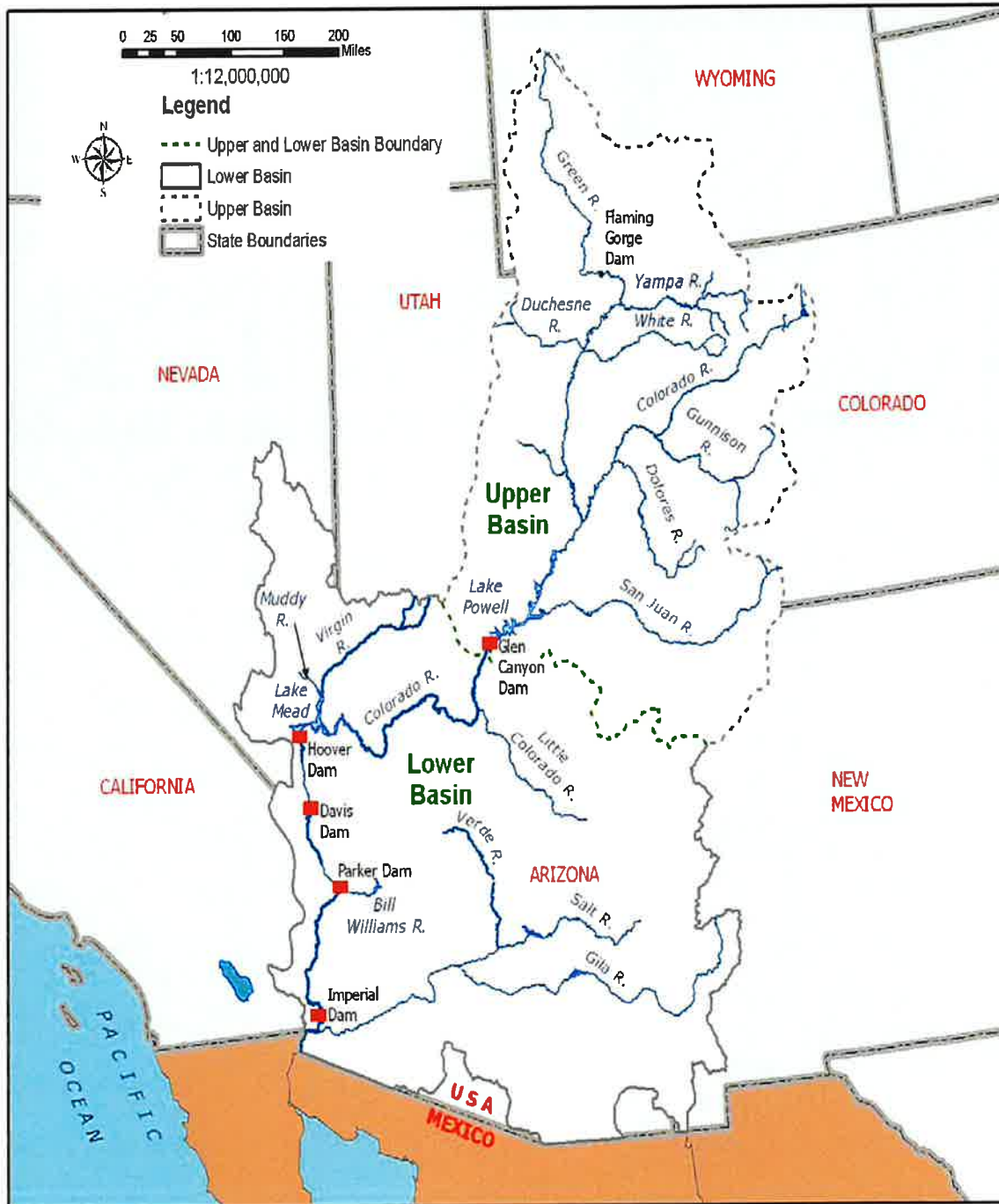


Figure 5. Major Colorado River Reservoir Storage Facilities and Basin Location Map

Source: Final EIS – Colorado River Interim Guidelines for Lower Basin Shortages and Coordinated Operations for Lake Powell and Lake Mead, Volume 1 Chapter 1 Purpose and Need , p I-10.

Annual Operating Plan for Colorado River Reservoirs (Applicable when Lake Mead Surplus/Shortage)

The AOP is developed in accordance with Section 602 of the Colorado River Basin Project Act (Public Law 90-537); the Criteria for Coordinated Long-Range Operations of Colorado River Reservoirs Pursuant to the Colorado River Basin Project Act of 1968, as amended, promulgated by the Secretary of the Interior; and Section 1804(c)(3) of the Grand Canyon Protection Act (Public Law 102-575). As part of the AOP process, the Secretary makes determinations regarding the availability of Colorado River water for deliveries to the lower basin states, including whether normal, surplus, and shortage conditions are in effect on the lower portion of the Colorado River.

2007 Colorado River Interim Guidelines for Lower Basin Shortages (2007 Interim Guidelines)

A multi-year drought in the Colorado River Upper Basin triggered the need for the 2007 Interim Shortage Guidelines. In the summer of 1999, Lake Powell was essentially full with reservoir storage at 97 percent of capacity. However, precipitation fell off starting in October 1999 and 2002 inflow was the lowest recorded since Lake Powell began filling in 1963.¹⁶ By August 2011, inflow was 279 percent (279%) of average; however, drought resumed in 2012 and continued through calendar year 2022. Using the record in **Table 10**, average unregulated inflow to Lake Powell for water years 2000-2022 is 70 percent (69.96%); or if 2011 is excluded, 67 percent (66.95%) of the historic average, see **Table 10**.

Table 10. Unregulated Inflow to Lake Powell, Percent of Historic Average, 2000-2022

2000	2001	2002	2003	2004	2005	2006	2007	2008	2009	2010
62%	59%	25%	51%	49%	105%	73%	68%	102%	88%	73%
2011	2012	2013	2014	2015	2016	2017	2018	2019	2020	2021
136%	35%	49%	90%	83%	80%	101%	36%	120%	54%	36%
2022										
34%										

Source: UCR Water Operations: Historic Data (2000-2022)

In the midst of the drought period, USBR developed 2007 Interim Guidelines with consensus from the seven basin states, which selected the Draft EIS Preferred Alternative as the basis for USBR's final determination. The basin states found the Preferred Alternative best met all aspects of the purpose and need for the federal action.¹⁷

The 2007 Interim Guidelines Preferred Alternative highlights the following:

1. The need for the Interim Guidelines to remain in place for an extended period of time.
2. The desirability of the Preferred Alternative based on the facilitated consensus recommendation from the basin states.
3. The likely durability of the mechanisms adopted in the Preferred Alternative in light of the extraordinary efforts that the basin states and water users have undertaken to develop

¹⁶ Water Year: October 1 through September 30 of following year, so water year ending September 30, 1999

¹⁷ USBR *Colorado River Interim Guidelines for Lower Basin Shortages and Coordinated Operations for Lake Powell and Lake Mead* <<http://www.usbr.gov/lc/region/programs/strategies.html>>

implementing agreements that will facilitate the water management tools (shortage sharing, forbearance, and conservation efforts) identified in the Preferred Alternative

4. That the range of elements in the Preferred Alternative will enhance the Secretary's ability to manage the Colorado River reservoirs in a manner that recognizes the inherent tradeoffs between water delivery and water storage.

In June 2007, USBR announced that a preferred alternative for Colorado River Interim Guidelines for Lower Basin Shortages and Coordinated Operations of Lake Powell and Lake Mead (Final Preferred Alternative) had been determined. The Final Preferred Alternative, based on the basin states' consensus alternative and an alternative submitted by the environmental interests called "Conservation Before Shortage," is comprised of four key operational elements which are to guide operations of Lake Powell and Lake Mead through 2026 are:

1. Shortage strategy for Lake Mead and Lower Division states: The Preferred Alternative proposed discrete levels of shortage volumes associated with Lake Mead elevations to conserve reservoir storage and provide water users and managers in the Lower Basin with greater certainty to know when, and by how much, water deliveries will be reduced during low reservoir conditions.
2. Coordinated operations of Lake Powell and Lake Mead: The Preferred Alternative proposed a fully coordinated operation of the reservoirs to minimize shortages in the Lower Basin and to avoid risk of curtailments of water use in the Upper Basin.
3. Mechanism for storage and delivery of conserved water in Lake Mead: The Preferred Alternative proposed the Intentionally Created Surplus (ICS) mechanism to provide for the creation, accounting, and delivery of conserved system and non-system water thereby promoting water conservation in the Lower Basin. Credits for Colorado River or non-Colorado River water that has been conserved by users in the Lower Basin creating an ICS would be made available for release from Lake Mead at a later time. The total amount of credits would be 2.1 MAF, but this amount could be increased up to 4.2 MAF in future years.
4. Modifying and extending elements of the Interim Surplus Guidelines (ISG). The ISG determines conditions under which surplus water is made available for use within the Lower Division states. These modifications eliminate the most liberal surplus conditions thereby leaving more water in storage to reduce the severity of future shortages.

With respect to the various interests, positions, and views of the seven basin states, this provision adds an important element to the evolution of the legal framework for prudent management of the Colorado River. Furthermore, the coordinated operation element allows for adjustment of Lake Powell releases to respond to low reservoir storage conditions in either Lake Powell or Lake Mead. States found the Preferred Alternative best met all aspects of the purpose and need for the federal action.¹⁸ The 2007

¹⁸ USBR Colorado River Interim Guidelines for Lower Basin Shortages and Coordinated Operations for Lake Powell and Lake Mead.

Interim Guidelines are in place from 2008 through December 31, 2025 (through preparation of the 2026 Annual Operating Plan).

Lower Colorado Region Water Shortage Operations

The Colorado River Basin is experiencing a prolonged period of drought and record-low runoff conditions that have resulted in historically low reservoir levels in both Lake Powell (upper Basin) and Lake Mead (lower Basin). The period from 2000 through 2022 was the lowest 23-year inflow into Lake Powell in the historical record and has strained the Colorado River system. The drought in the Colorado River watershed has continued through 2022. Despite an increase in observed runoff in August 2011 when unregulated inflow to Lake Powell was 279 percent of the average. Since 2000, Lake Mead has been below the “average” level of lake elevations (see Figure 6 Such conditions have caused the activation of shortage plans for waters users in Arizona and Nevada, and in Mexico. By May of 2022 Lake Meads elevation had declined to 1,048 feet. These conditions resulted in the U.S. Secretary of the Interior declaring the first-ever Tier 2a Shortage on the Colorado River. The drought in the Colorado River watershed had lessened by mid 2023 after a winter of record-breaking rain and snow but not enough to take out of a Tier 1 Shortage for 2024 operations

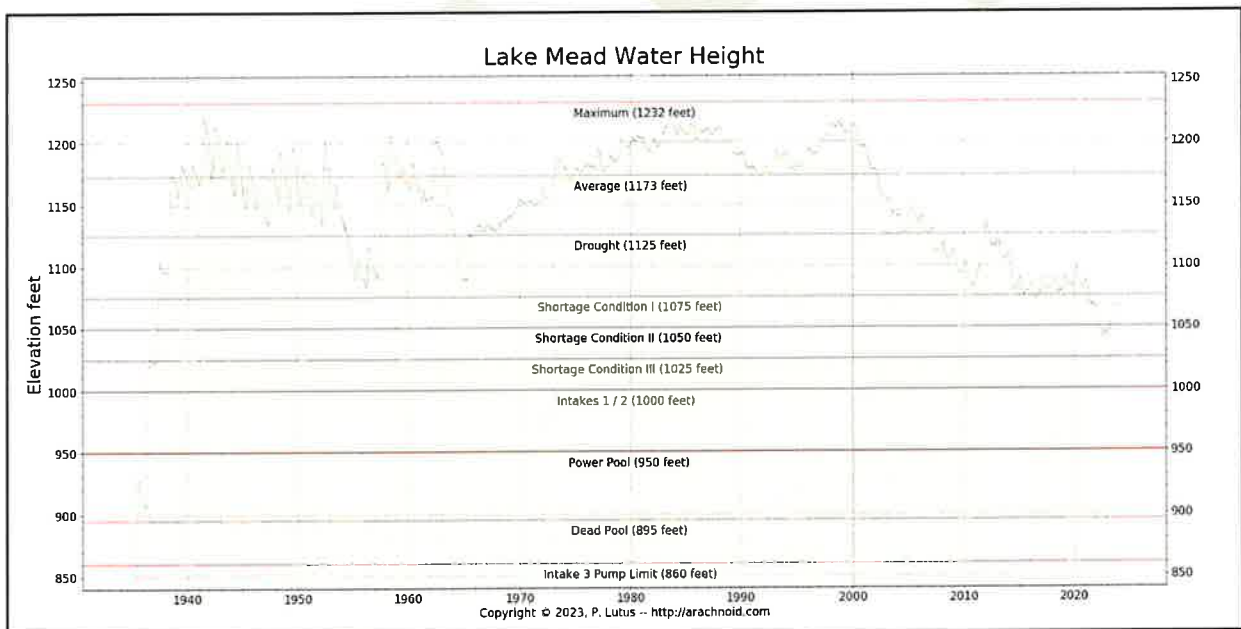


Figure 6. Lake Mead Water Elevation Levels November 2023

Source: <<http://www.arachnoid.com/NaturalResources/index.html>>

According to guidelines put in place in 2007, Arizona and Nevada begin to take shortages when the water elevation in Lake Mead falls below 1,075 feet. The volumes of shortages increase as water levels fall to 1,050 feet and again at 1,025 feet. In 2012, Mexico agreed to participate in a 5-year pilot agreement to share specific volumes of shortages at the same elevations. The 2007 interim shortage guidelines contain no reductions for California, which has senior water rights to the Central Arizona

Project water supply, through 2025 when the guidelines expire. If Lake Mead's elevation drops to 1,025 feet, a re-consultation process would be triggered among the basin states to address next steps. Consultation would start out within each state, then move to the three lower basin states, followed by all seven states and the USBR. Mexico will then be brought into the process unless they choose to participate earlier. In total, 721,000 acre-feet of reductions will be implemented in the Lower Basin and Mexico in 2023 consistent with various agreements that dictate the operation of the Colorado River.

California has no stipulated reduction to its water supplies under a Tier 2a Shortage declaration. While not directly affected by the shortage reductions announced by Reclamation, the Shortage condition does prevent IID from overrunning its approved water order and, as stated earlier, contributions to address Lake Mead water elevation are anticipated by IID. IID has offered voluntary water conservation for the benefit of Lake Mead, up to 250,000 AFY, as long as there are no obligatory reductions.

IMPERIAL IRRIGATION DISTRICT WATER SUPPLY AND DEMAND

SB 610 requires an analysis of a normal, single dry, and multiple dry water years to show that adequate water is available for the proposed Project in various climate scenarios. Water availability for this Project in a normal year is no different from water availability during a single-dry and multiple-dry year scenarios. This is due to the small effect rainfall has on water availability in IID's arid environment along with IID's strong entitlements to the Colorado River water supply. Local rainfall does have some impact on how much water is consumed (i.e., if rain falls on agricultural lands, those lands will not demand as much irrigation), but does not impact the definition of a normal year, a single-dry year, or a multiple-dry year scenario.

WATER AVAILABILITY – NORMAL YEAR

IID is entitled to annual net consumptive use of 3.1 MAF of Colorado River, less its QSA/Transfer Agreement obligations. Imperial Dam, located north of Yuma, Arizona, serves as a diversion structure for water deliveries throughout southeastern California, Arizona, and Mexico. Water is transported to the IID water service area through the AAC for use throughout the Imperial Valley. IID historic and forecast net consumptive use volumes at Imperial Dam from CRWDA Exhibit B are shown in Table 11. Volumes 2003-2022 are adjusted for USBR Decree Accounting historic records. Volumes for 2023-2077 are from CRWDA Exhibit B modified to reflect 2014 Letter Agreement changes to the 1988 IID/MWD Water Conservation Agreement.¹⁹

¹⁹ [2014 Imperial Irrigation District Letter Agreement](#) for Substitution and Conservation Modifications to the IID/MWD Water Conservation Agreement - December 17, 2014.

Due to limits on annual consumptive use of Colorado River water under the QSA/Transfer Agreements, IID's water supply during a normal year is best represented by the CRWDA Exhibit B Net Available for Consumptive Use (**Table 11**, Column 11). The annual volume is IID Priority 3(a) Quantified Amount of 3.1 million acre-feet (MAF) (**Table 11**, Column 2) less the IID transfer program reductions for each year (**Table 11**, Columns 3-9). IID suggests **Table 11**, which assumes full use of IID's quantified water supply, be used in determining base normal year water availability.

DRAFT

SB 610 - Water Supply Assessment for Hell's Kitchen PowerCo 1 and LithiumCo 1 Project

Table 11. IID Historic and Forecast Net Consumptive Use for Normal Year, Single-Dry Year and Multiple-Dry Year Water Supply, 2003-2037, et seq. (CRWDA Exhibit B)

IID Quantification and Transfers, Volumes in KAF at Imperial Dam ¹										
Col 1	2	3	4	5	6	7	8	9	10	11
Year	IID Priority 3(a)									IID Net [Available for] Consumptive Use (Col 2 - 10)
	IID 3(a) Quantified Amount	IID Reductions							IID Total Reduction (Σ Cols 3-9) ⁵	
		1988 MWD Transfer ²	SDCWA Transfer	AAC Lining	Salton Sea Mitigation SDCWA Transfer ³	Intra-Priority 3 CVWD Transfer	MWD Transfer w\ Salton Sea Restoration ⁴	Misc. PPRs		
2003	3,100	105.1	10.0	0.0	0.0	0.0	0.0	11.5	126.6	2978.2
2004	3,100	101.9	20.0	0.0	15.0	0.0	0.0	11.5	148.4	2743.9
2005	3,100	101.9	30.0	0.0	15.0	0.0	0.0	11.5	158.4	2756.8
2006	3,100	101.2	40.0	0.0	20.0	0.0	0.0	11.5	172.7	2909.7
2007	3,100	105.0	50.0	0.0	25.0	0.0	0.0	11.5	191.5	2872.8
2008	3,100	105.0	50.0	8.9	26.0	4.0	0.0	11.5	205.4	2825.1
2009	3,100	105.0	60.0	65.5	30.1	8.0	0.0	11.5	280.1	2566.7
2010	3,100	105.0	70.0	67.7	33.8	12.0	0.0	11.5	294.8	2540.5
2011	3,100	103.9	63.3	67.7	0.0	16.0	0.0	11.5	262.4	2915.8
2012	3,100	104.1	106.7	67.7	15.2	21.0	0.0	11.5	326.2	2,903.2
2013	3,100	105.0	100.0	67.7	71.4	26.0	0.0	11.5	381.6	2,554.9
2014	3,100	104.1	100.0	67.7	89.2	31.0	0.0	11.5	403.5	2,533.4
2015	3,100	107.82	100.0	67.7	153.3	36.0	0.0	11.5	476.3	2,480.9
2016	3,100	105.0	100.0	67.7	130.8	41.0	0.0	11.5	456.0	2,504.3
2017	3,100	105.0	100.0	67.7	105.3	45.0	0.0	9.9	432.9	2,667.1
2018	3,100	105	130	67.7	0.1	63	0.0	9.7	375.5	2,724.5
2019 ⁶	3,100	105	160	67.7	46.55	68	0.0	6.9	454.2	2,645.8
2020	3,100	105	192.5	67.7	0.0	73	0.0	9.1	448.0	2,652.0
2021	3,100	105	205	67.7	0.0	78	0.0	9.3	465.0	2,635.0
2022	3,100	105	202.5	67.7	0	83	0.0	9.8	468.0	2,632.0
2023	3,100	105	200	67.7	0	88	0.0	11.5	472.2	2,627.8
2024	3,100	105	200	67.7	0	93	0.0	11.5	477.2	2,622.8
2025	3,100	105	200	67.7	0	98	0.0	11.5	482.2	2,617.8
2026	3,100	105	200	67.7	0	103	0.0	11.5	487.2	2,612.8
2027	3,100	105	200	67.7	0	103	0.0	11.5	487.2	2,612.8
2028	3,100	105	200	67.7	0	103	0.0	11.5	487.2	2,612.8
2029-37	3,100	105	200	67.7	0	103	0.0	11.5	487.2	2,612.8
2038-47 ⁷	3,100	105	200	67.7	0	103	0.0	11.5	487.2	2,612.8
2048-77 ⁸	3,100	105	200	67.7	0	50	0.0	11.5	434.2	2,665.8

1. 2003 through 2022, volumes are adjusted for actual USBR Decree Accounting values; IID Total Reduction and Net Available for Consumptive Use may not equal Col 2 minus Col 10, if IID conservation/use was not included in Exhibit B.
2. 2014 Letter of Agreement provides that, effective January 2016 total amount of conserved water available is 105 KAFY
3. Salton Sea Mitigation volumes may vary based on conservation volumes and method of conservation.
4. *This transfer is not likely given lack of progress on Salton Sea restoration as of 2018; shaded entries represent volumes that may vary.*
5. Reductions include conservation for 1988 IID/MWD Transfer, IID/SDCWA Transfer, AAC Lining; SDCWA Transfer Mitigation, MWD Transfer w/Salton Sea Restoration (if any); Misc. PPRs. Amounts are independent of increases and reductions as allowed by the IOPP.
6. In order to resolve the outstanding 2010 Salton Sea mitigation water pre-delivery issue, IID left 46,546 AF of extraordinary conservation in Lake Mead. See IID's December 19, 2019, revised 2019 water order and Reclamation's March 10, 2020, approval letter.
7. Assumes SDCWA does not elect termination in year 35.
8. Assumes SDCWA and IID mutually consent to renewal term of 30 years.
9. Modified from 100 KAFY in CRWDA Exhibit B; stating in 2018 MWD will provide CVWD 50 KAFY of the 100 KAFY.

Source: CRWDA: Federal QSA Exhibit B, p 13; updated values from 2022 Annual Water & QSA Implementation Report

CRWDA Exhibit B Net Available for Consumptive Use volumes less system operation demand represents the amount of water available for delivery by IID Water Department to its customers each year. In a normal year, perhaps 50,000 to 100,000 AF of effective rainfall would fall in the IID water service area. However, rainfall is not evenly distributed throughout the IID water service area and is not taken into account by IID in the submittal of its Estimate of Diversion (annual water order) to the USBR.

EXPECTED WATER AVAILABILITY – SINGLE DRY AND MULTIPLE DRY YEARS

Historically, when drought conditions exist within the IID water service area, as has been the case for the past two decades, the water supply available to meet agricultural and non-agricultural water demands remains the same as normal year water supply because IID historically relied solely on its entitlement for Colorado River water. Due to the priority of IID water rights and other agreements, drought conditions affecting Colorado River water supplies cause shortages for Arizona, Nevada, and Mexico, before impacting California and IID. Accordingly, the Net Available for Consumptive Use volumes in Table 11, Column 11 represents the water supply at Imperial Dam available for diversion by IID in single-dry year and multiple-dry year scenarios, consistent with IID's senior water rights. The runoff declines in the upper basin and prolonged drought conditions throughout the west have resulted, for the first time, in the Colorado River operating under a Tier 2a Shortage Condition in 2023, creating long-term water supply uncertainties throughout the Basin states.

Water Management under a Suspended Inadvertent Overrun Payback Policy (IOPP)

Under normal operating conditions, the CRWDA Inadvertent Overrun Payback Policy (IOPP), provided IID with some flexibility to manage its water use. When the water level in Lake Mead is above 1,125 feet, an overrun of its USBR approved annual water order was permissible, and IID had up to three years to pay water use above the annual water order. When Lake Mead's water level is at or below 1,125 feet on January 1 in the calendar year after the overrun is reported in the USBR Lower Colorado Region Decree Accounting Report, the IOPP prohibits additional overruns and requires that outstanding overruns be paid back in the subsequent calendar year rather than in three years as allowed under normal conditions; that is, the payback is to be made in the calendar year following publication of the overrun in the USBR Decree Accounting Report. The IOPP is suspended during shortage conditions. For historic IID annual rainfall, net consumptive use, transfers and IID underrun/overrun amounts, see Table 12.

SB 610 - Water Supply Assessment for Hell's Kitchen PowerCo 1 and LithiumCo 1 Project

Table 12. IID Annual Rainfall (In), Net Consumptive Use and Underrun/Overrun Amounts (AF), 1988-2022

Year	IID Total Annual Rainfall	IID Water Users	IID/MWD Transfer	IID/SDCWA Transfer	SDCWA Transfer Salton Sea Mitigation	IID Underrun / Overrun	IID/CVWD Transfer	AAC Lining
1988		2,947,581						
1989		3,009,451						
1990	91,104	3,054,188	6,110					
1991	192,671	2,898,963	26,700					
1992	375,955	2,575,659	33,929					
1993	288,081	2,772,148	54,830					
1994	137,226	3,048,076	72,870					
1995	159,189	3,070,582	74,570					
1996	78,507	3,159,609	90,880					
1997	64,407	3,158,486	97,740					
1998	100,092	3,101,548	107,160					
1999	67,854	3,088,980	108,500					
2000	29,642	3,112,770	109,460					
2001	12,850	3,089,911	106,880					
2002	12,850	3,152,984	104,940					
2003	116,232	2,978,223	105,130	10,000	0	6,555		
2004	199,358	2,743,909	101,900	20,000	15,000	-166,408		
2005	202,983	2,756,846	101,940	30,000	15,000	-159,881		
2006	19,893	2,909,680	101,160	40,000	20,000	12,414		
2007	64,580	2,872,754	105,000	50,000	25,021	6,358		
2008	63,124	2,825,116	105,000	50,000	26,085	-47,999	4,000	8,898
2009	30,0354	2,566,713	105,000	60,000	30,158	-237,767	8,000	65,577
2010	189,566	2,545,593	105,000	70,000	33,736	-207,925	12,000	67,700
2011	109,703	2,915,784	103,940	63,278	0	82,662	16,000	67,700
2012	133,526	2,903,216	104,140	106,722	15,182	134,076	21,000	67,700
2013	134,497	2,554,845	105,000	100,000	71,398	-64,981	26,000	67,700
2014	53,517	2,533,414	104,100	100,000	89,168	-797	31,000	67,700
2015	97,039	2,480,933	107,820	100,000	153,327	-90,025	36,000	67,700
2016	90,586	2,504,258	105,000	100,000	130,796	-62,497	41,000	67,700
2017	105,919	2,548,171	105,000	100,000	105,311	-30,591	45,000	67,700
2018	63,318	2,625,422	105,000	130,000	0	0	63,000	67,700
2019	146,384	2,558,136	105,000	160,000	46,555	-34,215	68,000	67,700
2020	130,275	2,493,623	105,000	192,500	0	-98,073	73,000	67,700
2021	81,901	2,552,674	105,000	205,000	0	-37,737	78,000	67,700
2022	61,377	2,577,164	105,000	202,500	0	-6,470	83,000	67,700

Notes: Volumes in acre-feet and except Total Annual Rainfall are USBR Decree Accounting Report record at Imperial Dam.

IID Total Annual Rainfall from IID Provisional Water Balance, first available calculations are for 1990.

Not all IID QSA programs are shown on this table.

Source: USBR Decree Accounting reports, except IID Total Rainfall and IID Overrun/Underrun is a separate calculation

Source: 2022 IID Annual Water & QSA Implementation Report and 2022 IID SWRCB Report; IID Total Rainfall and IID Overrun/Underrun is a separate calculation

On August 16, 2021, the water level in Lake Mead was 1,060 feet and for the first time since the IOPP came into effect, the Secretary of the Interior declared the first-ever, Tier 1 shortage condition for Colorado River operations, elevations reaching 1,045 as of mid-2022 (Figure 7). For IID, this meant that no overruns would be allowed to IID's approved water order and continues in effect through 2024.

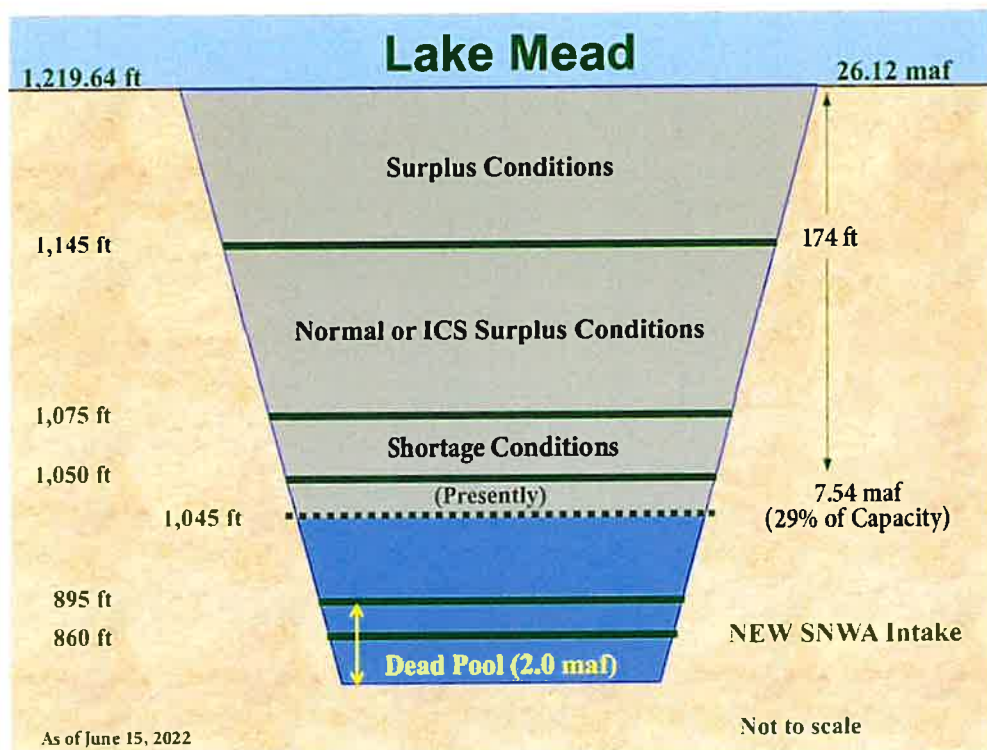


Figure 7. Lake Mead Schematic (June 15, 2022)

The flexibility that IID was allowed in 2013 and 2014 is no longer available to the district. Under the terms of the IOPP, no overruns are allowed in a year when payback is required. IID has not experienced any overrun pay back since 2014 as noted in **Table 13**. Under shortage conditions, IID would use any conserved water stored in a non-System reservoir, if available, to prevent any overrun.

Table 13. IID Inadvertent Overrun Payback to the Colorado River under the IOPP, 2012-2022

Calendar Year of Payback	2011 Overrun Payback (AF)	2012 Overrun Payback (AF)	Payback Total for Calendar Year (AF)
2013	55,710	-	55,710
2014	20,662	134,076	154,738
Total Payback	76,372	134,076	210,448

Notes: All values are consumptive use volumes at Imperial Dam (AF).

2013 Payback Total was 62 KAF, but in 2012 IID had 6,290 AF of early payback, reducing volume to 55,710 AF

The 2013 IOPP payback obligation, prohibition on overruns in payback years, and suspension of this flexibility during shortage conditions led the IID Board to implement an apportionment program pursuant to the 2007 EDP, which has been subsequently revised and modified over the years. The Revised 2023 EDP is a version approved and adopted by the IID Board on July 26, 2023 (see Attachment B). The Revised 2022 EDP also establishes a water exchange clearinghouse to facilitate the movement of water supply between all water users and water user categories. The established water user categories are 1) agricultural water users, 2) industrial/commercial water users and 3) potable water users. As designed, the clearinghouse will allow IID and its water customers to balance water demands with the water supplies that are available to all users.

Generally, the EDP Apportionment, as discussed in the proceeding section, is not expected to impact industrial/commercial uses. However, given the certainty of continuing drought on the Colorado River through 2026 and other stressors, provisions such as the 2012 IWSP Water Agreement sections 3.7 and 3.8 as well for dry and multiple dry year water assessment may come into effect. IID has agreed to work with Project proponents to ensure to the extent possible that the IWSP Water Supply Agreement terms will not adversely impact Project operation. For purposes of this WSA, years with a shortage condition that impacts non-agricultural projects such as an IOPP payback obligation constitute "dry" years for IID. For single-dry year and multiple-dry water year assessments, IID's EDP shall govern.

Equitable Distribution Plan (EDP) History

A 2006 study by Hanemann and Brookes suggested that overrun conditions were likely to occur 40-50 percent of the years during the decade following the report. Under such conditions a supply/demand imbalance would occur resulting in a need to apportion water consistent with state law. Under California state law, water must be distributed equitably as determined by the IID Board of Directors.

On November 28, 2006, the IID Board of Directors adopted Resolution No 22-2006 approving development and implementation of an Equitable Distribution Plan to address times when customers' demand would exceed IID's Colorado River supply. The EDP, adopted in 2007 allowed the IID Board to institute an apportionment program. As part of this resolution, the IID Board directed the General Manager to prepare the rules and regulations necessary or appropriate to implement the plan within the district. The EDP Regulations were created to enable IID to implement a water management tool (apportionment) to address years in which water demand is expected to exceed supply.

It was expected that an annual EDP Apportionment would be established for each of the next several years, if not for the duration of the QSA. However, the implementation of the EDP apportionment was legally challenged in 2013 with litigation ensuing through 2017 when a statement of decision was issued by the trial court, followed by a writ of mandate and a declaratory judgment later that year. The writ of mandate directed IID to repeal the EDP. On February 6, 2018, the IID board approved a resolution repealing the EDP while the case was on appeal. On July 16, 2020, the appellate court reversed the writ of mandate and declaratory judgment on almost all grounds, including declaratory relief on the water rights issue and IID's discretion to determine the method of apportionment except for a provision as to how

water was prioritized among water user categories. The court ruled that the district is required to distribute water equitably for all categories of users.

On June 21, 2022, IID adopted a revised EDP to address the single outstanding legal issue with respect to prioritization of apportionments among categories of water users. The revised EDP also updated certain operational provisions and most importantly, to the extent feasible, provides for a defined quantity of available, annual water supply apportioned to each water user to prevent cumulative demands from exceeding IID's available, authorized annual Colorado River supply (Appendix B-Equitable Distribution Plan). Implementation of the EDP will resume January 1, 2023, and continue annually thereafter consistent with the adopted EDP. In July 2023 the EDP was revised again to allow for direct transfer of water through the IID Clearinghouse and among the respective water user categories. For details regarding the EDP and its implementation, including related forms, please visit IID's website at [Equitable Distribution | Imperial Irrigation District \(iid.com\)](https://www.iid.com).

Projected Water Supplies

The projected and continued decline in runoff and prolonged drought conditions in the West are expected to contribute to even lower water elevation levels at Lakes Powell and Mead. The Department of the Interior made the decision in early 2022 to protect critical Lake Powell elevations above Glen Canyon Dam by adding 500,000 AF of water from Flaming Gorge reservoir and temporarily reducing the 2022 annual operational release to Lake Mead by 480,000 AF. These conditions resulted in a reduced water apportionment to most of the Lower Division States and Mexico for 2022 and 2023, but did not affect IID's water supply for consumptive use.

Despite the Department's extraordinary actions, the hydrological forecasts and reservoir elevations have continued to decline. Basin states have been asked to develop a plan in 2022 to reduce demands by 2-4 million acre-feet per year through 2026 or the Secretary of the Interior would take regulatory action to force these reductions in order to protect the Colorado River system from the prolonged drought conditions and climate change impacts. California reductions, or the potential for regulatory reductions by the Secretary of the Interior remain undefined as of the date of this water supply assessment for the Hell's Kitchen PowerCo 1 and LithiumCo 1 Project.

IID is working diligently with federal agencies and Colorado River contractors to minimize impacts to the local community. In this vein, IID recognizes the need for significant response actions to protect the long-term water supply certainty for the Imperial Valley as the Colorado River operates under these unprecedented conditions. On October 5, 2022 the Colorado River Board of California, in partnership with representatives of the four primary California Section 5 contractors (IID, Palo Verde Irrigation District, Coachella Valley Water District and Metropolitan Water District of Southern California) submitted a letter to the Department of Interior proposing for California to conserve up to an additional 400,000 AF of water in Lake Mead each year, beginning in 2023 and extending through 2026, to assist with stabilizing Colorado River reservoir elevations. IID has gone on record that its share of the

California proposal would not exceed 250,000 AFY. IID proposes to conserve its contribution to Lake Mead via system and on-farm efficiency conservation and temporary fallowing.

PROJECT WATER AVAILABILITY FOR A 20-YEAR PERIOD TO MEET PROJECTED DEMANDS

The primary source of fresh water for the facility is anticipated to be irrigation water made available under a supply agreement and purchased through IID. Water will be obtained from the "Q" and "R" laterals adjacent to the Project site. Water will be transferred to a water storage pond, with a capacity of approximately 18 acre-feet (AF), located adjacent to the Q Drain. The water would then be transferred to 100,000-gallon aboveground water storage tank via an aboveground fresh-water pipeline. Additional pipelines will be constructed to transport the water from the water storage tank to HKP1 and HKL1 facilities. The water will be used for steam wash water, purged water for pump seals, and the RO potable water system, process wash water, and, at times, cooling water makeup. The project is designed to minimize reliance on external sources of water supply for process needs as well by using condensed steam from the geothermal steam condensate to the greatest extent practical. A filtration-based or RO potable water system will be used to process IID fresh water for the non-drinking potable water needs at the site. A Nontransient-Noncommunity Water System Permit will be obtained from ICPHD for the onsite potable water system. Bottled drinking water will be purchased for consumption.

Untreated Colorado River water will be supplied to the project via the adjacent "Q" and "R" laterals under a(n) Industrial Water Supply Agreement with IID. The Project is located on vacant land that is generally undeveloped. On June 14, 2017, the County authorized Geothermal CUP #16-0001, which allowed construction of up to four well pads as well as drilling and maintenance of up to six separate geothermal exploratory wells on the Project site. A well pad, Well Pad 1, north of Alcott Road and west of Davis Road, and two geothermal wells were constructed on the site in 2021. Rough grading for Well Pad 3, south of Noffsinger Road and east of Davis Road began in November 2021. The remaining Project site is undeveloped. Areas to the north and south of the Project site consist of undeveloped open space. Area to the west is open space followed by the Salton Sea. The State of California manages a wildlife management area, including waterfowl ponds to the east of the Project site. The Project is not currently receiving water from IID but will receive water from gates Q-28 and R-24 which are currently in working condition. As the Project site is largely undeveloped at this time, water use will increase with implementation of proposed project.

As noted previously, under the terms of California legislation adopted to facilitate the QSA/Transfer Agreements and enacted in [CWC Section 1013](#), the IID board adopted the [TLCFP](#) to address how to deal with any such temporary reduction of water use by projects such as solar projects that are developed under a CUP. This Project is not subject to the TLCFP.

While conserved water generated from the TLCFP is limited by law for use for water transfer or environmental purposes, by satisfying multiple district objectives the TLCFP serves to reduce the need

for efficiency conservation and other water use reduction practices on the part of IID and its water users providing the district with wide benefits. One of the considerations in developing the TLCFP was to provide agricultural landowners with long-term assurances from IID that, at Project termination, irrigation service would be available for them to resume farming operations.

IWSP Water

At the present time, IID is providing water delivery service for use by solar energy generation projects under Water Rate Schedule 7 General Industrial Use. If IID determines that the proposed Project should obtain water under IID's Interim Water Supply Policy (IWSP) for non-agricultural projects in addition to delivery rates under Schedule 7 General Industrial Use, the Applicant may need to initiate the process to secure a water supply agreement. IID will determine whether the Project should obtain water under IID's Interim Water Supply Policy (IWSP) for non-agricultural projects in addition to Schedule 7 General Industrial Water.

The IWSP, provided herein as Attachment A, designates up to 25,000 AFY of water for potential conservation for Non-Agricultural Projects within IID's water service area. As of November 2023, IID has up to 18,620 AF that it may make available under the IWSP for new projects such as the proposed project. The IWSP establishes a schedule for Processing Fees, Reservation Fees, and Development Fees that change each year for all non-agricultural projects, and annual Water Supply Development fees for some non-agricultural projects. The proposed Project's water use will be subject to the annual Water Supply Development fee if IID determines that water for the Project is to be supplied under the IWSP.

Given the Colorado River conditions, the likelihood that IID will not receive its annual 3.1 MAF apportionment less QSA/Transfer Agreement obligations of Colorado River water is no longer low despite the high priority of the IID entitlement relative to other Colorado River contractors, see IID's Water Rights section on page 37 and projected water supplies. Given the prolonged drought conditions and recent communication from the Department of the Interior, reductions to all basin contractors, including IID, are increasingly likely. If such obligatory reductions were to come into effect within the 30-year Project life, the Applicants are to work with IID to ensure any anticipated reduction can be managed.

The County of Imperial as the lead agency has a responsibility to determine if the current and projected demands and water supply conditions, including projected uncertainties of Colorado River hydrology are sufficient to enable the County to make the findings necessary to approve this WSA. IID, like any water provider, has jurisdiction to manage the water supply within its service area and impose conservation measures during a period of temporary water shortage, such as the one we are experiencing now.

Water for construction (primarily for dust control) would be obtained from IID canals or laterals in conformance with IID rules and regulations for MCI temporary water use.²⁰ Water would be picked up from a nearby lateral and delivered to the construction location by a water truck capable of carrying approximately 4,000 gallons per load. To obtain water delivery service, the Project proponent will complete an IID-410 Certificate of Ownership and Authorization (Water Card), which allows the Water Department to provide the district with information needed to manage the district apportioned water supply. Water cards are used for Agriculture, Municipal, Industrial and Service Pipe accounts. If water is to be provided under IWSP in addition to Schedule 7, General Industrial Use, the Applicant may also need to enter into a IWSP Water Supply Agreement.

²⁰ Complete the Application for Temporary Water Use and submit to Division office. Complete encroachment permit through Real Estate – non-refundable application fee of \$250, se. IID website: [Real Estate / Encroachments, Permissions, and Other Permitting](#). Fee for temporary service water: Schedule No. 7 General Industrial Use / Temporary Service Minimum charge for up to 5 AF, pay full flat fee for 5 AF at General Industrial Use rate (\$425); use more than 5 AF, pay fee for actual use at General Industrial Rate (\$85/AF).

EXPECTED WATER DEMANDS FOR THE PROPOSED PROJECT

Water for the proposed Project will be needed on-site for steam wash water, purged water for pump seals, and the RO potable water system, process wash water, and cooling water makeup. use. Untreated Colorado River water will be supplied to the project via the adjacent “Q” and “R” laterals under a(n) Industrial Water Supply Agreement with IID. The Project is located on vacant land that is generally undeveloped. On June 14, 2017, the County authorized Geothermal CUP #16-0001, which allowed construction of up to four well pads as well as drilling and maintenance of up to six separate geothermal exploratory wells on the Project site. A well pad, Well Pad 1, north of Alcott Road and west of Davis Road, and two geothermal wells were constructed on the site in 2021. Rough grading for Well Pad 3, south of Noffsinger Road and east of Davis Road began in November 2021. The remaining Project site is undeveloped. Areas to the north and south of the Project site consist of undeveloped open space. The area to the west is open space followed by the Salton Sea. The State of California manages a wildlife management area, including waterfowl ponds to the east of the Project site. The Project is not currently receiving water from IID but will receive water from gates Q-28 and R-24 which are currently in working condition. As the Project site is largely undeveloped at this time, water use will increase with implementation of proposed project.

Project raw water uses are summarized in **Table 14**.

Table 14. Project Operational Water Uses (AFY)

Use	Acre-Feet per Year
Raw Water for Dust Control*	0
Raw Water for HKP1 Operations (30 years @ 200 AFY)	200
Raw Water for HKL1 Operations (30 years @ 6,300 AFY)	6,300
Raw Water for Fire Suppression (water for system testing is recycled to storage tank)	0
TOTAL RAW WATER USAGE	6,500

*Water for dust control while in operation is required to be separated.

IID delivers raw Colorado River water to the proposed Project site through the following gates and laterals for agricultural purposes. The 10-year record for 2013-2022 of water delivery accounting is shown in **Table 15**. The data documents a 10-year average of 119.9 AFY.

Table 15. Ten-Year Historic Delivery (AFY), 2013-2022

Canal/Gate	2013	2014	2015	2016	2017	2018	2019	2020	2021	2022
Q-28	188.3	83.1	119.3	111.9	95.2	102	148.4	120	122.3	94.3
R-24-003	14.3	0	0	0	0	0	0	0	0.00	0.00
TOTAL	202.6	83.1	119.3	111.9	95.2	102	148.4	120	122.3	94.3

Source: IID Staff, February 31, 2023 (Contact Justina Gamboa-Arce)

The proposed Project has an estimated total operational water demand (of 6,500 AFY or 195,000 AF amortized over a 30 year term (for all delivery gates for Project). Thus, the proposed Project demand is

an increase of 6,380.1 AFY from the historical 10-year average or 5,321- percent (5,321 %) more than the historic 10-year average annual delivery for agricultural uses at the proposed Project site. The proposed Project's estimated operational water demand represents only 34.9 percent (34.9%) of the 18,620 AFY balance of water supply that may be available for contracting under the IWSP.

IID’S ABILITY TO MEET DEMANDS WITH WATER SUPPLY

Under normal operating conditions, non-agricultural water demands for the IID water service area are projected for 2025-2055 in **Table 5**, and IID agricultural demands including system operation are projected for 2025-2055 in **Table 6**, all volumes within the IID water service area. IID water supplies available for consumptive use after accounting for mandatory transfers are projected to 2077 in **Table 11** (Column 11), volumes at Imperial Dam.

To assess IID’s ability to meet future water demands, IID historic and forecasted demands are compared with CRWDA Exhibit B net availability under its water supply entitlement, volumes at Imperial Dam **Table 11** (Column 11). The analysis requires accounting for system operation consumptive use within the IID water service area, from AAC at Mesa Lateral 5 to Imperial Dam, and for water pumped for use by the USBR Lower Colorado Water Supply Project (LCRWSP), an IID consumptive use component in the USBR Decree Accounting Report. IID system operation consumptive use for 2021 is provided in **Table 16** to show the components to be included in the calculation of 2022 volumes in comparison to 2020.

Table 16. IID System Operations Consumptive Use within IID Water Service Area and from AAC at Mesa Lateral 5 to Imperial Dam, (KAF), 2022

	2020 Operational Consumptive Use (KAF)	2022 Operational Consumptive Use (KAF)
IID Delivery System Evaporation	24.4	24.8
IID Canal Seepage	90.8	89.4
IID Main Canal Spill	10.1	10.6
IID Lateral Canal Spill	121.5	122.4
IID Seepage Interception	-39.0	-33.8
IID Unaccounted Canal Water	-40.0	-161.4
Total IID System Operational Use, within water service area	167.8	52.0
“Losses” from AAC @ Mesa Lat 5 to Imperial Dam	9.2	38.3
LCWSP pumpage	-10	-10
Total System Operational Use in 2020 and 2022	167.0	80.3

Sources: 2022 IID Water Balance Rerun 03/28/2023

Notwithstanding any regulatory water supply cuts from the Secretary of Interior, IID’s ability to meet customer water demands through 2055 as shown in **Table 17** is based on the following:

- Non-agricultural use from **Table 5**.
- Agricultural and Salton Sea mitigation uses from **Table 6**.
- CRWDA Exhibit B net available for IID consumptive use from **Table 11**.
- System operation consumptive use from **Table 16** for 2020.

Table 17. IID Historic and Forecasted Consumptive Use vs CRWDA Exhibit B IID Net Available Consumptive Use, volumes at Imperial Dam (KAFY), 2015-2055

	2015	2020	2025	2030	2035	2040	2045	2050	2055
Non-Ag Delivery	107.4	113.2	133.1	142.9	151.4	163.2	175.4	188.4	199.3
Ag Delivery	2,158.9	2,165.4	2,259.5	2,209.5	2,209.5	2,209.5	2,209.5	2,209.5	2,209.5
QSA SS Mitigation Delivery	153.3	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
System Op CU in IID & to Imperial Dam	61.3	167.0	230.5	225.4	225.4	225.4	225.4	225.4	225.4
IID CU at Imperial Dam	2,488.2	2,503.6	2,623.1	2,577.8	2,586.3	2,598.1	2,610.3	2,623.3	2,634.2
Conservation in Excess of Exhibit B	45.5	51.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Total IID CU	2,533.6	2,554.6	2,623.1	2,577.8	2,586.3	2,598.1	2,610.3	2,623.3	2,634.2
Exhibit B IID Net Available for CU at Imperial Dam	2,623.7	2,652.7	2,617.8	2,612.8	2,612.8	2,612.8	2,612.8	2,665.8	2,665.8
IID Underrun/Overrun at Imperial Dam	-90.02	-98.07	5.30	-35.00	-26.50	-14.70	-2.50	-42.50	-31.60

Notes: 2015 and 2020 have been updated to reflect actual consumptive use with respective USBR decree accounting adjustments

Non-Ag Delivery CI 15.0%, Ag Delivery CI 3.0%, QSA SS mitigation CI 15%

QSA Salton Sea Mitigation Delivery terminated on 12/31/2017.

Underrun /Overrun = IID CU at Imperial Dam minus CRWDA Exhibit B Net Available

Notes: Ag Delivery for 2025 to 2055 does not take into account land conversion for solar use nor reduction in agricultural land area due to urban expansion.

As shown above, IID forecasted demand has the potential to exceed CRWDA Exhibit B Net Consumptive Use volumes during several time intervals through the lifespan projection for the Project. However, due to temporary land conversion for solar use and urban land expansion that will reduce agricultural acres in the future, a water savings of approximately 217,000 AFY will likely be generated into the future and for the lifetime of the proposed Project, assuming no regulatory cutbacks are enforced upon IID.

In addition, as show on Table 18, USBR 2020 Decree Accounting Report states that IID Consumptive Use was 2,493.7 KAF (excludes 1,579 AF of ICS for storage in Lake Mead and an additional 49,444 AF of conserved water left on the Colorado River system) with an underrun of -98.1 KAF, as reported by IID in 2020 Annual SWRCB Report per WRO 2002-2013; that is, IID used less than the amount in its approved Water Order (2,615,300 AF).

Table 18. 2020 Approved Water Order, Actual CU (Decree Accounting Report) and IID Underrun, KAF at Imperial Dam

IID Approved Water Order	2,625.3 less 10 supplied by LCWSP and less 26 of additional conserved water
IID Consumptive Use	2,493.7
IID Underrun /Overrun	-98.1
<p><i>Sources:</i> 2020 IID Revised Water Order, approved on March 10, 2020, <u>2020 Decree Accounting Report</u>, and 2020 Annual Report of IID Pursuant to SWRCB Revised Order WRO 2002-2013</p>	

As reported in the 2022 Annual Water & QSA Implementation Report and 2022 SWRCB Report and presented in **Table 12**, from 2013 to 2022 IID consumptive use (CU) resulted in underruns; i.e., annual CU was less than the district’s QSA Entitlement of 3.1 MAFY minus QSA/Transfer Agreements obligations. This would indicate that even though **Table 17** shows IID Overrun/Underrun at Imperial Dam exceeding CRWDA Exhibit B Net Available for CU, for the 30-year life of the proposed Project, IID consumptive use may be less than forecasted.

Meanwhile, forecasted Ag Delivery reductions presented in **Table 6** are premised on implementation of on-farm practices that will result in efficiency conservation. These reductions do not take into account land conversion for solar projects nor reduction in agricultural land area due to urban expansion; that is to say, the forecasted Ag Delivery is for acreage in 2003 with reduction for projected on-farm conservation efficiency. Thus, Ag Delivery demand may well be less than forecasted in **Table 6**. In any case, the proposed Project will use less water than the historical agricultural demand of proposed Project site, so the proposed Project will ease rather than exacerbate overall IID water demands.

In the event that IID has issued water supply agreements that exhaust the 25 KAFY IWSP set aside for conservation, and it becomes apparent that IID delivery demands due to non-agriculture use are going to cause the district to exceed its quantified 3.1 MAFY entitlement less QSA/Transfer Agreements obligations, IID has identified options to meet these new non-agricultural demands. These options include (1) tracking water yield from temporary land conversion from agricultural to non-agricultural land uses (renewable solar energy); and (2) only if necessary, developing conservation projects to expand the size of the district’s water supply portfolio.

These factors will be discussed in the next two sections, Tracking Water Savings from Growth of Non-Agricultural Land Uses and Expanding Water Supply Portfolio.

Tracking Water savings from Growth of Non-Agricultural Land Uses

The Imperial County Board of Supervisors has targeted up to 25,000 acres of agricultural lands, about 5 percent (5%) of the farmable acreage served by IID, for temporary conversion to solar farms; because

the board found that this level of reduction would not adversely affect agricultural production. As reported for IID's Temporary Land Conversion Fallowing Program, existing solar developments at the end of 2022 have converted 13,177 acres of farmland. These projects had a yield at-river of 69,898 AF of water in 2022. The balance of the 25,000-acre agriculture-to-solar policy is 11,823 acres. On average, each agricultural acre converted reduces agricultural demand by 5.1 AFY, which results in a total at-river yield (reduction in consumptive use) of 127,500 AFY.

However, due to the nature of the conditional use permits under which solar farms are developed, IID cannot rely on this supply being permanently available. In fact, should a solar project decommission early, that land may go immediately back to agricultural use (it remains zoned an agricultural land). Nevertheless, during their operation, the solar farms do ameliorate pressure on IID to implement projects to meet demand from new non-agricultural projects.

Unlike the impact of solar projects, other non-agricultural uses are projected to grow, as reflected in the nearly 87.5 percent (87.5%) increase in non-agricultural water demand from 107.4 KAF in 2015 to 201.4 KAF in 2055 reflected herein in **Table 5**. This increase in demand of 94 KAFY is likely to be offset by reductions in agricultural lands; however, as the land remains zoned as agricultural land, that source is not reliable to be permanently available to IID.

The amount of land developed for residential, commercial, and industrial purposes is projected to grow by 55,733 acres from 2015 to 2050²¹ within the sphere of influence of the incorporated cities and specific plan areas in Imperial County. A conservative estimate is that such development will displace at least another 24,500 acres of farmland based on the Imperial Local Agency Formation Commission (LAFCO) sphere of influence maps and existing zoning and land use in Imperial County. At 5.13 AFY yield at-river, there would be a 125,000 AFY reduction IID net consumptive use. However, the total acreage from actual annexations that have resulted in reductions to agricultural acreage between 2015 and 2021 has been 2,224 acres, according to IID's annual inventory of total farmable land which is consistent with the acreage gain to non-agricultural land uses (2,224 acres) and based on annexation records obtained through the Imperial County Local Agency Formation Commission. This shift in acreage documents a growth rate of approximately 50 percent of the originally projected rate.

The total foreseeable solar project temporary yield at-river (91,800 AFY) and municipal development permanent yield at-river, conservatively adjusted (65,000 AFY) is to reduce forecasted IID net consumptive use at-river 156,800 AFY, which is more than enough to meet the forecast Demand minus Exhibit B Net Available volumes shown in **Table 17**. This Yield at-river is sufficient to meet the forecasted excess of non-agricultural use over Net Available supply within the IID service area for the next 20 years, as is required for SB 610 analysis (assuming there are no regulatory cuts to IID's full entitlement).

²¹ IRWMP, Chapter 5, Table 5-14.

Farmland retirement associated with municipal development would reduce IID agricultural delivery requirements beyond the efficiency conservation projections shown in **Table 6** and **Table 17**. Therefore, in the event that Schedule 7 General Industrial Use water has exhausted its apportioned amount, the Applicants will rely on IID IWSP water to supply the Project, as discussed above in the Projected Water Availability section.

Expanding Water Supply Portfolio

While forecasted long-term annual yield-at-river from the reduction in agricultural acreage due to municipal development in the IID service area is sufficient to meet the forecasted excess of non-agricultural use over CRWDA Net Available supply (Table 17) without regulatory cuts and without expanding IID's Water Supply Portfolio, IID has also evaluated the feasibility of a number of capital projects to increase its water supply portfolio.

As reported in 2012 Imperial IRWMP Chapter 12, IID contracted with GEI Consultants, Inc. to identify a range of capital project alternatives that the district could implement. Qualitative and quantitative screening criteria and assumptions were developed in consultation with IID staff. Locations within the IID water service area with physical, geographical, and environmental characteristics most suited to implementing short- and long-term alternatives were identified. Technical project evaluation criteria included volumes of water that could be delivered and/or stored by each project, regulatory and permitting complexity, preliminary engineering components, land use requirements, and costs.

After preliminary evaluation, a total of 27 projects were configured:

- 17 groundwater or drain water desalination
- 2 groundwater blending
- 6 recycled water
- 1 groundwater banking
- 1 IID system conservation (concrete lining)

Projects were assessed at a reconnaissance level to allow for comparison of project costs. IID staff and the board identified key factors to categorize project alternatives and establish priorities. Lower priority projects were less feasible due to technical, political, or financial constraints. Preferential criteria were features that increased the relative benefits of a project and grant it a higher priority. Four criteria were used to prioritize the IID capital projects:

1. **Financial Feasibility.** Projects whose unit cost was more than \$600/AF were eliminated from further consideration.
2. **Annual Yield.** Project alternatives generating 5,000 AF or less of total annual yield were determined not to be cost-effective and lacking necessary economies of scale.

3. **Groundwater Banking.** Groundwater banking to capture and store underruns is recognized as a beneficial use of Colorado River water. Project alternatives without groundwater banking were given a lower priority.
4. **Partnering.** Project alternatives in which IID was dependent on others (private and/or public agencies) for implementation were considered to have a lower priority in the IID review; this criterion was reserved for the IRWMP process, where partnering is a desirable attribute.

Table 19. Based on these criteria, the top ten included six desalination, two groundwater blending, one system conservation, and one groundwater storage capital projects. These capital projects are listed in Table 19 which follows.IID Capital Project Alternatives and Cost (May 2009 price levels \$)

Name	Description	Capital Cost	O&M Cost	Equivalent Annual Cost	Unit Cost (\$/AF)	In-Valley Yield (AF)
GW 18	Groundwater Blending E. Mesa Well Field Pumping to AAC	\$39,501,517	\$198,000	\$2,482,000	\$99	25,000
GW 19	Groundwater Blending: E. Mesa Well Field Pumping to AAC w/Percolation Ponds	\$48,605,551	\$243,000	\$3,054,000	\$122	25,000
WB 1	Coachella Valley Groundwater Storage	\$92,200,000	\$7,544,000	\$5,736,746	\$266	50,000
DES 8	E. Brawley Desalination with Well Field and Groundwater Recharge	\$100,991,177	\$6,166,000	\$12,006,000	\$480	25,000
AWC 1	IID System Conservation Projects	\$56,225,000	N/A	\$4,068,000	\$504	8,000
DES 12	East Mesa Desalination with Well Field and Groundwater Recharge	\$112,318,224	\$6,336,000	\$12,831,000	\$513	25,000
DES 4	Keystone Desalination with IID Drainwater/ Alamo River	\$147,437,743	\$15,323,901	\$23,849,901	\$477	50,000
DES 14	So. Salton Sea Desalination with Alamo River Water and Industrial Distribution	\$158,619,378	\$15,491,901	\$24,664,901	\$493	50,000
DES 15	So. Salton Sea Desalination with Alamo River Water and MCI Distribution	\$182,975,327	\$15,857,901	\$26,438,901	\$529	50,000
DES 2	Keystone Desalination with Well Field and Groundwater Recharge	\$282,399,468	\$13,158,000	\$29,489,000	\$590	50,000

Source: Imperial IRWMP, Chapter 12; see also Imperial IRWMP Appendix N, IID Capital Projects

IID Near Term Water Supply Projections

As mentioned above, IID's quantified Priority 3(a) water right under the QSA/Transfer Agreements secures 3.1 MAF per year, less transfer obligations of water for IID's use from the Colorado River, without relying on rainfall in the IID service area. Even with this strong entitlement to water, IID actively promotes on-farm efficiency conservation and is implementing system efficiency conservation measures including seepage recovery from IID canals and the All-American Canal (ACC) and measures to reduce operational discharge. As the IID website [Water Department](#) states:

Through the implementation of extraordinary conservation projects, the development of innovative efficiency measures and the utilization of progressive management tools, the IID Water Department is working to ensure both the long-term viability of agriculture and the continued protection of water resources within its service area.

Overall, agricultural water demand in the Imperial Valley will decrease due to IID system and grower on-farm efficiency conservation measures that are designed to maintain agricultural productivity at pre-QSA levels while producing sufficient yield-at-river to meet IID's QSA/Transfer Agreements obligations. These efficiencies combined with the conversion of some agricultural land uses to non-agricultural land uses (both solar and municipal), ensure that IID can continue to meet the water delivery demand of its existing and future agricultural and non-agricultural water users, including this Project for the next 20 years and for the life of the proposed Project under a water supply consistent with the district's full entitlement.

IMPERIAL COUNTY PLANNING AND DEVELOPMENT SERVICES (LEAD AGENCY) FINDINGS

IID serves as the regional wholesale water supplier, importing raw Colorado River water and delivering it, untreated, to agricultural, municipal, industrial, environmental, and recreational water users within its water service area. Imperial County Planning and Development Services serves as the responsible agency with land use authority over the proposed project. Imperial County Planning and Development Services Water Assessment findings are summarized as follows, based on the information contained herein and as supported by IID water supply data:

1. IID's annual entitlement to consumptive use of Colorado River water is capped at 3.1 MAF less water transfer obligations, pursuant to the QSA and Related Agreements. Under the terms of the CRWDA, IID is implementing efficiency conservation measure to reduce net consumptive use of Colorado River water needed to meet its QSA/Transfer Agreements obligations while retaining historical levels of agricultural productivity.
2. In 2022 IID consumptively used 2,577,164 AF of Colorado River water (volume at Imperial Dam); 2,486,061 AF were delivered to customers (including recreational and environmental water deliveries) of which 2,368,642 AF or 95 percent went to agricultural users as per IID's Water Balance run on 3/30/2023.
3. Reduction of IID's net consumptive use of Colorado River water under the terms of the Colorado River Water Delivery Agreement is to be the result of efficiency conservation measures. Crop water use in the Imperial Valley will not decline under these conditions, however IID operational spill and tailwater from field runoff will decline as efficiency conservation measures are implemented, impacting the Salton Sea.
4. The dependability of IID's water rights, Colorado River flows, and Colorado River storage facilities for Colorado River water alone are not sufficient to assure water availability for the Project. The prolonged drought conditions on the Colorado River Basin have made it increasingly likely that the water supply of IID may be disrupted, in dry years or/and under shortage conditions. Mexico, Arizona, and Nevada, which have lower priority than IID, have already experienced Tier 1 and Tier 2a reductions in 2022 as a result of the declared Colorado River water shortage.
5. Due to ongoing Colorado River drought conditions, Lake Mead's declining elevation, reduced inflows from Lake Powell, and the suspension of the federal Inadvertent Overrun and Payback Policy, which eliminates IID's ability to overrun its 3.1 MAF annual entitlement during water shortage conditions, the IID Board has implemented an annual apportionment program (otherwise known as the Equitable Distribution Plan or EDP).

6. IID's EDP apportions the available water supply among all its water users equitably and among three water user categories, based on historical use: 1) agricultural water users, 2) commercial/industrial water users, and 3) potable water users. Apportionment into these categories as a whole is initiated after deducting from the available water supply water for operational system needs, system conservation yields, environmental mitigation requirements, recreational uses, and similar unmeasured small pipe account water uses. See Attachment B - Equitable Distribution Plan.
7. Historically, IID has never been denied the right to use the annual volume of water it has available for its consumptive uses under its entitlement. Nevertheless, IID is participating in discussions for possible actions in response to continued extreme drought on the Colorado River.
8. The proposed Project has an estimated total water demand of 195,000 AF and 6,500 AFY amortized over a 30-year term (for all delivery gates for Project). Thus, the proposed Project demand is an increase of 6,380.1 AFY from the historical 10-year average of 119.9 AFY, a 5,321percent (5,321%), increase from the historic 10-year average annual delivery for agricultural uses at the proposed Project site.
9. The Project's water delivery will be covered under the Schedule 7 General Industrial Use. In the event that IID determines that the proposed Project is to utilize IWSP for Non-Agricultural Projects water, the Applicant will also need to enter into an IWSP Water Supply Agreement with IID. In which case, the proposed Project would use 34.9 percent (34.9%) of the 18,620 AFY of IWSP water.
10. Based on the Environmental Impact Report (EIR) prepared for this proposed Project pursuant to the CEQA, California Public Resources Code sections 21000, *et seq.* (SCH No. 2022030704), Imperial County Planning and Development Services hereby finds that the IID projected water supply is sufficient to satisfy the demands of this proposed Project in addition to existing and planned future uses, including agricultural and non-agricultural uses for a 20-year Water Supply Assessment period and for the 30-year proposed Project life.

ASSESSMENT CONCLUSION

This Water Supply Assessment has determined that IID water supply is adequate for the Hell's Kitchen PowerCo 1 and LithiumCo 1 Project (proposed Project). The Imperial Irrigation District's IWSP for Non-Agricultural Projects may dedicate up to 25,000 AF of IID's annual conserved water supply to serve new projects. As of November 2023, a total of 18,620 AF per year remain available for conservation for new projects providing reasonably sufficient supplies for new non-agricultural water users that enter into a Water Supply Agreement with IID over the next 5-year planning period, at minimum. Imperial County Planning and Development Services estimates a cumulative, non-agricultural project water supply demand increase of up to 40,000 AFY within the foreseeable 20-year planning period, however, all new non-agricultural projects, including Hell's Kitchen LLC, are required to mitigate their respective water supply demand via conservation programs or conservation projects in order to receive future water apportionments.

New, non-agricultural projects may be susceptible to delivery cutbacks when an EDP Apportionment is exhausted, thus all approved projects require best management practices and water use efficiency at all times. Given the prolonged drought conditions and recent communication to IID from the Department of the Interior, reductions to all basin contractors, including IID and its water customers, are increasingly likely. If such reductions were to come into effect within an approved project's 30-year life, the Applicants are to work with IID to ensure any anticipated reduction can be managed via the means identified herein or other equivalent measures.

Under an authorized water supply agreement, the Hell's Kitchen PowerCo 1 and LithiumCo 1 Project will be required to acknowledge and accept as a condition of water service that to the extent that IID receives an order or directive from a governmental authority, having appropriate jurisdiction, that reduces the total volume of water available to IID from the Colorado River during all or any part of their water service agreement, IID may reduce the water service agreement amount, as directed by the IID Board, as a proportionate reduction of the total volume of water available to IID. This reduction is separate from and in addition to any allocation authorized pursuant to the EDP.

The Project's operational water demand of approximately 195,000 AF and 6,500 AFY amortized over 30 years represents 34.9 % of the unallocated supply that may be set aside under the IWSP for non-agricultural projects, and approximately 3.2 percent (3.2 %) of forecasted future non-agricultural water demands planned in the Imperial IRWMP by 2055 (201.4 KAFY). The water demand for the proposed Project represents a 5,321% increase from the 10-year average historic average agricultural water use for 2013-2022 at the proposed Project site, an increase in water use 6,380.1 AFY at full build-out.

For all the reasons described herein, the historical stability of the IID water supply, the amount of foreseeable water available, along with on-farm and system efficiency conservation and other measures being undertaken by IID and its customers suggest that the Hell's Kitchen PowerCo 1 and LithiumCo 1

Project's water needs will be reasonably met for the next 20 years as assessed for compliance under SB-610.

DRAFT

RESOURCES AND REFERENCES

1. California Department of Water Resources. (2003). Guidebook for Implementation of Senate Bill 610 and Senate Bill 221 of 2001 to assist water suppliers, cities, and counties in integrating water and land use planning.
2. Imperial County Planning and Development Services. (2008). Imperial County General Plan 2008 Update. El Centro, CA. General Plan | Imperial County Planning & Development Services (icpds.com), retrieved, 2021
3. Imperial Irrigation District. Website: Equitable Distribution Plan.
4. Imperial Irrigation District Website: 2021 Water Conservation Plan. (2021). Imperial Irrigation District 2021 Water Conservation Plan. Imperial, CA.
5. Imperial Irrigation District. (2022). IID Interactive GIS Water Service Area Map. Imperial, CA.
6. Imperial Irrigation District. (2009). Interim Water Supply Policy for Non-Agricultural Projects. Imperial, CA
7. Imperial Irrigation District. (2012). Temporary Land Conversion Following Policy (TLFCP) for Water Conservation Yield Water conservation yield attributable to land removed from agricultural production and temporarily fallowed. Updated March 27, 2018.
8. Imperial Irrigation District Water Department. (2013). Colorado River Water Accounting and Conservation Commitments Update. Tina Anderholt Shields, PE. Colorado River Resources Manager Imperial, CA.
9. Imperial Irrigation District. (2022). 2022 Water & QSA Implementation Report, Imperial, CA
10. Imperial Irrigation District. (2021). Imperial, CA.
11. Imperial Irrigation District. (2022). Temporary Land Following Conversion Policy. (TLFCP).
12. Imperial Irrigation District. (2023). 2022 IID SWRCB Report.
13. United States Bureau of Reclamation Lower Colorado Region Website: Boulder Canyon Operations Office – Programs and Activities, Lower Colorado River Water Accounting, Water Accounting Reports (1964 - 2015). Compilation of Records in Accordance with Article V of the Decree of the Supreme Court of the United States in Arizona v. California Dated March 9, 1964: Calendar Years 1964 - 2015 Boulder City, NV.

ATTACHMENTS

DRAFT

Attachments

Attachment A: IID Interim Water Supply Policy for Non-Agricultural Projects

Attachment B: IID 2023 Equitable Distribution Plan, revised July, 2023

(This page intentionally left blank)

DRAFT

ATTACHMENT A: IID INTERIM WATER SUPPLY POLICY FOR NON-AGRICULTURAL PROJECTS²²

1.0 Purpose.

Imperial Irrigation District (the District) is developing an Integrated Water Resources Management Plan (IWRMP) ²³ that will identify and recommend potential programs and projects to develop new water supplies and new storage, enhance the reliability of existing supplies, and provide more flexibility for District water department operations, all in order to maintain service levels within the District's existing water service area. The first phase of the IWRMP is scheduled to be completed by the end of 2009 and will identify potential projects, implementation strategies and funding sources. Pending development of the IWRMP, the District is adopting this Interim Water Supply Policy (IWSP) for Non-Agricultural Projects, as defined below, in order to address proposed projects that will rely upon a water supply from the District during the time that the IWRMP is still under development. It is anticipated that this IWSP will be modified and/or superseded to take into consideration policies and data developed by the IWRMP.

2.0 Background.

The IWRMP will enable the District to more effectively manage existing water supplies and to maximize the District's ability to store or create water when the available water supplies exceed the demand for such water. The stored water can be made available for later use when there is a higher water demand. Based upon known pending requests to the District for water supply assessments/verifications and pending applications to the County of Imperial for various Non-Agricultural Projects, the District currently estimates that up to 50,000 acre feet per year (AFY) of water could potentially be requested for Non-Agricultural Projects over the next ten to twenty years. Under the IWRMP the District shall evaluate the projected water demand of such projects and the potential means of supplying that amount of water. This IWSP currently designates up to 25,000 AFY of water for potential Non-Agricultural Projects within IID's water service area. Proposed Non-Agricultural projects may be required to pay a Reservation Fee, further described below. The reserved water shall be available for other users until such Non-Agricultural projects are implemented and require the reserved water supply. This IWSP shall remain in effect pending the approval of further policies that will be adopted in association with the IWRMP.

3.0 Terms and Definitions.

3.1 Agricultural Use. Uses of water for irrigation, crop production and leaching.

²² IID Board Resolution 31-2009. Interim Water Supply Policy for New Non-Agricultural Projects. September 29, 2009. < [IID Interim Water Supply Policy for Non-Agricultural Projects](#) >

²³ The 2009 Draft IID IWRMP has been superseded by the October 2012 Imperial IRWMP, which incorporates the conditions of the IWSP by reference.

3.2 **Connection Fee.** A fee established by the District to physically connect a new Water User to the District water system.

3.3 **Industrial Use.** Uses of water that are not Agricultural or Municipal, as defined herein, such as manufacturing, mining, cooling water supply, energy generation, hydraulic conveyance, gravel washing, fire protection, oil well re-pressurization and industrial process water.

3.4 **Municipal Use.** Uses of water for commercial, institutional, community, military, or public water systems, whether in municipalities or in unincorporated areas of Imperial County.

3.5 **Mixed Use.** Uses of water that involve a combination of Municipal Use and Industrial Use.

3.6 **Non-Agricultural Project.** Any project which has a water use other than Agricultural Use, as defined herein.

3.7 **Processing Fee.** A fee charged by the District Water Department to reimburse the District for staff time required to process a request for water supply for a Non-Agricultural Project.

3.8 **Reservation Fee.** A non-refundable fee charged by the District when an application for water supply for a Non-Agricultural Project is deemed complete and approved. This fee is intended to offset the cost of setting aside the projected water supply for the project during the period commencing from the completion of the application to start-up of construction of the proposed project and/or execution of a water supply agreement. The initial payment of the Reservation Fee will reserve the projected water supply for up to two years. The Reservations Fee is renewable for up to two additional two-year periods upon payment of an additional fee for each renewal.

3.9 **Water Supply Development Fee.** An annual fee charged to some Non-Agricultural Projects by the District, as further described in Section 5.2 herein. Such fees shall assist in funding IWRMP or related water supply projects,

3.10 **Water User.** A person or entity that orders or receives water service from the District.

4.0. CEQA Compliance.

4.1 The responsibility for CEQA compliance for new development projects within the unincorporated area of the County of Imperial attaches to the County of Imperial or, if the project is within the boundaries of a municipality, the particular municipality, or if the project is subject to the jurisdiction of another agency, such as the California Energy Commission, the particular agency. The District will coordinate with the County of Imperial, relevant municipality, or other agency to help ensure that the water supply component of their respective general plans is comprehensive and based upon current information. Among other things, the general plans should assess the direct, indirect, and cumulative potential impacts on the environment of using currently available water supplies for new industrial, municipal, commercial and/or institutional uses instead of the historical use of that water for agriculture. Such a change in land use, and the associated water use, could potentially impact land uses,

various aquatic and terrestrial species, water quality, air quality and the conditions of drains, rivers, and the Salton Sea.

4.2 When determining whether to approve a water supply agreement for any Non-Agricultural Project pursuant to this IWSP, the District will consider whether potential environmental and water supply impacts of such proposed projects have been adequately assessed, appropriate mitigation has been developed and appropriate conditions have been adopted by the relevant land use permitting/approving agencies, before the District approves any water supply agreement for such project.

5.0. Applicability of Fees for Non-Agricultural Projects.²⁴

5.1 Pursuant to this Interim Water Supply Policy, applicants for water supply for a Non-Agricultural Project shall be required to pay a Processing Fee and may be required to pay a Reservation Fee as shown in Table A. All Water Users shall also pay the applicable Connection Fee, if necessary, and regular water service fees according to the District water rate schedules, as modified from time to time.

5.2 A Non-Agricultural Project may also be subject to an annual Water Supply Development Fee, depending upon the nature, complexity, and water demands of the proposed project. The District will determine whether a proposed Non-Agricultural Project is subject to the Water Supply Development Fee for water supplied pursuant to this IWSP as follows:

5.2.1. A proposed project that will require water for a Municipal Use shall be subject to an annual Water Supply Development Fee as set forth in Table B if the projected water demand for the project is in excess of the project's estimated population multiplied by the District-wide per capita usage. Municipal Use projects without an appreciable residential component will be analyzed under sub-section 5.2.3.

5.2.2. A proposed project that will require water for an Industrial Use located in an unincorporated area of the County of Imperial shall be subject to an annual Water Supply Development Fee as set forth in Table B.

5.2.3. The applicability of the Water Supply Development Fee set forth in Table B to Mixed Use projects, Industrial Use projects located within a municipality, or Municipal Use projects without an appreciable residential component, will be determined by the District on a case-by-case basis, depending upon the proportion of types of land uses and the water demand proposed for the project.

5.3. A proposed Water User for a Non-Agricultural Projects may elect to provide some or all of the required water supply by paying for and implementing some other means of providing water in a manner approved by the District, such as conservation projects, water storage projects and/or use of an alternative source of supply, such as recycled water or some source of water other than from the

²⁴ The most recent fee schedules can be found in a link at IID/Water/ Municipal, Industrial and Commercial Customers, or visit by URL at [Imperial Irrigation District : Water Rate Schedules](#)

District water supply. Such election shall require consultation with the District regarding the details of such alternatives and a determination by the District, in its reasonable discretion, concerning how much credit, if any, should be given for such alternative water supply as against the project's water demand for purposes of determining the annual Water Supply Development Fee for such project.

5.4 The District Board shall have the right to modify the fees shown on Tables A and B from time to time.

6. Water Supply Development Fees collected by the District under this IWSP shall be accounted for independently, including reasonable accrued interest, and such fees shall only be used to help fund IWRMP or related District water supply projects.

7. Any request for water service for a proposed Non-Agricultural Project that meets the criteria for a water supply assessment pursuant to Water Code Sections 10910-10915 or a water supply verification pursuant to Government Code Section 66473.7 shall include all information required by Water Code Sections 10910 –10915 or Government Code Section 66473.7 to enable the District to prepare the water supply assessment or verification. All submittals should include sufficient detail and analysis regarding the project's water demands, including types of land use and per capita water usage, necessary to make the determinations outlined in Section 5.2.

8. Any request for water service for a proposed Non-Agricultural Project that does not meet the criteria for a water supply assessment pursuant to Water Code Section 10910-10915 or water supply verification pursuant to Government Code Section 66473.7 shall include a complete project description with a detailed map or diagram depicting the footprint of the proposed project, the size of the footprint, projected water demand at full implementation of the project and a schedule for implementing water service. All submittals should include sufficient detail and analysis regarding the project's water demands, including types of land use and per capita water usage, necessary to make the determinations outlined in Section 5.2.

9. All other District rules and policies regarding a project applicant or Water User's responsibility for paying connection fees, costs of capital improvements and reimbursing the District for costs of staff and consultant's time, engineering studies and administrative overhead required to process and implement projects remain in effect.

10. Municipal Use customers shall be required to follow appropriate water use efficiency best management practices (BMPs), including, but not limited to those established by the California Urban Water Conservation Council BMP's (see <http://www.cuwcc.org/mou/exhibit-1-bmp-definitions-schedules-requirements.aspx>), or other water use efficiency standards, adopted by the District or local government agencies.

11. Industrial Use customers shall be required to follow appropriate water use efficiency BMP's, including but not limited to those established by the California Urban Water Conservation Council and

California Energy Commission, as well as other water use efficiency standards, adopted by the District or local government agencies.

12. The District may prescribe additional or different BMPs for certain categories of Municipal and Industrial Water Users.

(This page intentionally left blank)

ATTACHMENT B: IID EQUITABLE DISTRIBUTION PLAN²⁵

Adopted December 11, 2007
Revised November 18, 2008
Revised April 07, 2009
Revised April 23, 2013
Revised May 14, 2013
Revised October 28, 2013
Revised June 21, 2022
Revised July 26, 2023

²⁵ Equitable Distribution Plan documents. July 26, 2023, <https://www.iid.com/water/rules-and-regulations/equitable-distribution>

Equitable Distribution Plan

Adopted December 11, 2007

Revised November 18, 2008

Revised April 07, 2009

Revised April 23, 2013

Revised May 14, 2013

Revised October 28, 2013

Revised June 21, 2022

Revised July 26, 2023



1.0 Purpose.

1.1 Purpose. The Imperial Irrigation District ("District" or "IID") is authorized by the Irrigation District Law, specifically California Water Code Section 22252, to adopt rules and regulations for the equitable distribution of water within the District. The IID Board of Directors has approved this plan for the equitable distribution of the available water supply (the "Equitable Distribution Plan"). This Equitable Distribution Plan is for the management of the District's available water supply and does not transfer water and/or water rights outside the IID service area, but does allow for an intra-district clearinghouse for the movement of water within the IID water service area. Pursuant to Resolution No. 31-2022, the IID Board of Directors has adopted this revised Equitable Distribution Plan.

2.0 Terms and Definitions.

2.1 Agricultural Water. Water used for irrigation, related to agricultural purposes, duck ponds, and algae farming. Pipe and small parcel water service as identified by the District's *Rules and Regulations Governing the Distribution and Use of Water* is not included in this definition pursuant to Section 2.22.

2.2 Agricultural Water User(s). A District Water User that uses Agricultural Water.

2.3 Agricultural Water Users Category. A category of District Water Users comprised of Agricultural Water Users.

2.4 Apportionment. The amount of water equitably apportioned among District Water Users within each Water User Category pursuant to Sections 3.2, 3.3, and 3.4.

2.5 Available Water Supply. Water available each Calendar Year for Apportionment, which shall not include Operational and System Water and may be subject to a Water Management Reduction.

2.6 Calendar Year. Each 12-month period that begins on January 1 and ends on December 31.

2.7 Category Apportionment. The amount of water equitably apportioned to each Water User Category as a category, which is calculated by the Calendar Year average of the historical water use for that Water User Category as a whole during the years 2003 to 2012, eliminating the highest Calendar Year and lowest Calendar Year of water use history.

2.8 Clearinghouse. A mechanism administered by the District or other entity authorized by the IID Board of Directors to provide a means by which qualified

District Water Users can transfer water within the IID water service area during a Calendar Year pursuant to Section 6.0.

2.9 Cropland. Irrigable acreage within the District service area divided into fields based on the [proprietary] District Geospatial Data Base compiled from IID records, inspections and U.S. Consolidated Farm Service Agency (CFSA) Common Land Unit (CLU) standards, or other defined acreage database such as the assessor's parcel records.

2.10 District or IID. The Imperial Irrigation District.

2.11 District Conservation Assignment. Apportionment contractually or automatically assigned to IID for water conservation purposes from lands participating in or designated for participation in any District On-Farm Efficiency Conservation Program, District Fallowing Program or other District conservation programs, or subject to the Temporary Land Conversion Fallowing Policy or Interim Water Supply Policy per the terms and conditions set forth in those program agreements and/or IID policies.

2.12 District Fallowing Program. Any program administered by the District to create conserved water by fallowing agricultural lands per the terms and conditions set forth in those program agreements and/or IID policies, including the Temporary Land Conversion Fallowing Policy.

2.13 District On-Farm Efficiency Conservation Program. Any program administered by the District to create conserved water by on-farm efficiency conservation measures and/or projects per the terms and conditions set forth in those program agreements and/or IID policies.

2.14 District System Conservation Program/Projects. An integrated package of system improvements to existing infrastructure and construction of new facilities designed to conserve water.

2.15 District Water User. Any user of water supplied by the District receiving an Apportionment.

2.16 Eligible Agricultural Acre(s). Acreage that is subject to the Temporary Land Conversion Fallowing Policy or meets all the following:

- a. Cropland greater than 5 acres;
- b. Used for crop production, duck ponds or algae farming;
- c. Current with water availability charges and water bills; and
- d. Connected to District water distribution system.

2.17 Farm Unit. A grouping of two or more Agricultural Water accounts of one or more fields leased or owned by the same Agricultural Water User; a single Agricultural Water account is automatically a Farm Unit.

2.18 Hybrid Apportionment. A Method of Apportionment used to calculate the Apportionment per Eligible Agricultural Acre within the Agricultural Water Users Category as set forth in Section 3.2.

2.19 Industrial/Commercial Water User(s). District Water Users receiving water directly from the District, and not from a Potable Water User, for industrial and commercial uses.

2.20 Industrial/Commercial Water Users Category. A category of District Water Users comprised of Industrial/Commercial Water Users.

2.21 Method of Apportionment. The method of apportionment used to calculate the Apportionment for District Water Users within each Water User Category during a Calendar Year.

2.22 Operational and System Water. Water not available for Apportionment because it is: (i) required by law, contract, and/or regulatory order or permit to be delivered or used for another use or user and failure to do so would impact the District's operations, maintenance and/or Available Water Supply; (ii) required for the District's operations and maintenance, including operational carriage and discharge water, system losses, seepage (excluding water from seepage interception conservation projects), evaporation or other losses in the District's distribution system, such as unmetered uses which cannot otherwise be calculated, including small parcel and pipe water service, recreation/lakes, and feedlots, adjusted for calculated losses from the District's point of diversion; or (iii) created by District System Conservation Program/Projects and absent the District System Conservation Program/Projects the water would not have been available for Apportionment because it would have been otherwise lost, such as through seepage or discharge.

2.23 Other District Conservation Program. Any program administered by the District to create conserved water by any means identified by the District per the terms and conditions set forth in program agreements and/or IID policies.

2.24 Overrun Payback Program. A program consistent with the federal Inadvertent Overrun and Payback Policy or other federal policies or programs to which the District may be subject, by which the cost of and/or responsibility for any District payback obligation will be borne by those District Water Users responsible for exceeding the Apportionment in a Calendar Year (adjusted for any Clearinghouse water transferred) should a District overrun occur in that Calendar Year; provided that this Overrun Payback Program shall not be available to District Water Users in any Calendar Year the federal

Inadvertent Overrun and Payback Policy is suspended and/or the District is not allowed to overrun pursuant to a federal law, rule, or regulation.

2.25 Potable Water User(s). District Water Users receiving water from the District and treating that water through a water treatment system to deliver potable water to its water users, including but not limited to municipalities and special districts.

2.26 Potable Water Users Category. A category of District Water Users comprised of Potable Water Users.

2.27 Take-or-Pay Basis. An obligation that District Water Users pay, pursuant to the District's Water Rate Schedules and *Rules and Regulations Governing the Distribution and Use of Water*, for all of the Apportionment accepted by the District Water User and not used during the Calendar Year.

2.28 Three-Year Average Apportionment. A Method of Apportionment used to calculate the Apportionment for each District Water User within the Potable Water Users Category and the Industrial/Commercial Water Users Category as set forth in Sections 3.3 and 3.4.

2.29 Water Card. The common term for the "Certificate of Ownership and Authorization of Owner Designee or Tenant" described in Regulation No. 3 of the District's *Rules and Regulations Governing the Distribution and Use of Water*. The Water Card provides information i.e., Cropland, name and address of owner and any lessees, APN, gate and canal providing water service, identity of person authorized to order water/receive notices from the District, who is obligated to pay, and similar information.

2.30 Water Management Reduction. A reduction in Available Water Supply for Apportionment, or a percentage reduction in each Category Apportionment, because of a District-wide overrun payback requirement mandatory program, or regulatory limitation of or reduction in the District's Colorado River water supply.

2.31 Water Users Category(ies). The Agricultural Water Users Category, the Potable Water Users Category, and the Industrial/Commercial Water Users Category.

3.0 Equitable Distribution.

3.1 Category Apportionment and District Water User Apportionment. Each Water User Category shall receive a Category Apportionment from the Available Water Supply to be distributed to the District Water Users within that Water User Category. Once the Category Apportionment is calculated for each Water User Category, each District Water User within each Water User Category will be apportioned water in accordance with Sections 3.2, 3.3, and 3.4, provided that the aggregate apportioned water to District Water Users within each Water User Category shall not exceed the Category Apportionment for that Water User Category.

3.2 Agricultural Water User Apportionment. Apportionment models understood and discussed to date are historical, straight line, soil type and hybrids of a combination of these methods. The default Method of Apportionment for Agricultural Water Users is the Hybrid Apportionment, which may be changed for any Calendar Year prior to the notification period set forth in Section 4.1 at the discretion of the IID Board of Directors. The Hybrid Apportionment is comprised of a historical use component and a straight line component and is calculated for each Eligible Agricultural Acre as the sum of:

a. One-half of the average amount of water used each Calendar Year between 2003 to 2012, excluding the highest and lowest Calendar Years, up to a maximum of 10 acre-feet (i.e., 5 acre-feet will be maximum 1/2 of 10 acre-feet limit); and

b. After the historical use component is calculated for every Eligible Agricultural Acre within the Agricultural Water User Category and that amount is subtracted from the Category Apportionment, the remaining amount of Category Apportionment for the Agricultural Water User Category is divided by the Eligible Agricultural Acres resulting in a flat amount for each Eligible Agricultural Acre.

3.3 Potable Water User Apportionment. The default Method of Apportionment for Potable Water Users is the Three-Year Average Apportionment, which may be changed for any Calendar Year prior to the notification period set forth in Section 4.1 at the discretion of the IID Board of Directors. The Three-Year Average Apportionment is calculated as up to the average amount of water used each of the most recent three Calendar Years that such data is available for each District Water User within the Potable Water User Category.

3.4 Industrial/Commercial Water User Apportionment. The default Method of Apportionment for Industrial/Commercial Water Users is the Three-Year Average Apportionment, which may be changed for any Calendar Year prior to the notification period set forth in Section 4.1 at the discretion of the IID Board of Directors. The Three-Year Average Apportionment is calculated as up to the average amount of water used each of the most recent three Calendar Years that such data is available for each District Water User within the Industrial/Commercial Water User Category.

4.0 Apportionment Acceptance on Take-Or-Pay Basis.

4.1 A written notice of the Apportionment for each District Water User shall be sent no later than October 31 prior to the beginning of the next Calendar Year. For Agricultural Water Users, the written notice of the Apportionment will be identified per Eligible Agricultural Acre and the number of Eligible Agricultural Acres per landowner, which shall be sent to the landowner, lessee and the authorized representative.

4.2 Prior to the start of the Calendar Year, the District Water User and/or, as applicable, the landowner or authorized representative (of Eligible Agricultural Acres

for the Agricultural Water Users Category), with written consent of the lessee (if any), must, using a District form:

a. Accept some, all or none of the Apportionment on a Take-or-Pay Basis.

b. Reserve some or all of the Apportionment on a Take-or-Pay Basis for the use of a future lessee, if applicable. The landowner remains responsible for payment on a Take-or-Pay Basis for the amount reserved for the future lessee, if applicable, unless and until payment is made by the future lessee.

c. Designate the person or entity responsible for payment of accepted and unused Apportionment on the Take-or-Pay Basis.

For Agricultural Water Users only, approve or disapprove the use of the Apportionment on other fields within the Farm Unit.

a. Allow or disallow a lessee to offer accepted and unused Apportionment to the Clearinghouse.

4.3 The District Water User and/or landowner will only be responsible for payment on a Take-or-Pay Basis for Apportionment that is accepted and remains unused in the water account at the end of the Calendar Year. On December 31 of the Calendar Year, payment for any remaining amount of the unused Apportionment will be included in the year end invoice.

4.4 Apportionment not affirmatively rejected is considered accepted. In the event a District form accepting Apportionment is not received for a field, IID will provide water delivery service to an owner or lessee with a valid Water Card in an amount not to exceed the Apportionment.

5.0 **Farm Units.**

5.1 The Farm Unit allows for the creation of a master Agricultural Water account under which individual Agricultural Water accounts are aggregated. The District will continue to bill for delivered water by individual Agricultural Water account and not by the Farm Unit or "master water account."

5.2 The primary purpose of a Farm Unit is to allow an Agricultural Water User to order water on any field within the Farm Unit as long as there is a remaining water balance for the Farm Unit greater than the water order. If water is not available within the Farm Unit, the water order will not be accepted, unless and until procedures are developed and implemented under this Equitable Distribution Plan, including procedures for the Overrun Payback Program, that allow for the acceptance of the water order.

5.3 The District will account for water and track a water balance for each field. Fields can move between Agricultural Water accounts when there is a change to the Water Card and the water balance for the field will move with the field.

5.4 Agricultural Water Users must complete and keep current the Water Card and any Farm Unit designations to receive an Apportionment and delivery of water. It is the Agricultural Water User's responsibility to keep Farm Unit designations current.

5.5 An Agricultural Water account may only be associated with a single Farm Unit at any one time. Any Agricultural Water account not designated as part of a Farm Unit will be tracked and identified as an individual Farm Unit comprised solely of that Agricultural Water account.

5.6 The amount of Apportionment available to an Agricultural Water User on leased fields included in a Farm Unit must be approved by the landowner and lessee of those fields.

5.7 Water can be added to a Farm Unit by transferring water through the Clearinghouse, but the transfer must be made to individual fields within the Farm Unit. If no particular fields are specified, the District will select a field within the Farm Unit to initially receive the water or (as closely as possible) equally divide the water among all Eligible Agricultural Acres within the Farm Unit.

5.8 An Agricultural Water User may designate multiple Farm Units. Apportionment may only be transferred between Farm Units via the Clearinghouse.

5.9 The priority of water use within a Farm Unit is (a) accepted Apportionment authorized for use on the field, (b) water from other fields authorized for transfer within the Farm Unit, and (c) water from the Clearinghouse; or as otherwise provided in procedures developed and implemented under and pursuant to this Equitable Distribution Plan. Water from a higher-priority category must be fully-used before water from a lower-priority category may be used within a Farm Unit.

6.0 Clearinghouse.

6.1 Purpose. The Clearinghouse is a mechanism to facilitate the movement of water between District Water Users and/or between Farm Units. Administration of the Clearinghouse may be delegated by the District to an entity authorized by the IID Board of Directors on a non-profit basis under rules approved by the IID Board of Directors, however all final transactions must be reported to the District for implementation.

6.2 Eligibility. Any District Water User may be a transferee. Any District Water User may be a transferor. All transferees and transferors must be current on their District water accounts and billings, including water availability charges.

6.3 Transfers. Water made available to the Clearinghouse for transfer will be assigned to Clearinghouse accounts and water shall be transferred through the Clearinghouse pursuant to procedures developed and implemented under and pursuant to this Equitable Distribution Plan. Water available for transfer will be made on a first-come, first-serve basis for those District Water Users that have submitted an offer to transfer water or submitted a request for additional water; except that a District Water User may direct the transfer of their offered water to a designated requesting District Water User within the same Water User Category.

6.4 Clearinghouse Transfer Form. The transfer form will be the Clearinghouse form used to document all transfers of water including the relevant transactional information to execute the transaction between the transferor and transferee.

6.5 Water Transferred Through the Clearinghouse. The transferee shall be billed and shall pay the District for the transferred water when ordered for delivery in the same manner, time and amount as any other water ordered pursuant to the District's Water Rate Schedules and *Rules and Regulations Governing the Distribution and Use of Water*. After the District processes the Clearinghouse transfer form, the transferor shall have no further obligation for payment of that water on a Take-or-Pay Basis. Any supplemental transactional information or fees associated with the transfer of the water between the transferor and transferee but not relevant to the implementation of the transaction are a private matter and shall not be reported to the District. Any transfers of water, whether within the Farm Unit or via the Clearinghouse, are only for the Calendar Year in which they occur and do not constitute a permanent transfer of water, or create a right to be apportioned water in future years.

6.6 Offers Remaining at Calendar Year End. Any offers for water to be transferred through the Clearinghouse not transferred by the end of the Calendar Year may be used by the District to meet the needs of other District Water Users, fulfilling conservation responsibilities, or for other District purposes. Use by the District in this manner will not relieve the District Water Users of payment required on the Take-or-Pay Basis.

7.0 On-Farm Conservation and Land Fallowing Programs.

7.1 An Agricultural Water User that participates in the District On-Farm Efficiency Conservation Program, District Fallowing Program, or Other District Conservation Program is subject to a District Conservation Assignment of the Agricultural Water User's accepted Apportionment for the Farm Unit equal to the amount of water conserved for which the Agricultural Water User is contracted.

7.2 If the Agricultural Water User's Apportionment is less than the District On-Farm Efficiency Conservation Program, District Fallowing Program, or Other District Conservation Program contracted amount, the Agricultural Water User must procure this

difference from either: the Agricultural Water User's accepted Apportionment on other Eligible Agricultural Acres within the Farm Unit, or the Clearinghouse.

7.3 If the Agricultural Water User's Apportionment is more than the District Following Program contracted amount, the Agricultural Water User may use the difference on other Eligible Agricultural Acres within the Farm Unit not participating in a District Following Program, on the fallowed field after the term of the District Following Program, or offer it to the Clearinghouse.

8.0 **Miscellaneous.**

8.1 The IID Board of Directors, at its sole discretion, which may include consideration of recommendations by the Agricultural Water Advisory Committee, may declare a 15-day period in which all offers of water received by the Clearinghouse, of up to 7% (seven percent) of the District Water User's Apportionment, shall be accepted by the District thereby relieving the District Water Users of payment of that water on the Take-or-Pay Basis. This water accepted by the District will be offered back for transfer to other District Water Users via the Clearinghouse.

8.2 The General Manager is authorized and directed to do any and all things necessary to implement and effectuate these Regulations in a manner consistent with this policy, including the temporary modification of any dates necessary to facilitate implementation.

8.3 In the event of a Water Management Reduction, the IID Board of Directors, at its sole discretion, may take any actions it determines and finds are necessary to protect the public health and safety.

8.4 The IID Board of Directors may terminate the implementation of an annual Apportionment at any time at its discretion or upon recommendation of the Agricultural Water Advisory Committee. The District shall track actual water demands during the Calendar Year.

RESOLUTION NO.

A RESOLUTION OF THE BOARD OF SUPERVISORS OF THE COUNTY OF IMPERIAL, CALIFORNIA, FOR THE DENIAL OF APPEAL #23-0004 AND CERTIFYING THE FINAL PROJECT ENVIRONMENTAL IMPACT REPORT FOR THE HELL'S KITCHEN POWER & LITHIUM PROJECT.

WHEREAS, a Final EIR (SCH #2020030704) and Candidate CEQA Findings have been prepared in accordance with the requirements of the California Environmental Quality Act, the State CEQA Guidelines, and the County's "Rules and Regulations to Implement CEQA as Amended"; and,

WHEREAS, the Board of Supervisors of the County of Imperial has been delegated with the responsibility of approving and certifying the Final EIR; and,

WHEREAS, public notice of said application has been given, and the Board of Supervisors has considered evidence presented by the Imperial County Planning & Development Services Department and other interested parties at a public hearing held with respect to this item on January 23, 2024 and,

NOW THEREFORE, the Board of Supervisors of the County of Imperial **DOES HEREBY RESOLVE** as follows:

SECTION 1. The Board of Supervisors has considered the proposed Final Environmental Impact Report (FEIR), and Candidate CEQA Findings prior to making a decision to approve and certify the proposed FEIR and Findings of Fact. The Board of Supervisors finds and determines that the Environmental Impact Report is adequate and prepared in accordance with the requirements of the California Environmental Quality Act (CEQA) which analyzes environmental effects, based upon the following findings and determinations.

SECTION 2. That in accordance with State Planning and Zoning law and the County of Imperial regulations, the following findings for the approval and certification of the FEIR, MM&RP and Findings of Fact has been made as follows:

1. That the Final Project EIR (SCH# 2020030704), Candidate CEQA Findings for the Hell's Kitchen Power Co 1 LLC ("Project") has been prepared in accordance with the requirements of the California Environmental Quality Act, the State CEQA Guidelines, and the County's "Rules and Regulations to Implement CEQA, as Amended".
2. That the County has reviewed, analyzed, and considered Final Project EIR, the environmental impacts therein identified for this Project, the Candidate CEQA Findings, and the Mitigation Monitoring and Reporting Program, and the entire Record of Proceedings prior to approving this project.

3. That the Final Project EIR, the Candidate CEQA Findings reflect the independent judgment of the County.
4. That the Candidate CEQA Findings are supported by substantial evidence and supported by information provided to the County by experts, including but not limited to the County staff and the EIR preparer, on whom the County relies.
5. That the County accept as its own, incorporate as if set forth in full herein, and make each and every one of the findings contained in the Candidate CEQA Findings, including feasibility of mitigation measures pursuant to Public Resources Code 21081(a)/CEQA Guidelines 15091.
6. That the Mitigation Monitoring and Reporting Program is designed to ensure that during project implementation, the Developer and any other responsible parties implement the Project components and comply with feasible mitigation measures identified in the CEQA Findings, the Project entitlements, and the Mitigation Monitoring and Reporting Program and that these measures are fully enforceable through permit conditions, agreements, and/or other measures, such as their inclusion in the Mitigation Monitoring and Reporting Program.
7. That the Project will not individually or cumulative have an adverse effect on fish and wildlife resources, as defined in Section 711.2 of the Fish and Game Code.
8. That the Record of Proceedings consists of the Final EIR (and all its technical reports and addendums thereto); the County staff reports; the CEQA Findings; the Mitigation Monitoring and Reporting Program; the various Project entitlements and documents referenced therein; all final reports, applications, memoranda, maps, letters, and other planning documents prepared by the EIR planning/environmental consultant; all final reports, memoranda, maps, letters, and other planning documents prepared by the County staff; all documents submitted by members of the public and public agencies in connection with the Final EIR; minutes and transcripts of all public meetings and public hearings; all written and verbal public testimony presented during a noticed public hearing for the proposed project which such testimony was taken and any and all other materials which constitute the record of proceeding pursuant to Public Resources Code section 21167.6(e); and matters of common knowledge to the County staff, and Planning Commission, including, but not limited to the County General Plan, the County Land Use Ordinance, and County policies, which may be found during regular business hours at the Imperial County Planning & Development Services Department at 801 Main Street, El Centro, CA 92243.
9. That the Board of Supervisors does hereby certify the Final Project EIR and CEQA Findings.

NOW THEREFORE, the Board of Supervisors of the County of Imperial **DOES HEREBY DENY APPEAL #23-0004** and **CERTIFY** the **Final EIR (SCH #2022030704)**, subject to the Conditions of Approval.

PASSED, ADOPTED AND APPROVED by the Board of Supervisors of the County of Imperial on this 23rd day of January 2024.

AYES:

NOES:

ABSENT:

ABSTAIN:

Luis A. Plancarte, Chairman
Imperial County Board of Supervisors

ATTEST: _____
BLANCA ACOSTA, Clerk of the
Board of Supervisors, County of
Imperial, State of California

**FINDINGS OF FACT AND STATEMENT OF OVERRIDING
CONSIDERATIONS
IMPERIAL COUNTY, CALIFORNIA
HELL'S KITCHEN POWERCO 1 AND
LITHIUMCO 1 PROJECT
Pursuant to Section 21081 of the Public
Resources Code and
Sections 15091 and 15093 of the State
CEQA Guidelines**

Prepared for:

COUNTY OF IMPERIAL
Planning and Development Services Department
801 Main Street
El Centro, California 92243
(442) 265-1736

Prepared by:

CHAMBERS GROUP, INC.
3151 Airway Avenue, Suite F208
Costa Mesa, California 92626
(949) 261-5414

December 2023

TABLE OF CONTENTS

	<u>Page</u>
SECTION 1.0 – INTRODUCTION	1
1.1 ORGANIZATION OF CEQA FINDINGS OF FACT.....	1
1.2 STATUTORY REQUIREMENTS	2
1.3 LOCATION AND CUSTODIAN OF RECORD OF PROCEEDINGS.....	3
1.4 CERTIFICATION OF FINAL EIR	3
SECTION 2.0 – ENVIRONMENTAL SETTING AND PROJECT DESCRIPTION	4
2.1 PROJECT BACKGROUND AND OBJECTIVES.....	4
2.1.1 Location	4
2.1.2 Adjacent Land Uses	4
2.2 PROJECT DESCRIPTION.....	5
2.3 STATEMENT OF PROJECT GOALS AND OBJECTIVES	5
2.4 REQUIRED PERMITS AND APPROVALS	6
2.4.1 Lead Agency Approval	6
2.4.2 Other Required Permits and Approvals.....	6
2.5 CUMULATIVE SCENARIO	7
SECTION 3.0 – CEQA REVIEW AND PUBLIC PARTICIPATION.....	9
3.1 NOTICE OF PREPARATION/INITIAL STUDY	9
3.2 NOTICE OF AVAILABILITY/NOTICE OF COMPLETION FOR DRAFT ENVIRONMENTAL IMPACT REPORT.....	9
SECTION 4.0 – NO ENVIRONMENTAL IMPACTS.....	10
4.1 AGRICULTURE AND FOREST RESOURCES	10
4.2 MINERAL RESOURCES	10
4.3 RECREATION.....	11
SECTION 5.0 – LESS THAN SIGNIFICANT ENVIRONMENTAL IMPACTS.....	12
5.1 AESTHETICS	12
5.2 ENERGY.....	13
5.3 GREENHOUSE GAS	14
5.4 LAND USE AND PLANNING	14
5.5 NOISE.....	15
5.6 POPULATION AND HOUSING	15
5.7 PUBLIC SERVICES.....	16
5.8 WILDFIRE	16
SECTION 6.0 – LESS THAN SIGNIFICANT ENVIRONMENTAL IMPACTS WITH MITIGATION INCORPORATED	18
6.1 AIR QUALITY	18

6.2	BIOLOGICAL RESOURCES.....	21
6.3	CULTURAL RESOURCES.....	26
6.4	GEOLOGY AND SOILS.....	29
6.5	HAZARDS AND HAZARDOUS MATERIALS.....	31
6.6	HYDROLOGY AND WATER QUALITY.....	32
6.7	TRIBAL CULTURAL RESOURCES.....	33
6.8	UTILITIES AND SERVICE SYSTEMS.....	35
SECTION 7.0 – SIGNIFICANT AND UNAVOIDABLE IMPACTS.....		37
7.1	GROWTH INDUCING IMPACTS.....	37
SECTION 8.0 – FINDINGS REGARDING PROJECT ALTERNATIVES.....		39
8.1	NO PROJECT ALTERNATIVE.....	39
8.2	REDUCED PROJECT SIZE ALTERNATIVE.....	39
8.3	CONCLUSION.....	41
SECTION 9.0 – FINDINGS ON MITIGATION MONITORING AND REPORTING PLAN.....		42
9.1	INTRODUCTION.....	42
9.2	PURPOSE OF MITIGATION MONITORING AND REPORTING PROGRAM.....	42
SECTION 10.0 – FINDINGS ON CHANGES TO THE DRAFT EIR AND RECIRCULATION.....		64
10.1	CHANGES TO DRAFT EIR.....	64
10.2	FINDINGS.....	64
SECTION 12.0 – REFERENCES.....		1

LIST OF TABLES

	<u>Page</u>
Table 1: Mitigation Measures.....	Error! Bookmark not defined.

SECTION 1.0 – INTRODUCTION

1.1 ORGANIZATION OF CEQA FINDINGS OF FACT

The content and format of this California Environmental Quality Act (CEQA) Findings of Fact (findings) is designed to meet the current requirements of CEQA and the *CEQA Guidelines*. The Final Focused Environmental Impact Report (EIR) for the Hell's Kitchen PowerCo 1 and LithiumCo 1 Project (Proposed Project) identified significant environmental impacts which will result from its implementation. Although, the Imperial County finds that the inclusion of certain mitigation measures will reduce most potential significant effects to a less than significant level, no impacts will remain Significant and Unavoidable. The Board of Supervisors, in adopting these findings, must also adopt a Statement of Overriding Considerations and a Mitigation Monitoring Plan (MMRP) for the Proposed Project. The Board finds that the MMRP, which is incorporated by reference and made a part of these findings, meets the requirements of Public Resources Code (PRC) Section 21081.6 by providing for the implementation and monitoring of measures intended to mitigate potentially significant effects of the Proposed Project. In accordance with CEQA and the *CEQA Guidelines*, the Imperial County adopts these findings as part of the certification of the Final EIR for the Proposed Project. Pursuant to PRC Section 21082.1 (c)(3), the Imperial County also finds that the Final EIR reflects the Imperial County's independent judgment as the Lead Agency for the Proposed Project.

The content and format of the CEQA Findings of Fact is designed to meet the current requirements of CEQA and the *CEQA Guidelines*. The Findings of Fact is organized into the following sections:

- **Chapter 1, Introduction** outlines the organization of this document and identifies the location and custodian of the record of proceedings.
- **Chapter 2, Environmental Setting and Project Description** describes the location and characteristics of the project site, project overview, project design standards, project objectives and benefits, and the required permits and approvals for the Proposed Project.
- **Chapter 3, CEQA Review and Public Participation** describes the steps Imperial County has undertaken to comply with the *CEQA Guidelines* as they relate to public input, review, and participation during the preparation of the Draft and Final EIRs.
- **Chapter 4, No Environmental Impacts** provides a summary of those environmental issue areas where no impacts would occur.
- **Chapter 5, Less Than Significant Environmental Impacts** provides a summary of less than significant impacts and a finding adopting the Final EIR's conclusions.
- **Chapter 6, Less Than Significant Environmental Impacts With Mitigation Incorporated** provides a summary of potentially significant environmental effects for which implementation of identified mitigation measures would avoid or substantially reduce the environmental effects to less than significant levels.
- **Chapter 7, Significant and Unavoidable Environmental Impacts** provides a summary of potentially significant environmental effect for which no mitigation measures are identified, or

for which implementation of feasible mitigation measures would not avoid or substantially reduce the environmental effects to less than significant levels.

- **Chapter 8, Findings Regarding Project Alternatives** provides a summary of the alternatives considered for the Proposed Project.
- **Chapter 9, Findings on Mitigation Monitoring and Reporting Plan** provides a brief discussion of the Proposed Project's compliance with the *CEQA Guidelines* regarding the adoption of a plan for reporting and monitoring.
- **Chapter 10, Findings on Changes to the Draft EIR and Recirculation** provides a brief overview of reasons for changes to the Draft EIR and why it is not necessary to re-circulate the Draft EIR.
- **Chapter 11, Statement of Overriding Considerations** provides a summary of all the project's significant and unavoidable adverse impacts. In addition, this section identifies the project's substantial benefits that outweigh and override the project's significant unavoidable impacts, such that impacts are considered acceptable.

1.2 STATUTORY REQUIREMENTS

The CEQA (PRC Section 21081 *et seq.*), and the *CEQA Guidelines* (the Guidelines) (14 Cal. Code Regulations, Section 15091 *et seq.*), require that:

- (a) No public agency shall approve or carry out a project for which an EIR has been certified which identifies one or more significant environmental effects of the project unless the public agency makes one or more written findings for each of those significant effects, accompanied by a brief explanation of the rationale for each finding. The possible findings are:
 - (1) Changes or alterations have been required in, or incorporated into, the project which avoid or substantially lessen the significant environmental effect as identified in the final EIR.
 - (2) Such changes or alterations are within the responsibility and jurisdiction of another public agency and not the agency making the finding. Such changes have been adopted by such other agency or can and should be adopted by such other agency.
 - (3) Specific economic, legal, social, technological, or other considerations, including provision of employment opportunities for highly trained workers, make infeasible the mitigation measures or project alternatives identified in the final EIR.

In short, CEQA requires that the lead agency adopt mitigation measures or alternatives, where feasible, to avoid or mitigate significant environmental impacts that would otherwise occur with implementation of the Proposed Project. Project mitigation or alternatives are not required, however, where they are infeasible or where the responsibility for modifying the Proposed Project lies with another agency [*CEQA Guidelines*, Section 15091 (a)].

For those significant effects that cannot be mitigated to a less than significant level, the public agency is required to find that specific overriding economic, legal, social, technological, or other benefits of the

Proposed Project outweigh such significant effects (see, Pub. Res. Code Section 21081 (b)). The Guidelines state in Section 15093 that:

- If the specific economic, legal, social, technological, or other benefits of a proposed project outweigh the unavoidable adverse environmental effects, the adverse environmental effects may be considered 'acceptable.'

1.3 LOCATION AND CUSTODIAN OF RECORD OF PROCEEDINGS

The documents and other materials that constitute the record of proceedings upon which Imperial County's project approval are located at 801 Main Street, El Centro, California 92243. The record of proceedings is provided in compliance with PRC Section 21081.6(a)(2) and California Code of Regulations Title 14, Section 15091(e).

1.4 CERTIFICATION OF FINAL EIR

Pursuant to *CEQA Guidelines* Section 15090, Imperial County further finds and certifies that:

- (a) The Final EIR has been completed in compliance with CEQA;
- (b) The Final EIR has been presented to the Board of Supervisors, which constitutes the decision-making body of the lead agency, and the Board of Supervisors has reviewed and considered the information contained in the Final EIR and in the record of proceedings for the Proposed Project prior to approving the project; and
- (c) The Final EIR reflects the Board of Supervisors's independent judgment and analysis.

SECTION 2.0 – ENVIRONMENTAL SETTING AND PROJECT DESCRIPTION

2.1 PROJECT BACKGROUND AND OBJECTIVES

Controlled Thermal Resources (US) Inc. via its subsidiary Hell's Kitchen Geothermal, LLC is proposing the Hell's Kitchen PowerCo 1 (HKP1), and Hell's Kitchen LithiumCo 1 LLC is proposing the Hell's Kitchen LithiumCo 1 (HKL1) in Imperial County, California. HKP1 involves the development of a geothermal power plant that will produce up to 49.9 megawatts (MW) net of geothermal green energy. HKL1 involves development of mineral extraction and processing facilities capable of producing lithium hydroxide, silica and polymetallic products, and possibly boron compounds, for commercial sale. HKP1 and HKL1 (together referred to as the Proposed Project) will be constructed by Hell's Kitchen PowerCo 1 LLC and Hell's Kitchen LithiumCo 1 LLC respectively, both subsidiaries of Controlled Thermal Resources (US) Inc. (CTR) and will have shared facilities. Hell's Kitchen Operating Services LLC, also a subsidiary of Controlled Thermal Resources (US) Inc. will operate and maintain these facilities.

The HKP1 objectives include the following:

- To produce 49.9MW (net) of geothermal green energy from within CTR's geothermal lease area.
- To provide power to the Imperial Irrigation District and other potential off takers.

The HKL1 objectives include the following:

- To provide a sustainable domestic source of lithium, a designated critical material identified by the U.S. Department of Energy.
- To extract and produce lithium hydroxide, silica, bulk sulfide, and polymetallic products for commercial sale from the geothermal brine within the Hell's Kitchen lease area.
- To minimize the distance between the geothermal power plant and lithium extraction plant for production efficiency and to reduce the extent of pipeline required to convey brine and steam to and from the geothermal power facility to the mineral extraction plant, therefore minimizing the overall industrial footprint of the combined power and mineral operations.

2.1.1 Location

The Project is located within undeveloped land owned by Imperial Irrigation District (IID) and a right-of-way (ROW) corridor for the gen-tie transmission line to the IID interconnect station near Hudson Ranch (HR1). The Project would be located within Sections 11 and 12, Township 11 North, Range 13 East in Imperial County near the eastern shore of the Salton Sea. The Project is approximately 3.6 miles west of the Town of Niland.

2.1.2 Adjacent Land Uses

Zoning designations of the surrounding properties include S-1-G, to the north, east, and south, M-2-G-PE to also the east, and S-2-G to the west. The properties bordering the Project site are designated for Agricultural land use to the north, east, and south, with Government/Special Public land use also to the east in the County's General Plan. No land use is to the west of the Project site as that area is the Salton

Sea (County 2007, 2015a). The land surrounding the Project site is mainly undeveloped agricultural or vacant land. Areas to the north and south of the Project site consist of undeveloped open space. Area to the west is open space followed by the Salton Sea. The State of California manages a wildlife management area, including waterfowl ponds to the east of the Project site. The nearest development is a single-family home located approximately 0.50 miles to the east, and the nearest commercial development is Hudson Ranch, located approximately 1.1 miles south.

2.2 PROJECT DESCRIPTION

The Hell's Kitchen PowerCo 1 (HKP1), and Hell's Kitchen LithiumCo 1 LLC is proposing the Hell's Kitchen LithiumCo 1 (HKL1) in Imperial County, California. HKP1 involves the development of a geothermal power plant. HKL1 involves development of mineral extraction and processing facilities capable of producing lithium hydroxide, silica and polymetallic products, and possibly boron compounds, for commercial sale. HKP1 and HKL1 (together referred to as the Proposed Project) will be constructed by Hell's Kitchen PowerCo 1 LLC and Hell's Kitchen LithiumCo 1 LLC respectively, both subsidiaries of Controlled Thermal Resources (US) Inc. (CTR) and will have shared facilities. Hell's Kitchen Operating Services LLC, also a subsidiary of Controlled Thermal Resources (US) Inc. will operate and maintain these facilities. The Project will consist of the following activities:

- construction and operation of a 49.9-MW geothermal power plant;
- construction of well pads with geothermal production and injection wells;
- construction of pipelines between HKP1 and HKL1 to facilitate the movement of brine between the facilities;
- construction and operation of a mineral-extraction facility to extract lithium hydroxide, silica, and polymetallic products, and possibly boron compounds from the geothermal brine;
- construction and operation of minerals handling and packaging facilities;
- construction of ingress and egress to the Project site from Davis Road;
- paving of Davis Road from McDonald Road to Noffsinger Road (approximately 2 miles);
- construction and operation of a 230-kV gen-tie line (approximately 2 miles south and 0.3 miles east); and
- construction of shared administrative facilities, offices, repair facilities, shipping and receiving facilities, and other infrastructure components.

The development area for the Project would be approximately 68 acres.

2.3 STATEMENT OF PROJECT GOALS AND OBJECTIVES

The intended objectives of the Proposed Project are to:

The HKP1 objectives include the following:

- To produce 49.9MW (net) of geothermal green energy from within CTR's geothermal lease area.
- To provide power to the Imperial Irrigation District and other potential off takers.
- To minimize and mitigate potential impacts to sensitive environmental resources while producing renewable energy and creating jobs.

The HKL1 objectives include the following:

- To provide a sustainable domestic source of lithium, a designated critical material identified by the U.S. Department of Energy.
- To extract and produce lithium hydroxide, silica, bulk sulfide, and polymetallic products for commercial sale from the geothermal brine within the Hell's Kitchen lease area.
- To minimize the distance between the geothermal power plant and lithium extraction plant for production efficiency and to reduce the extent of pipeline required to convey brine and steam to and from the geothermal power facility to the mineral extraction plant, therefore minimizing the overall industrial footprint of the combined power and mineral operations.
- To minimize and mitigate potential impacts to sensitive environmental resources within the Project area.

2.4 REQUIRED PERMITS AND APPROVALS

As required by the *CEQA Guidelines*, this section provides, to the extent the information is known to Imperial County, the CEQA Lead Agency, a list of the agencies that are expected to use this EIR in their decision making and a list of permits and other approvals required to implement the project.

2.4.1 Lead Agency Approval

As required by the CEQA Guidelines, this section provides, to the extent the information is known to the Imperial County, a list of permits and approvals to implement the Proposed Project and list of agencies that will review this Draft Focused EIR and be used in their decision-making process. The following lists Imperial County entitlements and permits that may be required for the Proposed Project prior to construction and operation:

- Imperial County Planning Department – Conditional Use Permit
- Imperial County Planning Department – Zoning Variance
- Imperial County Planning Department – Development Agreement (if required)
- Imperial County Building Department – Building and Grading Permits
- Imperial County Public Works Department – Encroachment Permit(s)

The Final Focused EIR must be certified by the Board of Supervisors as to its adequacy in compliance with CEQA prior to any actions being taken on the Proposed Project. The analysis of this Draft Focused EIR is intended to provide environmental review for the Proposed Project, including potential environmental effects associated with the development of a commercial lithium hydroxide production plant within the Salton Sea geothermal field in Imperial County in accordance with CEQA requirements.

2.4.2 Other Required Permits and Approvals

Other required permits and approvals may be necessary to approve and implement the Proposed Project as the Imperial County finds appropriate. Approvals include but are not limited to architectural plan and design; landscaping; lighting; transportation permits and approvals for driveways and routes; grading;

hauling; and public utilities. Due to the location of the Project, the California State Lands Commission would be a responsible agency. The following permits/agreements would be required from IID:

- Imperial Irrigation District – Encroachment Permit(s)
- Imperial Irrigation District – Water Supply Agreement
- Imperial Irrigation District – Other approvals not yet known for water or power

Reviewing Agencies

Reviewing Agencies include those agencies that do not have discretionary powers, but that may review the Draft EIR for adequacy and accuracy. Potential Reviewing Agencies include the following:

Federal Agencies:

- United States Fish and Wildlife (USFWS) – Incidental Take Permit (ITP; if needed)
- United State Army Corps of Engineers (USACE) – Individual Permit under Section 404 of the Clean Water Act

State Agencies:

- California Department of Transportation (Caltrans) – Encroachment Permit
- California Department of Fish and Wildlife (CDFW) – Lake or Streambed Alteration Agreement and Incidental Take Permit (if needed)
- California Department of Toxic Substances/Certified Unified Program Agency (CUPA) – Hazardous Materials / Environmental Protection Agency Approvals and Permits
- California Geologic Energy Management Division (CalGEM) – Permit(s) to drill

Regional Agencies:

- Regional Water Quality Control Board – Waste Discharge Requirement and 401 Water Quality Certification
- Imperial Irrigation District – Encroachment Permit
- Imperial County Air Pollution Control District – Permit to Construct and Permit to Operate; Use of Generators (if needed)
- Imperial County Public Health Department – Nontransient-Noncommunity Water System Permit
- Imperial County Building Department – Building and Grading Permits
- Imperial County Public Works Department – Encroachment Permit(s)
- Imperial County Fire Department and Office of Emergency Services

2.5 CUMULATIVE SCENARIO

Cumulative impacts refer to the combined effect of Proposed Project impacts with the impacts of other past, present, and reasonably foreseeable future projects. Both CEQA and the CEQA Guidelines require that cumulative impacts be analyzed in an EIR. As set forth in the CEQA Guidelines, the discussion of cumulative impacts must reflect the severity of the impacts, as well as the likelihood of their occurrence; however, the discussion need not be as detailed as the discussion of environmental impacts attributable to the project alone. As stated in CEQA, “a project may have a significant effect on the environment if the

possible effects of a project are individually limited, but cumulatively considerable (CEQA Guidelines 15130).”

According to the CEQA Guidelines 15355:

“Cumulative impacts” refer to two or more individual effects which, when considered together, are considerable and which compound or increase other environmental impacts.

- The individual effects may be changes resulting from a single project or several separate projects.
- The cumulative impact from several projects is the change in the environment, which results from the incremental impact of the proposed project when added to other closely related past, present, and reasonably foreseeable probable future projects. Cumulative impacts can result from individually minor, but collectively significant projects taking place over a period of time.

In addition, as stated in the CEQA Guidelines 15064(h)(4), it should be noted that:

“The mere existence of significant cumulative impacts caused by other projects alone shall not constitute substantial evidence that the Proposed Project’s incremental effects are cumulatively considerable.”

The following project has been identified to occur or are currently scheduled within a 2-mile radius from the Project site.

- Hudson Ranch 1 (CUP 22-0020)- Geothermal Well on approximately 500 acre parcel 0.58 miles from project site.

SECTION 3.0 – CEQA REVIEW AND PUBLIC PARTICIPATION

Imperial County has complied with the *CEQA Guidelines* during the preparation of the Draft EIR for the Proposed Project. The Draft EIR, dated August, 2023, was prepared following input from the public, responsible agencies, and affected agencies through the EIR scoping process. The “scoping” of the EIR was conducted utilizing several of the tools available under CEQA. In accordance with Section 15063 of the *CEQA Guidelines*, a Notice of Preparation (“NOP”) and Initial Study (“IS”) were prepared and distributed to the State Clearinghouse, responsible agencies, affected agencies, and other interested parties on March 31, 2022. The NOP was posted in the Imperial County Clerk’s office for 30 days. Information requested and input provided during the 30-day NOP comment period regarding the scope of the EIR were included in the Draft EIR. Notices informing the community of the public review periods for the NOP/IS and Draft EIR were distributed using three methods: a NOP, a Notice of Availability (“NOA”), and newspaper publication. The NOP and NOA included information on where to view the NOP/IS and Draft EIR, how to comment on the IS and Draft EIR. The public review period and scoping for the NOP/IS was from March 31, 2022 to May 13, 2022, and the public review period for the Draft EIR was from August 30, 2023 to October 13, 2023.

3.1 NOTICE OF PREPARATION/INITIAL STUDY

Per *CEQA Guidelines* Section 15082, an NOP for the Draft EIR was prepared. The IS/NOP was sent to the Office of Planning and Research, State Clearinghouse for distribution to State agencies and directly to regional and local agencies. The NOP was published in March 2022. During the public scoping period, the IS/NOP was made available for review at the following locations:

- Imperial County Planning & Development Services Department, 801 Main Street, El Centro, CA 92243
- In addition, the NOP/IS was made available online at <http://www.icpds.com>

3.2 NOTICE OF AVAILABILITY/NOTICE OF COMPLETION FOR DRAFT ENVIRONMENTAL IMPACT REPORT

In accordance with *CEQA Guidelines* Section 15087(a), a Notice of Availability/Notice of Completion (“NOA/NOC”) of the Draft EIR was prepared. The Draft EIR and the NOA/NOC was sent to the Office of Planning and Research, State Clearinghouse for distribution to State agencies and directly to regional and local agencies. The NOA/NOC was published on August 30, 2023. During the public scoping period, the Draft EIR and the NOA/NOC was made available for review at the following locations:

- Imperial County Planning & Development Services Department, 801 Main Street, El Centro, CA 92243 City of El Centro
- Public Library, 539 State Street, El Centro, California
- In addition, the Draft EIR and NOA/NOC were made available online at <http://www.icpds.com>

SECTION 4.0 – NO ENVIRONMENTAL IMPACTS

Based on the Initial Study and the Record of Proceedings, the Board of Supervisors finds that the Proposed Project would have no impacts associated with:

- Agriculture and Forest Resources
- Mineral Resources
- Recreation

Because the Findings of No Impact were made in the Initial Study, these environmental issues areas were not carried forward for analysis in the EIR.

4.1 AGRICULTURE AND FOREST RESOURCES

According to the California Department of Conservation's Farmland Mapping and Monitoring Program, the Project site is designated as "Other Land" (DOC 2020a). No Prime Farmland, Unique Farmland, or Farmland of Statewide Importance is located within or in proximity to the Project site. The County General Plan designates the Project site as Agriculture land use; however, according to the General Plan Land Use Element, a non-agricultural land use may be permitted within General Plan-designated agricultural land if the use does not conflict with agricultural operations and will not result in the premature elimination of agricultural operations (County 1993). There is no existing agricultural land on the Project site, thus the Project would not conflict with or eliminate agricultural operations. No land within the Project site is zoned for agricultural use. The Project site is not subject to the provisions of a Williamson Act contract (DOC 2018). No land within the Project site is zoned forest land or timberland and there is no existing forest land on the Project site or in the immediate vicinity. The Project would not result in the conversion of agricultural land or forest land. No impacts would occur and no further analysis is required.

FINDINGS

- 1) The Board finds, based on the Initial Study, the Final EIR, and the whole of the record, that the Proposed Project would result in no impact relating to the Agriculture and Forest Resources issues discussed above.

4.2 MINERAL RESOURCES

Although there are geothermal resources and minerals underlying the Project, there are no designated mineral resource zones or mineral resource recovery sites within the vicinity of the Project site. There are a number of mines along the Chocolate Mountain Range to the east, but the closest is approximately 5.3 miles from the Project site (DOC 2020c). Additionally, a part of this Project is a geothermal brine processing plant that would produce commercial-grade lithium hydroxide, silica, bulk sulfide, and polymetallic products, increasing the availability of these mineral resources. In utilizing the waste stream to produce these mineral resources, the Project actually represents a gain in the availability of these resources. The Project would be in alignment with the County General Plan's Renewable Energy and Transmission Element, Objective 3.2, which states that the County should "encourage the continued development of the mineral extraction/production industry for job development using geothermal brines

from the existing and future geothermal flash power plants” (County, 1993). No known mineral resources or mineral resource recovery sites would be lost as a result of the Project; thus, no impacts would occur and no further analysis is required.

FINDINGS

- 1) The Board finds, based on the Initial Study, the Final EIR, and the whole of the record, that the Proposed Project would result in no impact relating to Mineral Resources.

4.3 RECREATION

There are no parks or other developed federal, State, or County recreational facilities in the Project area or immediate vicinity. Further, the Project involves the construction of a geothermal power plant and brine processing plant and would not construct any recreational facilities. It is estimated that there will be up to 500 workers at the Project site during peak construction and approximately 112 full-time employees during operations. These construction workers and employees are expected to come from existing populations that live in and commute from the surrounding local communities. Therefore, the Project would not cause an increase in population that would result in physical deterioration of existing recreational facilities. No impacts would occur, and no further analysis is required.

FINDINGS

The Board finds, based on the Initial Study, the Final EIR, and the whole of the record, that the Proposed Project would result in no impact relating to Recreation resources

SECTION 5.0 – LESS THAN SIGNIFICANT ENVIRONMENTAL IMPACTS

Based on the Final EIR and the Record of Proceedings, the Board of Supervisors finds that the Proposed Project would have less than significant environmental effects associated with the following environmental issues:

- Aesthetics
- Energy
- Greenhouse Gas Emissions
- Land Use and Planning
- Noise
- Population and Housing
- Public Services
- Wildfire

5.1 AESTHETICS

Due to the distance of the Project site from the nearest scenic highway, the Proposed Project is not anticipated to have a substantial adverse effect on a scenic highway. The Proposed Project would not result in substantial adverse effect on a scenic highway because it would neither be located near a scenic highway nor would its presence interrupt the views seen along Highway 111.

The Proposed Project would affect the existing viewshed by partially blocking the mountain ranges to the north of the Project, such as the Orocopia and Chocolate Mountains to the north/northwest. While the mountains within Imperial County provide visual character to the area, the Project site is not a designated scenic viewpoint and therefore, the presence of Project features would not be considered to have a substantial adverse effect on a scenic vista. Furthermore, the Sonny Bono Salton Sea Wildlife Refuge is located 4 miles southwest of the Project site. Due to its distance from the Project site, the construction and operation of the Proposed Project would not result in substantial adverse effect to its use.

The construction and operation of the Proposed Project would not substantially degrade the existing visual character of the area. While the Project is not designated to contain high visual quality, it would be designed and constructed to be consistent with the existing power plants in the region so as to maintain visual consistency. Furthermore, the proposed uses of the site would be consistent with the permitted uses of the area as the land use ordinance by the County authorizes the development and operation of renewable energy projects with a CUP. Impacts therefore are less than significant.

FINDINGS

- 1) The Board finds, based on the Initial Study, the Final EIR, and the whole of the record, that the Proposed Project would result in less than significant impacts relating to the Aesthetics issues discussed above.

5.2 ENERGY

The off-road construction equipment fuel usage was calculated through use of the off-road equipment assumptions and fuel use assumptions provided in Appendix H, which found that the off-road equipment utilized during construction of the Project would consume 636,310 gallons of diesel fuel. The on-road fuel consumption during construction was calculated through use of the construction vehicle trip assumptions and fuel use assumptions provided in Appendix H, which found that the on-road trips generated from construction of the Project would consume 8,554,787 gallons of fuel. As such, the combined fuel used from off-road construction equipment and on-road construction trips for the Project would result in the consumption of 9,191,096 gallons of diesel fuel.

Construction activities associated with the Project would be required to adhere to all State and Imperial County Air Pollution Control District regulations for off-road equipment and on-road trucks, which provide minimum fuel efficiency standards. Construction activities for the Project would not result in the wasteful, inefficient, and unnecessary consumption of energy resources. In addition, the operation of the Project would result in a net increase of 147,732,2kilowatt-hours (kWh) per year.

Operation of the Project would result in increased consumption of petroleum-based fuels related to vehicular travel to and from the Project site. Operations related to fuel consumption were calculated using information related to the estimated number of employees, their estimated vehicle miles traveled per day, and the number of operational days per year. The Based on these assumptions, the Project would consume 25,217,394 gallons of transportation fuel per year (diesel and gasoline).

Additionally, the Project would comply with all federal, State, and County requirements related to the consumption of transportation energy, including CCR Title 24, Part 11, the CALGreen Code, which requires all new parking lots to provide preferred parking for clean air vehicles. Therefore, it is anticipated the Project will be designed and built to minimize transportation energy through the promotion of the use of electric-powered vehicles and that existing and planned capacity and supplies of transportation fuels would be sufficient to support the Project's demand. Thus, impacts regarding transportation energy supply and infrastructure capacity would be less than significant, and no mitigation measures would be required.

The Project would not conflict with or obstruct a State or local plan for renewable energy or energy efficiency. The applicable Renewable Energy and Transmission Element for the Project is included in the County's General Plan. The Proposed Project's consistency with the applicable energy-related policies in the Renewable Energy and Transmission Element of the General Plan are shown in Table 4.4-1 of the FEIR.

FINDINGS

- 1) The Board finds, based on the Initial Study, the Final EIR, and the whole of the record, that the Proposed Project would result in less than significant impacts relating to the Energy issues discussed above.

5.3 GREENHOUSE GAS

The GHG emissions are based on the proposed design detailed in the Project Description as well as IID's adherence to the State's Renewable Portfolio Standards (RPS) that require 60 percent of electricity provided by IID to be from zero-carbon emissions sources by the year 2030. Table 4.7 3 shows that the operational GHG emissions do not exceed either the USEPA's 25,000 MTCO₂e emissions threshold or ICAPCD Rule 903 – 20,000 MTCO₂e emissions threshold, where exceedance of either threshold would require the Project to perform additional GHG emissions recordkeeping and reporting. Therefore, the Project would offset greenhouse gas emissions. and a less than significant impact would occur.

The Proposed Project would not conflict with any applicable plan, policy, or regulation of an agency adopted for the purpose of reducing GHG emissions. As detailed above, neither the ICAPCD nor the County of Imperial has adopted a climate action plan; as such, the only applicable plan for reducing GHGs is the CARB's 2017 Climate Change Scoping Plan. Table 4.7-4 of the FEIR provides a summary of Project consistency with the Plan. With implementation of the Project Design Features committed to by the Project applicant and Statewide regulatory requirements including the CALGreen building standards, the Proposed Project would be consistent with all feasible mitigation measure for individual projects provided in the CARB's 2017 Scoping Plan. Therefore, implementation of the Proposed Project would not conflict with any applicable plan that reduces GHG emissions. Impacts would be less than significant.

FINDINGS

- 1) The Board finds, based on the Initial Study, the Final EIR, and the whole of the record, that the Proposed Project would result in less than significant impacts relating to the Greenhouse Gas issues discussed above.

5.4 LAND USE AND PLANNING

The Project is located in a rural area approximately 3.6 miles west of Niland, CA, which is the closest nearby community. The gen-tie line required by the Project would utilize existing transmission ROW, and traverse the existing area but would not physically divide the area for approximately 2.3 miles southeast. There are no residences in close proximity to the Project site; thus, the Project would not physically divide an established community and no impacts would occur and no further analysis is required.

The power and lithium production facilities are located in an area that is zoned S-1-G (open space / geothermal overlay), S-2-G (open space/preservation/geothermal overly) (S-1-G) and M-2-G-PE (medium industrial/geothermal overlay) and has an Agricultural land use. S-1-G, S-2-G, and M-2-G-PE allow geothermal exploration with a conditional use permit (CUP). Although S-2-G is for preservation only a well pad would be on the site along with a portion of the S-Berm/Extension Road which are allowed uses. The County Land Use Ordinance, Division 17, includes the Renewable Energy (RE) Overlay Zone, which authorizes the development and operation of renewable energy projects, with an approved conditional use permit (CUP). According to the General Plan Land Use Element, a non-agricultural land use may be permitted within General Plan-designated agricultural land if the use does not conflict with agricultural operations and will not result in the premature elimination of agricultural operations (County 1993). As analyzed in Section II, Agriculture and Forest Resources above, there is no existing agricultural land on the Project site and the land is not designated as Prime Farmland, Unique Farmland, or Farmland of Statewide Importance by the Department of Conservation. The mineral extraction is associated with the geothermal

extraction and would be compatible with the geothermal overlay. Implementation of the Project would require the approval of a CUP by the County to allow for the construction and operation of the proposed geothermal and mineral extraction facility on land designated as agriculture. With obtaining a CUP, the Project would be consistent with the land use plan; therefore, impacts associated with conflicts with land use plan, policy or regulation would be less than significant and no further analysis is required.

FINDINGS

- 1) The Board finds, based on the Initial Study, the Final EIR, and the whole of the record, that the Proposed Project would result in less than significant impacts relating to the Land Use and Planning issues discussed above.

5.5 NOISE

Implementation of the Project would not result in a substantial increase in ambient noise levels at off-site noise-sensitive receptors or exceed the County of Imperial Property Line Noise Standards (70 dBA anytime for Light Industrial/Industrial Park Zones) and the applicable Noise/Land Use Compatibility criteria. Based on reported noise levels from similar operations, it is anticipated that noise levels would not exceed the County property line noise limits at the closest sensitive receptors. Therefore, operational noise impacts would be less than significant.

FINDINGS

- 1) The Board finds, based on the Initial Study, the Final EIR, and the whole of the record, that the Proposed Project would result in less than significant impacts relating to the Noise issues discussed above.

5.6 POPULATION AND HOUSING

The Project involves construction and operation of a geothermal power plant and a geothermal brine processing plant and does not propose the development of any permanent housing on site. Temporary housing will be provided on site for the well drilling crew that will be working 24 hours a day for approximately 6 months; however, the temporary housing will be removed once the well-drilling phase is complete. The Project operation would require approximately 112 full-time employees who are expected to live in and commute from the local surrounding communities. Therefore, the Project is not anticipated to induce population growth directly or indirectly; thus, impacts would be less than significant, and no further analysis is required.

The Project development site is approximately 65 acres and is not zoned for housing. There are no residences within the Project site or and the closest residence is a single residence more than half mile away; thus, no existing people or housing would be displaced as a result of the Project, thus no impact would occur.

FINDINGS

- 1) The Board finds, based on the Initial Study, the Final EIR, and the whole of the record, that the Proposed Project would result in less than significant impacts relating to Population and Housing issues discussed above.

5.7 PUBLIC SERVICES

Fire protection and emergency medical services in the Project area are provided by the Imperial County Fire Department (ICFD). The closest station to the Project site is the Niland Station, approximately 4 miles east, or an approximately 9-minute drive (Google, 2022). During construction, the Project site will be cleared of all vegetation and cleared areas will be maintained throughout construction. Fire extinguishers will also be available around the construction site. In case of emergency response during operations, Project access from Davis Road would have turnaround areas to allow clearance for fire trucks per fire department standards. In addition, a 100,000-gallon water storage tank will be located on site for fire-water storage. The fire protection system will consist of a fire main and surface distribution equipment such as yard hydrants and hose houses, monitors around the perimeter of the cooling tower, automatic sprinklers for the turbine generator and auxiliary equipment, and a complete detection and alarm system. The firewater supply and pumping system will provide an adequate quantity of fire-fighting water.

All fire suppression systems will be designed in accordance with federal, State, and local fire codes; OSHA regulations; and other jurisdictional codes, requirements, and standard practices. The ICFD will be consulted to review and approve any and all proposed fire equipment, apparatus, and related fire prevention plans. Acceptable service ratios and response times for fire protection will be maintained following Project implementation through consultation with the ICFD and the County. Impacts would be less than significant, and no further analysis is required.

Police protection services in the area are provided by the Imperial County Sheriff's Department. The closest police station to the Project site is the Imperial County Sheriff's office in Niland, approximately 4 miles east, or an approximately 10-minute drive (Google, 2022). The increase in construction related traffic is not anticipated to significantly increase demand on law enforcement services due to the rural nature of the Project vicinity. Additionally, the Project site would have a security fence around the Project site and include obscured fencing around processing areas. In addition, approximately 112 full-time employees will be on site 24 hours a day, 7 days a week during operations of the Project, thereby minimizing the need for police surveillance. The workforce for the Project would come from surrounding areas, and the Project workforce would not create a new demand for police protection. Impacts would be less than significant, and no further analysis is required.

FINDINGS

- 1) The Board finds, based on the Initial Study, the Final EIR, and the whole of the record, that the Proposed Project would result in less than significant impacts relating to Public Services issues discussed above.

5.8 WILDFIRE

CALFIRE's Fire Hazard Severity Zone Viewer identifies no very high, high, or moderate fire hazard severity zones in the local or state responsibility areas within 30 miles of the Project site (CALFIRE 2022). Additionally, as mentioned in Section XV Public Services, all fire suppression systems will be designed in accordance with federal, state, and local fire codes; occupational health and safety regulations; and other jurisdictional codes, requirements, and standard practices. The ICFD will also be consulted to review and approve any and all proposed fire equipment, apparatus, and related fire prevention plans. Compliance with local emergency response and evacuation plans, including the EOP and MJHMP, will be maintained

through consultation with the ICFD and the County. Impacts would be less than significant and no further analysis is required.

The Seismic and Public Safety Element of the County General Plan also states that the potential for a major fire in the unincorporated areas of the County is generally low (County 1993). Moreover, the Project site is flat and is not within an area of risk due to slope. Although the County has experienced damage from heavy winds in the past, hazards in the County are managed by the MJHMP which is reviewed and updated every 5 years (County 2021). Further, during construction the Project site and access road will be cleared of all vegetation and cleared areas will be maintained throughout construction. Fire extinguishers will be available around the construction site as well. During operations, a brush control program will be prepared and implemented on those portions of the Project site that will not be developed. Hazardous materials onsite during operations may be flammable, but fire suppression systems will be installed and the ICFD will be consulted to review and approve any and all proposed fire equipment, apparatus, and related fire prevention plans. Thus, employees onsite would not be exposed to pollutant concentrations from a wildfire. Impacts would be less than significant and no further analysis is required.

FINDINGS

- 1) The Board finds, based on the Initial Study, the Final EIR, and the whole of the record, that the Proposed Project would result in less than significant impacts relating to Wildfire issues discussed above.

SECTION 6.0 – LESS THAN SIGNIFICANT ENVIRONMENTAL IMPACTS WITH MITIGATION INCORPORATED

Based on the Final EIR and the Record of Proceedings, the Board of Supervisors finds that the Proposed Project would have less than significant environmental effects with mitigation incorporated associated with the following environmental issues:

- Air Quality
- Biological Resources
- Cultural Resources
- Geology and Soils
- Hazards and Hazardous Materials
- Transportation
- Tribal Cultural Resources
- Utilities and Service Systems

6.1 AIR QUALITY

Both construction and operational emissions created from the Proposed Project would not be within their respective ICAPCD thresholds. According to the ICAPCD Handbook, projects that are within the ICAPCD thresholds are consistent with the regional air quality plans. Furthermore, the standard mitigation measures provided in the ICAPCD Handbook have been incorporated into the Project Description for the Proposed Project as Project Design Features (see Section 2.10), and the Proposed Project will be required to implement all of the ICAPCD Regulation VIII, fugitive dust control measures during construction and operation of the Proposed Project. Furthermore, any stationary sources of emissions operated on site will be required to adhere to ICAPCD Rule 207, New and Modified Stationary Source Review and Rule 201 that require permits to construct and operate stationary sources. The Proposed Project would have the potential to conflict with or obstruct implementation of the applicable air quality plans. However, the Project would implement mitigation measures AQ-1 and AQ-2 to reduce CO and NO_x emissions. Table 4.2-7 in the FEIR shows that once mitigated, all criteria pollutants would be reduced to a level that is less than significant. Therefore, with implementation of the above mitigation measure, impacts to air quality plans would be reduced to a level less than significant.

During start-up conditions, air emissions of CO and NO_x associated with the HKP1 were estimated to exceed the CEQA significance thresholds and air emissions of CO associated with HKP1 were estimated to exceed the Rule 207, Section C.2.g thresholds. ICAPCD Rule 207 Section C.2 requires emissions offsets for sources with pollutant emissions that exceed 137 pounds per day. Pursuant Rule 207, Section C.2.g, the Proposed Project has prepared a CO Air Quality Impact Analysis (Part F of Rule 207), which demonstrates that the HKP1 would not cause or contribute to a violation of the CO NAAQS/CAAQS. The 1-hour and 8-hour CO modeled concentration plus background concentrations are 2,213 and 1,369 micrograms per cubic meter (µg/m³), respectively, which are well below the NAAQS/CAAQS. Therefore, the startup

operations associated with the proposed standby/black-start diesel engine generator would have a less than significant impact on CO concentrations and would not result in cumulatively considerable net increase to any criterial pollutant for which the project region is nonattainment under an applicable federal or State ambient air quality standard.

MM-AQ-1: Prior to commencing construction, the Project proponent shall submit a Dust Control Plan to the Imperial County Air Pollution Control District (ICAPCD) for approval identifying all sources of PM10 and PM2.5 emissions and associated mitigation measures during the construction and operational phases of the Project. The Project proponent shall submit a Construction Notification Form to the ICAPCD ten days prior to the commencement of any earthmoving activity. This plan would provide a detailed list of control measures to reduce fugitive emissions from construction and operational activities, including but not limited to watering of unpaved roads, vehicle speed limits, windbreaks, transport container covers, and cleaning and sweeping procedures. The Dust Control Plan submitted to the ICAPCD shall meet all applicable requirements for control of fugitive dust emissions, including the following measures designed to achieve the no greater than 20-percent opacity performance standard for dust control:

- All disturbed areas, including bulk material storage, that is not being actively used shall be effectively stabilized; and visible emissions shall be limited to no greater than 20 percent opacity for dust emissions by using water, chemical stabilizers, dust suppressants, tarps, or other suitable material, such as vegetative groundcover. Bulk material is defined as earth, rock, silt, sediment, and other organic and/or inorganic material consisting of or containing PM with 5 percent or greater silt content.
- All on- and off-site unpaved roadway segments being used for 50 or more average vehicle trips per day shall be effectively stabilized, and visible emissions shall be limited to no greater than 20 percent opacity for dust emissions by the use of restricting vehicle access, paving, chemical stabilizers, dust suppressants, and/or watering.
- All unpaved traffic areas one acre or more in size with 75 or more average vehicle trips per day shall be effectively stabilized, and visible emissions shall be limited to no greater than 20 percent opacity for dust emissions by paving, chemical stabilizers, dust suppressants, and/or watering.
- All track-out or carry-out, which includes bulk materials that adhere to the exterior surfaces of motor vehicles and/or equipment (including tires) that may then fall onto the pavement on paved public roads, shall be cleaned at the end of each workday or immediately when mud or dirt extends a cumulative distance of 50 linear feet or more onto a paved road in an urban area.
- Movement of bulk material handling or transfer shall be stabilized prior to handling or at points of transfer with application of sufficient water or chemical stabilizers, or by sheltering or enclosing the operation and transfer line except, where such material or activity is exempted from stabilization by the rules of ICAPCD.
- Any temporary unpaved road shall be effectively stabilized and visible emissions shall be limited to no greater than 20 percent opacity for dust emission by paving, chemical stabilizers, dust suppressants and/or watering.

- Fugitive dust generation during construction would be minimized by watering as needed to meet Imperial County standards for fugitive dust control. To further reduce fugitive dust emissions, vehicle traffic on unpaved roads would be kept below 15 miles per hour.
- During grading, the Project would be watering actively disturbed on-site areas at least three times a day as necessary to reduce fugitive dust emissions.
- Access to the site would be via Highway 111, McDonald Road, and Davis Road. All workers, vendors and haul trucks would be required to utilize these roadways.
- An agreement between County of Imperial Public Works and the applicant would be established requiring the applicant to improve a two-mile section of the unpaved Davis Road adjacent to the site by installing a 12- to 18-inch- thick engineered Class II base section. In addition, at the request of the County, the applicant would utilize the improved section during construction and would wet the site continuously during construction activities. The road would be immediately paved after construction prior to operations of the plant to avoid damaging a new asphalt section.
- During construction, the Project would be required to maintain daily dust suppression at the two-mile section of Davis Road adjacent to the site using a water truck operating continuously while vehicles are using the road.
- The Project would provide wheel shakers at the exit(s) of the construction site to minimize dust being tracked off the Project site and onto the roadways.
- Operational on-road trips shall not operate on unpaved dirt roads.

MM-AQ-2: Prior to commencing construction, the Project proponent shall submit and commit to a Combustion Exhaust Emissions Control Program. This plan would provide a detailed list of control measures to minimize exhaust emissions during Project construction, including but not limited to fuel use, engine maintenance, and procedures:

- The Exhaust Emission Control Plan shall provide a detailed list of control measures to minimize exhaust emissions during Project construction, including but not limited to fuel use, engine maintenance, and procedures.
- The construction contractor shall be required to utilize construction equipment using diesel engines less than 50 horsepower with certified NOx emissions rated as Tier 3 or better. All off-road diesel-powered equipment greater than 50 horsepower that is used on-site during construction of the Project shall meet USEPA Tier 4 offroad emission standards and Level 3 diesel particulate filters.
- When commercially available, fossil fueled equipment shall be replaced with electrically driven equivalents (provided they are not run via a portable generator set).
- Idling times shall be minimized either by shutting equipment off when not in use or reducing the maximum idling time to five minutes (as required by the California Airborne Toxics Control Measure, Title 13, Section 2485 of California Code of Regulations). Clear signage shall be provided for construction workers at all access points.

- All construction equipment shall be maintained and properly tuned in accordance with manufacturer's specifications. All equipment shall be checked by a certified mechanic and determined to be running in proper condition prior to operation.
- Where access to alternative sources of power are available, portable diesel engines shall be prohibited. Haul truck shall be 2010 model year trucks or newer (a gross vehicle weight rating of at least 14,001 pounds), or best commercially available equipment, that meet the California Air Resources Board 2010 engine emissions standards at 0.01 g/horsepower-hour of particulate matter and 0.20 g/horsepower-hour of NOx emissions or newer, cleaner trucks.
- The volatile organic compounds (VOC) architectural coating limits specify that the use paints and solvents with a VOC content of 100 grams per liter or less for interior and 150 grams per liter or less for exterior surfaces shall be required.

Therefore, implementation of MM-AQ-1 and MM-AQ-2 would reduce impacts associated with Air Quality to less than significant.

FINDINGS

- 1) The Board finds, based on the Initial Study, the Final EIR and the whole of the record, that the Proposed Project would result in less than significant impacts relating to Air Quality discussed above with incorporation of the above mitigation measure.

6.2 BIOLOGICAL RESOURCES

The Project includes removal of cattails and other vegetation that provide breeding habitat for Yuma hispid cotton rat. Yuma hispid cotton rat could be impacted by construction activities if the species were to occur in the construction area at the time of construction. In addition, construction activities include excavation of trenches and steep walled foundations where cotton rat could become trapped. Because a qualified biologist would be on site to observe all vegetation removal activities and could relocate Yuma hispid cotton rat out of harm's way if one were observed in the area, the impact from vegetation removal activities would be less than significant. In addition, because open trenches will be covered to avoid cotton rats from becoming trapped and a biologist will observe open excavations daily, the impact of open excavations on cotton rats will be less than significant.

The Project study area contains wetlands and riparian habitats that are potentially subject to RWQCB, CDFW, and USACE jurisdiction. The removal of vegetation and discharge of fill to these wetland and riparian resources from temporary construction activities, or permanent conversion to a developed land use during operation of the proposed Project, could be a significant impact. Hell's Kitchen PowerCo 1 LLC and Hell's Kitchen LithiumCo 1 LLC will obtain all required USACE, CDFW, and RWQCB permits for impacts to wetlands and riparian areas prior to construction in any jurisdictional wetland or riparian area. The agencies permit processes requires compensatory mitigation for impacts to jurisdictional water resources. Because the Project will comply with all permit requirements, including development of compensatory wetland and riparian mitigation, the impacts on wetlands and riparian areas would be less than significant.

Project construction would occur within a relatively small area of comparatively low habitat quality along the roadside adjacent to the large, contiguous wetlands to the east. Following construction completion, vegetated areas and unvegetated open space would be converted permanently to developed land uses.

The conversion of these vegetated and unvegetated open space areas would not result in a noteworthy loss of habitat compared to the large contiguous wetlands and open space areas to the north, west, and east, and would not impede wildlife access to foraging habitat, breeding habitat, water sources, or other areas necessary for their movement or reproduction. The Project impacts are collocated adjacent to Davis Road, IID's existing power line, and other infrastructure. The Project study area does not contain any wildlife nursery sites. The impact would be less than significant.

Project construction would occur within a relatively small area of comparatively low habitat quality along the roadside adjacent to the large, contiguous wetlands to the east. Following construction completion, vegetated areas and unvegetated open space would be converted permanently to developed land uses. The conversion of these vegetated and unvegetated open space areas would not result in a noteworthy loss of habitat compared to the large contiguous wetlands and open space areas to the north, west, and east, and would not impede wildlife access to foraging habitat, breeding habitat, water sources, or other areas necessary for their movement or reproduction. The Project impacts are collocated adjacent to Davis Road, IID's existing power line, and other infrastructure. The Project study area does not contain any wildlife nursery sites. The impact would be less than significant.

In accordance with the consistency analysis provided in FEIR Table 4.3-1, the proposed Project is not anticipated to conflict with the Imperial County General Plan. There are no other local policies or ordinances protecting biological resources that apply to the proposed Project. Therefore, construction and operation of the proposed Project is anticipated to have a less-than-significant impact with respect to conflicting with any local policies or ordinances protecting biological resources. However, the Imperial County Board of Supervisors provides the ultimate determination regarding the proposed Project's consistency with the Imperial County General Plan.

MM- BIO-1: Designated Biologist- The Applicant shall retain the services of a Qualified Biologist. The Qualified Biologist will be employed during construction and all vegetation removal and ground-disturbing activities. The Qualified Biologist will document compliance with the projects mitigation measures and permits. The Qualified Biologist will have the authority to halt any Project activities that are in violation of the terms and conditions of the Project biological opinion(s) or incidental take permit, as appropriate.

MM- BIO-2: Biological Monitors- Biological monitor(s) will be employed to assist the Designated Biologist in conducting preconstruction surveys and monitoring ground disturbance, grading, construction, decommissioning, and restoration activities. The biological monitor(s) will have sufficient education and field experience to understand resident wildlife species biology. To avoid and minimize effects to biological resources, the biological monitor(s) will assist the Designated Biologist with the following:

- Conduct inspections for listed species during ground-disturbing construction activities and document that habitat within the construction zone is not occupied by Yuma Ridgway's rail or desert pupfish.
- Document compliance with all conservation measures, including but not limited to monitoring for presence of listed species; halting construction activity in the area if an individual listed species is found; and checking the staking/flagging of all disturbance areas to be sure that they are intact and that all construction activities are being kept within the staked/flagged limits. If a Yuma Ridgway's rail or desert pupfish is found within a work area, the Biological Monitor(s) will

immediately notify the Designated Biologist, who will determine measures to be taken to ensure that the individual is not harmed, such as temporarily halting construction.

MM- BIO-3. Worker Environmental Awareness Program Training: A Worker Environmental Awareness Program will be implemented for construction crews prior to the commencement of Project activities. Training materials and briefings will include, but not be limited to, discussion of the federal and State statutes protecting threatened and endangered species, the consequence of noncompliance with these statutes, identification of values of wildlife and natural plant communities, hazardous substance spill prevention and containment measures, and review of all required conservation measures.

MM-BIO-4: Flagging of Work Area Limits: All areas to be disturbed by the Project will be flagged prior to construction. All disturbance will be confined to these flagged areas, and all employees will be instructed that their activities must be confined to locations within the flagged areas.

MM- BIO-5: Power Wash Equipment: All equipment used during construction of the Project will be required to be power washed prior to arrival at the Project site to prevent the transportation and establishment of noxious weeds in the area

MM- BIO-6: Sediment and Erosion Control: The Project proponent will acquire the appropriate Clean Water Act regulatory permits, prepare a Stormwater Pollution and Prevention Plan (SWPPP), and implement BMPs prior to construction and site restoration. The SWPPP will identify specific actions and BMPs relating to the prevention of stormwater pollution from Project-related construction sources by identifying a practical sequence for site restoration, BMP implementation, contingency measures, responsible parties, and agency contacts. The SWPPP reflects localized surface hydrological conditions and will be reviewed by the USFWS prior to commencement of work. A SWPPP will be a condition of the contract with each contractor selected to build and decommission the Project. The SWPPP(s) at a minimum will incorporate soil stabilization and erosion control practices (e.g., hydroseeding, erosion control blankets, mulching), dewatering and/or flow diversion practices, sediment control practices (temporary sediment basins, fiber rolls), temporary and post-construction onsite and offsite runoff controls, and special considerations and BMPs for water crossings, wetlands, and drainages. The SWPPP will be prepared by a qualified SWPPP practitioner with BMPs selected to achieve maximum pollutant removal and that represent the best available technology that is economically achievable. Emphasis for BMPs is placed on controlling discharges of oxygen-depleting substances, floating material, oil and grease, acidic or caustic substances or compounds, and turbidity. Performance and effectiveness of these BMPs are determined either by visual means where applicable (i.e., observation of above-normal sediment release), or by actual water sampling in cases where verification of contaminant reduction or elimination (inadvertent petroleum release) is required to determine adequacy of the measure.

MM- BIO-7: Solid Waste Management: Solid waste will be properly contained in designated collection areas on site and regularly disposed of.

MM-BIO-8: Desert Pupfish Protection and Relocation Plan: A desert pupfish protection and relocation plan will be prepared prior to construction activities in any suitable habitat for desert pupfish. Its implementation will ensure construction in any suitable habitat for desert pupfish will be conducted with minimal effects on desert pupfish. This plan will be submitted to the Service and the CDFW for review and approval prior to any ground-disturbing activities that have a water component. This plan will provide:

1. Protocols for pre-construction or pre-maintenance surveys to assess species presence and spawning within or immediately adjacent to work areas (e.g., in, or at the end of, the irrigation drains/drain canals, open water areas, and around the open water margins). The protocols will also outline the qualifications required for biologists to conduct desert pupfish survey, capture, and relocation activities and the process for biologist approval.
2. Capture (e.g., trapping in the irrigation drains for construction and maintenance; or trapping, dip netting, and seining in open water areas that are drained or if the water level is dropped) and transport methods to minimize handling and stress as well as exposure to heat, low dissolved oxygen (DO), and crowding.
3. Identification of locations for release of captured desert pupfish.
4. Timing windows when construction or maintenance in open water areas and in the irrigation drain mouths/canals may be conducted with minimal effects on desert pupfish spawning.
5. Adaptive management procedures that include assessment of mitigation measure effectiveness, development of revised measures to improve effectiveness, and similar assessment of revised measures to verify effectiveness. Yuma Ridgway's Rail Measures, Black Rail, and Other Marsh Bird Measures.

MM-BIO-9. Construction Timing: Construction activities within habitat for Yuma Ridgway's rail (i.e., cattail marsh) will be scheduled to avoid the nesting and molting flightless season (i.e., February 15 – September 15). Pile driving activities adjacent to Yuma Ridgway's rail habitat will avoid Yuma Ridgway's rail nesting season

MM-BIO-10: Pre-Construction Surveys and Construction Monitoring for Yuma Ridgway's Rail and Black Rail: Pre-construction surveys for Yuma Ridgway's rail and black rail and construction monitoring will be conducted within all Project development areas within suitable habitat and a 500-foot buffer from suitable habitat. In the event that Yuma Ridgway's rail(s) or black rail(s) are detected within the work area (the area of active equipment use), all construction activities in the area will halt and the USFWS and CDFW will be notified no later than noon of the next business day. Project activities in the area may not proceed until the birds have left the work area. The USFWS and CDFW will also be notified if any Yuma Ridgway's rail are detected within 500 feet of the construction area. Project activities may proceed with caution in this buffer area under the direction of the Designated Biologist.

MM-BIO-11: Reduced Vehicle Speed Adjacent to Rail Habitat: Vehicle speeds will be reduced to 15 miles per hour (mph) on access roads adjacent to Yuma Ridgway's rail habitat. These areas will be appropriately signed to identify the speed limit.:

MM-BIO-12: Noise Attenuation: The following noise attenuation measures will be implemented to minimize noise impacts on Yuma Ridgway's rail during the nesting season:

- At least 30 days prior to activities within 500 feet of Yuma Ridgway's rail habitat, the Applicant will conduct a noise study to evaluate the maximum predicted noise level within rail habitat.
- If the maximum predicted noise is less than 60 A-weighted decibel scale (dBA) equivalent continuous sound level (Leq), no additional measures are required.
- If the maximum predicted noise level exceeds 60 dBA Leq in rail habitat, noise attenuation measures such as noise walls or hay bales will be installed between the noise source and the suitable habitat. Noise monitors will be installed at the edge of the nearest Yuma Ridgway's rail

habitat to assess the noise levels and verify that attenuation measures are successful. If necessary, additional noise reduction measures will be implemented to reduce the noise level to below 60 dBA at the edge of occupied habitat.

MM-BIO-13: Habitat Conservation: To offset the loss of Yuma Ridgway's rail habitat, the Project proponent will preserve, create, or enhance habitat near the Project site for Yuma Ridgway's rail. The Project proponent will provide funding for construction and long-term management of the created habitat and will provide financial assurance for the construction of the wetland habitat in the form of performance bonds, escrow accounts, casualty insurance, or letters of credit. The performance bond, escrow account, casualty insurance, or letter of credit shall be of sufficient value to cover all construction, monitoring and reporting costs until the habitat is fully established. The financial assurance shall be in place prior to ground disturbance. Long-term management funding will be provided sufficient to cover, at a minimum, the management costs related to procurement of water from IID, weed control, levee and control structure maintenance, and control structure repair or replacement. The Applicant will prepare a detailed Habitat Enhancement Mitigation and Mitigation Monitoring Plan for review and approval by the USFWS, Corps, and CDFW prior to Project construction. Habitat creation activities will be conducted outside of the bird breeding season (February 15 – September 15) to avoid potential noise impacts on Yuma Ridgway's rail.

MM-BIO-14: Burrowing Owl. A pre-construction survey will be conducted for burrowing owls. The survey will be conducted during peak activity period (one hour before to two hours after sunrise or two hours before to one hour after sunset) no more than 14 days prior to the start of construction and within 500 feet surrounding the construction area. If owls are located during the pre-construction survey between February 1 and August 31 (nesting season), a buffer area will be established according to the guidelines in the 2012 Staff Report. A modified buffer reduction may be used with CDFW concurrence. If burrowing owls are located during the nonbreeding season, owls may be passively relocated in coordination with CDFW, by a qualified biologist according to the procedures outlined in the 2012 Staff Report on Burrowing Owl Mitigation. If burrowing owls are found on site during pre-construction surveys, the Project proponent shall contact CDFW to prepare a plan of action for buffers or passive relocation.

MM- BIO-15: Lighting. Except as necessary for safety or security purposes, no lighting shall be allowed to impact wetland or riparian habitats.

MM-BIO-16: Nesting Bird Plan. Construction activities shall take place outside the general bird breeding season (February 15 to September 30), to the maximum extent practicable. Regardless of the time of year, prior to ground-disturbing activities, a qualified biologist shall conduct a nesting bird survey to comply with CDFW Code 3503 and 3503.5 and the Migratory Bird Treaty Act. The survey shall occur no more than three (3) days prior to initiation of proposed Project activities and shall include any potential habitat (including trees, shrubs, the ground, or nearby structures). Any occupied passerine and/or raptor nests occurring within the proposed Project area or the Project's zone of influence (generally 100-300 feet) shall be delineated and a no-disturbance buffer zone (as determined by the avian biologist) shall be established and maintained during Project activities. Additional follow-up surveys may be required by the resource agencies and Imperial County. The buffer zone shall be sufficient in size to prevent impacts to the nest. A qualified biologist shall monitor active nests to determine whether construction activities are disturbing nesting birds or nestlings. If the qualified biologist determines that construction activities pose a disturbance to nesting, construction work shall be stopped in the area of the nest and the no disturbance buffer shall be expanded. Once nesting has ceased and the fledglings are no longer using the nest area as

confirmed by a qualified biologist, the buffer may be removed. A nesting bird survey report shall be provided to Imperial County and CDFW. If an active nest is encountered during construction, construction shall stop immediately until a qualified biologist can determine the status of the nest and when work can proceed without risking violation to state or federal laws.

MM-BIO-17: Bird Flight Diverters. Bird flight diverters will be installed on any new transmission and power lines serving the Project, to limit bird mortality associated with introducing new transmission lines in bird flyways. Flight diverters make transmission lines more visible to birds. The transmission and power lines will be designed to meet Avian Power Line Interaction Committee (APLIC) guidelines.

MM-BIO-18: Excavation Areas. Any open trench or excavated area shall be securely covered anytime Project activities within the excavated/trenched area have ceased. The designated biologist shall oversee the covering of all excavated, steep-walled holes or trenches by placing plywood or other barrier materials such that animals are unable to enter and become entrapped. The use of temporary fencing around the perimeter or trenches or holes may be an acceptable minimization measure, if deemed appropriate by the biological monitor. Before holes or trenches are filled, the Biological Monitors shall thoroughly inspect the areas for trapped animals. If any worker discovers that any animal has become trapped, they shall halt Project-related activities and notify the biological monitor immediately.

MM-BIO-19: Wetland and Riparian Area Restoration/Compensation. The Project will provide restoration/compensation for all unavoidable impacts on areas under the jurisdiction of USACE, RWQCB, and CDFW. Impacts on jurisdictional areas will be avoided to the extent feasible. Where avoidance of jurisdictional areas is not feasible, the Project applicant will provide the necessary mitigation required as part of wetland permitting, by creation, restoration, or preservation of suitable jurisdictional or equivalent habitat along with adequate buffers to protect the function and values of jurisdictional areas. The Mitigation ratio will be 1:1 or as approved by the permitting agencies. The proposed Mitigation Plan area is located in Section 35 approximately 2 miles north of the HKP1 and HKL1 Projects at the corner of Beach Road and Access Road. The proposed mitigation area will total 159.61 acres; approximately 152 acres will be created native wetland/open water habitat and approximately 7 acres will be enhanced native upland habitat. Proposed native wetland communities include Willow Scrub Shrub, Cattail Bullrush Marsh and Desert Riparian Woodlands. Proposed upland communities include Sonoran Desert Scrub/Alkali Sink.

Therefore, implementation of MM-1 through MM-19 would reduce impacts associated with Biological Resources to less than significant.

FINDINGS

- 1) The Board finds, based on the Initial Study, the Final EIR and the whole of the record, that the Proposed Project would result in less than significant impacts relating to Biological Resources issues discussed above with incorporation of the above mitigation measures.

6.3 CULTURAL RESOURCES

The intensive pedestrian survey resulted in identification of a newly recorded resource which consists of a remnant of a historic-era house dating back to 1953 (TES-HK-001H). The structure is comprised of adobe brick. However, the structure has been altered over the years. The structure no longer contains walls, windows, doors, and room, and shows evidence of damage, graffiti, and other modern effects such as furniture and refuse. Based on the condition of the structure, there is not enough original structure

remaining to understand the original appearance of the structure. Standard DPR site records have been completed for this resource and are waiting permanent designation from the information center. Its severely dilapidated condition does not allow for the structure to meet the criteria needed for listing on the CRHR and is not known to be affiliated with anyone of significance or contribute to local cultural heritage or yield additional information to local history. Therefore, the Proposed Project would not result in significant impact to a historical resource. Impacts would be less than significant. An archaeological investigation was conducted for the Project to determine if there are any impacts that would occur that would disrupt or adversely affect a prehistoric or historic-era archaeological site to a community, ethnic or social group. The investigation resulted in resources being found within the Project area. However, because of the conditions of these resources, these have not been determined to be significantly impacted by the Proposed Project. However, given the largely undeveloped nature of the Project site with no previous development, there remains potential that the Project's ground disturbing activity would impact undiscovered resources. These resources could include but not limited to lithic materials, faunal, pottery, ceramics, building materials, or glassware.

Construction of the Proposed Project would involve grading, which may have the potential to uncover unknown human remains. However, if human remains are encountered during the proposed work, no further excavation or disturbance may occur near the find until the County coroner has been contacted. HSC 7050.5 states (a) Every person who knowingly mutilates or disinters, wantonly disturbs, or willfully removes any human remains in or from any location other than a dedicated cemetery without authority of law is guilty of a misdemeanor, except as provided in Section 5097.99 of the Public Resources Code. (b) In the event of discovery or recognition of any human remains in any location other than a dedicated cemetery, there shall be no further excavation or disturbance of the site or any nearby area reasonably suspected to overlie adjacent remains until the coroner of the county in which the human remains area discovered has determined that the remains are not subject to the provisions of Section 27481. The coroner shall make his or her determination within two working days from the time the person responsible for the excavation, or to his or her authorized representative, notifying the coroner of the discovery if recognition of human remains. (c) If the coroner determines that the remains are not subject to his or her authority and if the coroner recognizes the human remains to be those of a Native American, or has reason to believe that they are those of a Native American, he or she shall contact, by telephone within 24 hours, the Native American Heritage Commission. Compliance with these regulations would ensure impacts to human remains resulting from the Project would be less than significant.

MM-CUL-1 The Applicant shall retain the services of a Qualified Archaeologist, meeting the Secretary of the Interior Standards or County standards, whichever is greater, and require that all initial ground-disturbing work be monitored by archaeological specialist (monitor) proficient in artifact and feature identification in monitoring contexts. The Consultant (Qualified Archaeologist and/or monitor) shall be present at the Project construction phase kickoff meeting.

MM-CUL-2 Prior to commencing construction activities and thus prior to any ground disturbance in the Proposed Project site, the Consultant shall conduct initial Worker Environmental Awareness Program (WEAP) training to all construction personnel, including supervisors, present at the outset of the Project construction work phase, for which the Lead Contractor and all subcontractors shall make their personnel available. A tribal monitor shall be provided an opportunity to attend the preconstruction briefing, if requested. This WEAP training will educate construction personnel on how to work with the monitor(s) to identify and minimize impacts to archaeological resources and maintain environmental compliance. This WEAP training will educate the monitor(s) of construction procedures to avoid construction-related

injury or harm. This training may be performed periodically, such as for new personnel coming on to the Project as needed.

MM-CUL-3 The Contractor shall provide the Consultant with a schedule of initial potential ground-disturbing activities. A minimum of 48 hours will be provided to the Consultant of commencement of any initial ground-disturbing activities such as vegetation grubbing or clearing, grading, trenching, or mass excavation.

A monitor shall be present on-site at the commencement of ground-disturbing activities related to the Project. The monitor, in consultation with the Qualified Archaeologist, shall observe initial ground-disturbing activities and, as they proceed, adjust the number of monitors as needed to provide adequate observation and oversight. All monitors will have stop-work authority to allow for recordation and evaluation of finds during construction. The monitor will maintain a daily record of observations to serve as an ongoing reference resource and to provide a resource for final reporting upon completion of the Project.

The Consultant and the Lead Contractor and subcontractors shall maintain a line of communication regarding schedule and activity such that the monitor is aware of all ground-disturbing activities in advance to provide appropriate oversight.

MM-CUL-4 In the event of the discovery of previously unidentified archaeological materials, the Contractor shall immediately cease all work activities within an area of no less than 100 feet of the discovery. After cessation of excavation, the Contractor shall immediately contact the County. Except in the case of cultural items that fall within the scope of the Native American Grave Protection and Repatriation Act (NAGPRA), California Health and Safety Code 7050.5, CEQA 15064.5, or California Public Resources Code 5097.98, the discovery of any cultural resource within the Project area shall not be grounds for a Project-wide "stop work" notice or otherwise interfere with the Project's continuation except as set forth in this paragraph. Additionally, all consulting Native American Tribal groups that requested notification of any unanticipated discovery of archaeological resources on the Project shall be notified appropriately. If a discovery results in the identification of cultural items that fall within the scope of NAGPRA, the Contractor shall immediately cease all work activities within an area of no less than 100 feet (30 meters) of the discovery. In the event of an unanticipated discovery of archaeological materials during construction, the Applicant-retained Qualified Professional Archaeologist shall be contacted to evaluate the significance of the materials prior to resuming any construction-related activities near the find. If the Qualified Archaeologist determines that the discovery constitutes a significant resource under CEQA and it cannot be avoided, the Applicant shall implement an archaeological data recovery program.

MM-CUL-5 At the completion of all ground-disturbing activities, the Consultant shall prepare an Archaeological Resources Monitoring Report summarizing all monitoring efforts and observations, as performed, and any and all prehistoric or historic archaeological finds as well as providing follow-up reports of any finds to the SCCIC, as required.

In the event unanticipated, buried prehistoric archaeological resources (lithic material, faunal, pottery, etc.) or historical archaeological resources (ceramics, building materials, glassware, etc.) are unearthed during construction or any ground disturbing activities within the Project area, additional resource treatments would become necessary. Once a potential resource has been identified, all work within 100 feet must be halted until the find can be assessed by a qualified archaeologist.

Therefore, implementation of MM-CUL-1 through MM-CUL-5 would reduce impacts associated with Cultural Resources to less than significant.

FINDINGS

- 1) The Board finds, based on the Initial Study, the Final EIR and the whole of the record, that the Proposed Project would result in less than significant impacts relating to Cultural Resources issues discussed above with incorporation of the above mitigation measures.

6.4 GEOLOGY AND SOILS

The CBC requires that a site-specific ground motion hazard analysis be performed in accordance with American Society of Civil Engineers (ASCE) 7-16 Section 11.4.8 for structures. The parameters were determined and provided in the Geohazard Evaluation Report. General earthwork considerations pertaining to the Project include remedial grading/over excavation, excavatability, and fill materials. Design considerations would take into account expansion potential, collapse potential, and corrosivity. The Geohazard Evaluation Report notes that based on the preliminary site plans, no conditions on the Project site would preclude development of the Proposed Project, provided that Mitigation Measures GEO-1 and GEO-2 would be implemented. Therefore, the Proposed Project would be less than significant and is considered feasible from a geotechnical standpoint.

Based on the presence of shallow groundwater and the nature of subsurface soils, the potential for liquefaction is high. As such, site-specific liquefaction and dynamic settlement shall be evaluated with data obtained through the soils borings during the Project's geotechnical investigation phase. Implementation of Mitigation Measures GEO-1 and GEO-2, in addition to compliance with the CBC, would result in less than significant impacts.

Based on the Project's topography and relatively flat nature of the Project site, the risk of landslides is considered remote. However, unstable soils could result in subsidence, expansive soil, liquefaction and lateral spreading. Therefore, site-specific potential for these instabilities shall be evaluated with data from the soil borings during the geotechnical investigation phase. Implementation of Mitigation Measures GEO-1 and GEO-2, as well as the considerations provided in the Geohazard Evaluation Report, would ensure that construction of the Proposed Project would not result in significant impacts due to subsidence, expansive soil, liquefaction and lateral spreading. Impacts would be less than significant with mitigation incorporated

MM-GEO-1: A complete geotechnical engineering investigation shall be completed, with a Final Geotechnical Report to be prepared prior to submittal of a grading permit. The Final Geotechnical Report shall be prepared by a qualified consultant and be submitted to the County for review and approval. The investigation will include soil test borings; specific and detailed recommendations; soil and sediment analysis; detailed analysis and design standards; geotechnical design criteria; and detailed design recommendations.

MM-GEO-2: All grading operations and construction shall be conducted in conformance with the recommendations included in the Geohazard Evaluation Report prepared on August 17, 2022, and Final Geotechnical Report on the Project site. Design, grading, and construction shall be performed in accordance with the recommendations of the project geotechnical consultant and corrosion engineer, subject to review by the County, prior to commencement of grading activities.

PALEO-1: The Applicant shall retain the services of a Qualified Paleontologist and require that all initial ground-disturbing work be monitored by someone trained in fossil identification in monitoring contexts. The Qualified Paleontologist shall prepare a Paleontological Resource Mitigation Plan to be implemented during ground-disturbing activity for the proposed Project. This program should outline the procedures for paleontological monitoring, including extent and duration; protocols for salvage and preparation of fossils; and the requirements for a final mitigation and monitoring report. The Qualified Paleontologist and a paleontological monitor shall be present at the Project construction-phase kickoff meeting.

PALEO-2: Prior to commencing construction activities and, thus, prior to any ground disturbance in the Proposed Project site, the Qualified Paleontologist and paleontological monitor shall conduct initial Worker Environmental Awareness Program (WEAP) training to all construction personnel, including supervisors, present at the start of the Project construction work phase, for which the Applicant, or their designated Contractor, and all subcontractors shall make their personnel available. This WEAP training will educate construction personnel on how to work with the monitor(s) to identify and minimize impacts to paleontological resources and maintain environmental compliance, and it shall be performed periodically for new personnel coming on to the Project as needed.

PALEO-3: The Applicant, or their designated Contractor, shall provide the Qualified Paleontologist with a schedule of initial potential ground-disturbing activities. A minimum of 48 hours will be provided to the consultant prior to the commencement of any initial ground-disturbing activities, such as vegetation grubbing or clearing, grading, trenching, or mass excavation.

As detailed in the schedule provided, a paleontological monitor shall be present on-site at the commencement of ground-disturbing activities related to the Project. The monitor, in consultation with the Qualified Paleontologist, shall observe initial ground-disturbing activities and, as they proceed, make adjustments to the number of monitors as needed to provide adequate observation and oversight. All monitors will have stop-work authority to allow for recordation and evaluation of finds during construction. The monitor will maintain a daily record of observations as an ongoing reference resource and to provide a resource for final reporting upon completion of the Project.

The Qualified Paleontologist, paleontological monitor, and the Applicant, or their designated Contractor, and subcontractors shall maintain a line of communication regarding schedule and activity such that the monitor is aware of all ground-disturbing activities in advance to provide appropriate oversight.

PALEO-4: If paleontological resources are discovered, construction shall be halted within 50 feet of any paleontological finds and shall not resume until the Qualified Paleontologist can determine the significance of the find and/or the find has been fully investigated, documented, and cleared.

PALEO-5: At the completion of all ground-disturbing activities, the Qualified Paleontologist shall prepare a Paleontological Resources Monitoring Report summarizing all monitoring efforts and observations, as performed, and any and all paleontological finds and shall provide follow-up reports of any finds to the preferred paleontological repository, as required.

Therefore, implementation of MM-GEO-1 through MM GEO-2 and PALEO-1 through PALEO-5 would reduce impacts associated with Geology and Soils to less than significant.

FINDINGS

- 1) The Board finds, based on the Initial Study, the Final EIR and the whole of the record, that the Proposed Project would result in less than significant impacts relating to Geology and Soils issues discussed above with incorporation of the above mitigation measures.

6.5 HAZARDS AND HAZARDOUS MATERIALS

During construction and operations of the Project, hazardous materials would be transported to and from the Project site. Traffic barriers would protect piping and tanks on the site from potential traffic hazards. The Project Applicant would be required to follow all applicable federal, State, and local laws and regulations. Further, transportation would be subject to licensing and inspection by the CHP. With adherence to the regulatory measures and requirements for hazardous materials, impacts would be less than significant.

Based on the assessment conducted at the Project site, further investigations may be required if the areas containing RECs cannot be avoided by future development. Therefore, for the Project to not have a significant impact to the public and environment, the Project shall comply with local, State and federal guidelines and to the Mitigation Measures HAZ-1 and HAZ-2 to ensure the any accidental releases would be mitigated to a less than significant impact.

During operations, a brush control program would be prepared and implemented on those portions of the Project site that will not be developed. The Imperial County Fire District would be consulted to review and approve all proposed fire equipment, apparatus, and related fire prevention plans. Due to compliance with the measures identified above, and the distance from an identified area of high fire hazard risk, the Project would result in a less than significant impact associated with wildfires.

MM HAZ-1: To avoid health risks to construction workers, the Applicant shall require the contractor to prepare and implement a site Health and Safety Plan (HSP) if areas containing hazardous materials are to be disturbed. This plan will outline measures that will be employed to protect construction workers and the public from exposure to hazardous materials during construction activities. This plan shall be prepared prior to any ground-disturbing activities and shall be reviewed and approved by the Project Applicant. Workers shall review and sign the site HSP prior to proceeding with the assigned work.

MM HAZ-2: For any gen-tie structures or other areas of project ground disturbance that are close to a REC, a Phase 2 limited soil sampling shall be conducted to determine if there are any hazardous materials present on-site. The soil sampling shall be conducted during final design and prior to construction. Soil sampling will determine the California Human Health Screening Levels (CHHSL) of the testing protocol (CAM 17 metals, a list of 17 metals found typically in hazardous materials and mining sites). The CHHSLs are a list of 54 hazardous chemicals in soil or soil gas that the California Environmental Protection Agency (CalEPA) considers to be below thresholds for risks to human health. The Imperial County Public Health Department, Division of Environmental Health (DEH) shall review the soil sampling results. If the results are above the CHHSLs, then the DEH would refer the project to the California Department of Toxic Substances Control for proper soil handling and removal procedures.

Therefore, implementation of MM HAZ-1 and HAZ-2 would reduce impacts associated with Hazards and Hazardous Materials to less than significant.

FINDINGS

- 1) The Board finds, based on the Initial Study, the Final EIR and the whole of the record, that the Proposed Project would result in less than significant impacts relating to with Hazards and Hazardous Materials issues discussed above with incorporation of the above mitigation measures.

6.6 HYDROLOGY AND WATER QUALITY

Due to the size of the Project, Postconstruction Standards from the Phase II Small MS4 Permit will be applied to the Project. The proposed Project will implement site-design BMPs, source-control measures, low-impact development (LID) BMPs, and hydromodification-management BMPs to meet the permit criteria. The Project owner will maintain all on-site site-design BMPs, source-control measures, postconstruction BMPs, and retention basins during the lifetime of the Project. A full list of postconstruction BMPs is provided in Appendix I. With implementation of Mitigation Measures HWQ-1 and HWQ-2 impacts to water quality standards and waste discharge requirements would be less than significant.

MM-HWQ-1 Prepare SWPPP and Implement BMPs Prior to Construction and Site Restoration. The Project applicant or its contractor shall prepare a Storm Water Pollution Prevention Plan (SWPPP) specific to the Project and be responsible for securing coverage under the State Water Resources Control Board's National Pollution Discharge Elimination System stormwater permit for general construction activity (Order 2009-0009-DWQ). The SWPPP shall identify specific actions and best management practices (BMPs) related to the prevention of stormwater pollution from Project-related construction sources by identifying a practical sequence for site restoration, BMP implementation, contingency measures, responsible parties, and agency contacts. The SWPPP shall reflect localized surface hydrological conditions and shall be reviewed and approved by the appropriate agency prior to commencement of work and shall be made conditions of the contract with the contractor selected to build and decommission the Project. The SWPPP shall incorporate control measures in the following categories:

- Soil stabilization and erosion control practices
- Sediment control practices
- Temporary and postconstruction on- and off-site runoff controls
- Special considerations and BMPs for water crossings and drainages
- Monitoring protocols for discharge(s) and receiving waters, with emphasis place on the following water quality objectives: dissolved oxygen, floating material, oil and grease, potential of hydrogen (pH), and turbidity
- Waste management, handling, and disposal control practices
- Corrective action and spill contingency measures
- Agency and responsible party contact information
- Training procedures that shall be used to ensure that workers are aware of permit requirements and proper installation methods for BMPs specified in the SWPPP

The SWPPP shall be prepared by a Qualified SWPPP Practitioner and/or Qualified SWPPP Developer, with BMPs selected to achieve maximum pollutant removal and representative of the best available technology that is economically achievable. Emphasis for BMPs shall be placed on controlling discharges of oxygen-depleting substances; floating material; oil and grease; acidic or caustic substances or compounds; and turbidity. BMPs for soil-stabilization, erosion-control, and sediment-control practices will also be required. Performance and effectiveness of these BMPs shall be determined either by visual means where applicable (i.e., observation of above-normal sediment release), or by actual water sampling in cases

where verification of contaminant reduction or elimination, (inadvertent petroleum release) is required to determine adequacy of the measure.

MM-HWQ-2: Incorporate Postconstruction Runoff BMPs into Project Drainage Plan. The Project Drainage Plan shall adhere to the County's Engineering Guidelines Manual, IID Draft Hydrology Manual or other recognized source with approval by the County Engineer to control and manage the on- and off-site discharge of stormwater to existing drainage systems. Infiltration basins will be integrated into the Drainage Plan to the maximum extent practical. The Drainage Plan shall provide both short and long-term drainage solutions to ensure the proper sequencing of drainage facilities and management of runoff generated from Project-related impervious surfaces as necessary.

Therefore, implementation of MM-HWQ-1 and MM-HWQ-2 would reduce impacts associated with Hazards and Hazardous Materials to less than significant.

FINDINGS

- 1) The Board finds, based on the Initial Study, the Final EIR and the whole of the record, that the Proposed Project would result in less than significant impacts relating to Hazards and Hazardous Materials issues discussed above with incorporation of the above mitigation measures.

6.7 TRIBAL CULTURAL RESOURCES

Based on the results of the Cultural Resources Survey and in consultation with the tribes, the County has determined there are no known tribal cultural resources within the Project site. However, the potential remains for the Project's ground-disturbing activity to impact undiscovered resources. These resources could include but not be limited to lithic materials, faunal, pottery, ceramics, building materials, or glassware. Impacts would be considered less than significant with implementation of the mitigation measures outlined in Cultural Resources, Section 4.4 of the FEIR.

MM-CUL-1 The Applicant shall retain the services of a Qualified Archaeologist, meeting the Secretary of the Interior Standards or County standards, whichever is greater, and require that all initial ground-disturbing work be monitored by archaeological specialist (monitor) proficient in artifact and feature identification in monitoring contexts. The Consultant (Qualified Archaeologist and/or monitor) shall be present at the Project construction phase kickoff meeting.

MM-CUL-2 Prior to commencing construction activities and thus prior to any ground disturbance in the Proposed Project site, the Consultant shall conduct initial Worker Environmental Awareness Program (WEAP) training to all construction personnel, including supervisors, present at the outset of the Project construction work phase, for which the Lead Contractor and all subcontractors shall make their personnel available. A tribal monitor shall be provided an opportunity to attend the preconstruction briefing, if requested. This WEAP training will educate construction personnel on how to work with the monitor(s) to identify and minimize impacts to archaeological resources and maintain environmental compliance. This WEAP training will educate the monitor(s) of construction procedures to avoid construction-related injury or harm. This training may be performed periodically, such as for new personnel coming on to the Project as needed.

MM-CUL-3 The Contractor shall provide the Consultant with a schedule of initial potential ground-disturbing activities. A minimum of 48 hours will be provided to the Consultant of commencement of any initial ground-disturbing activities such as vegetation grubbing or clearing, grading, trenching, or mass excavation.

A monitor shall be present on-site at the commencement of ground-disturbing activities related to the Project. The monitor, in consultation with the Qualified Archaeologist, shall observe initial ground-disturbing activities and, as they proceed, adjust the number of monitors as needed to provide adequate observation and oversight. All monitors will have stop-work authority to allow for recordation and evaluation of finds during construction. The monitor will maintain a daily record of observations to serve as an ongoing reference resource and to provide a resource for final reporting upon completion of the Project.

The Consultant and the Lead Contractor and subcontractors shall maintain a line of communication regarding schedule and activity such that the monitor is aware of all ground-disturbing activities in advance to provide appropriate oversight.

MM-CUL-4 In the event of the discovery of previously unidentified archaeological materials, the Contractor shall immediately cease all work activities within an area of no less than 100 feet of the discovery. After cessation of excavation, the Contractor shall immediately contact the County. Except in the case of cultural items that fall within the scope of the Native American Grave Protection and Repatriation Act (NAGPRA), California Health and Safety Code 7050.5, CEQA 15064.5, or California Public Resources Code 5097.98, the discovery of any cultural resource within the Project area shall not be grounds for a Project-wide "stop work" notice or otherwise interfere with the Project's continuation except as set forth in this paragraph. Additionally, all consulting Native American Tribal groups that requested notification of any unanticipated discovery of archaeological resources on the Project shall be notified appropriately. If a discovery results in the identification of cultural items that fall within the scope of NAGPRA, the Contractor shall immediately cease all work activities within an area of no less than 100 feet (30 meters) of the discovery. In the event of an unanticipated discovery of archaeological materials during construction, the Applicant-retained Qualified Professional Archaeologist shall be contacted to evaluate the significance of the materials prior to resuming any construction-related activities near the find. If the Qualified Archaeologist determines that the discovery constitutes a significant resource under CEQA and it cannot be avoided, the Applicant shall implement an archaeological data recovery program.

MM-CUL-5 At the completion of all ground-disturbing activities, the Consultant shall prepare an Archaeological Resources Monitoring Report summarizing all monitoring efforts and observations, as performed, and any and all prehistoric or historic archaeological finds as well as providing follow-up reports of any finds to the SCCIC, as required.

In the event unanticipated, buried prehistoric archaeological resources (lithic material, faunal, pottery, etc.) or historical archaeological resources (ceramics, building materials, glassware, etc.) are unearthed during construction or any ground disturbing activities within the Project area, additional resource treatments would become necessary. Once a potential resource has been identified, all work within 100 feet must be halted until the find can be assessed by a qualified archaeologist.

Therefore, implementation of MM-CUL-1 through MM-CUL-5 would reduce impacts associated with Tribal Cultural Resources to less than significant.

FINDINGS

- 1) The Board finds, based on the Initial Study, the Final EIR and the whole of the record, that the Proposed Project would result in less than significant impacts relating to Tribal Cultural Resource issues discussed above with incorporation of the above mitigation measures.

6.8 UTILITIES AND SERVICE SYSTEMS

New facilities would be constructed for the purpose of water, wastewater treatment, stormwater drainage, electric power, natural gas, and telecommunications. Expansion of these facilities would utilize existing infrastructure no limited to existing irrigation canals and power/telephone lines which would minimize damage to existing facilities. Therefore, no significant environmental effects are expected to result. Impacts would be less than significant.

When drought conditions exist within the IID water service area, as has been the case for the past decade or so, the water supply available to meet agricultural and nonagricultural water demands remains the same as normal year water supply because IID continues to rely on its entitlement for Colorado River water. Due to the priority of water rights and other agreements, drought affecting Colorado River water supplies causes shortages for Arizona, Nevada, and Mexico, but not California or IID. Therefore, the likelihood that IID will not receive its annual 3.1 million AF apportionment under the QSA obligations of Colorado River water is low due to the high priority of the IID entitlement relative to other Colorado River contractors (see Appendix J for further details on the IID's water rights). If such reductions were to come into effect within the life of the 30-year Project, a significant impact would occur. If such reductions do occur, Mitigation Measure (MM) UTIL-1 would be implemented, requiring the Applicant to work with IID to ensure any reduction in water availability during the life of the Project can be managed. Therefore, with implementation of MM UTIL-1, impacts would remain less than significant.

It is estimated that 90 percent of filter cakes would fall below California thresholds for soluble threshold limit concentration (STLC) and total threshold limit concentration (TTLC). The remaining 10 percent, or approximately 4,178 cy, would exceed these standards and would be trucked to the Copper Mountain Landfill located at 34853 County 12th Street in Wellton, Arizona, approximately 96 miles southeast of the Project site. This landfill has a design capacity for 2.5 million megagrams. Although the remaining landfill capacity is not available, the amount of solid waste sent to this facility would be minimal. If the filter cakes were to exceed Arizona's toxicity standards which is not expected to occur, the Applicant will arrange for hazardous materials to be trucked to Idaho or Nevada.

As mentioned in Chapter 2: Project Description, approximately every three years the Project facilities will be shut down for about three weeks to complete a facility cleaning. This process would remove mineral scale from Project plant piping. The scale removed during this process has the potential to exceed STLC and TTLC standards for Arizona, in which case solid waste would be required to be trucked to Nevada. However, this is an extremely rare occurrence, and in the past 10 years only two truckloads have needed to be transported to Nevada. The implementation of the Proposed Project would not increase the amount of solid waste needing to go out of state. Therefore, solid waste facilities have adequate permitted capacity for solid waste materials generated by the Project. Impacts would be less than significant.

Disposal of solid/hazardous wastes generated during Project construction and operations would be in compliance with local federal, State, and County regulations and disposed of at authorized facilities. Therefore, a less than significant impact would occur.

MM-UTIL-1: If the IID does not receive its annual 3.1 maf water apportionment according to the QSA obligations of Colorado River water during the Project's 30-year lifespan, the Applicant shall work with IID to ensure any reduction in water availability can be managed by the Project.

Therefore, implementation of MM-UTIL-1 would reduce impacts associated with Utilities and Service Systems to less than significant.

FINDINGS

- 1) The Board finds, based on the Initial Study, the Final EIR and the whole of the record, that the Proposed Project would result in less than significant impacts relating to Utilities and Service Systems issues discussed above with incorporation of the above mitigation measures.

SECTION 7.0 – SIGNIFICANT AND UNAVOIDABLE IMPACTS

This Section describes the environmental issue areas on which the Proposed Project would have significant and unavoidable impacts. Section 8 discusses the degree to which the Proposed Project Alternatives (including the recommended Proposed Project Alternative) reduce or increase these significant and unavoidable impacts.

The potentially adverse effects of the Proposed Project are identified in the Final EIR. After implementation of the mitigation measures, the Proposed Project will not have a significant and unavoidable impact on any environmental resource areas

7.1 GROWTH INDUCING IMPACTS

Pursuant to Section 15126.2 of the CEQA Guidelines: an EIR must address whether a project will directly or indirectly foster growth as follows:

[An EIR shall] discuss the ways in which the Proposed Project could foster economic or population growth, or the construction of additional housing, either directly or indirectly, in the surrounding environment. Included in this are projects which would remove obstacles to population growth (a major expansion of wastewater treatment plant, might, for example, allow for more construction in service areas). Increases in the population may further tax existing community service facilities so consideration must be given to this impact. Also, discuss the characteristics of some projects, which may encourage and facilitate other activities that could significantly affect the environment, either individually or cumulatively. It must not be assumed that growth in any area is necessarily beneficial, detrimental, or of little significance to the environment.

As discussed below, this analysis evaluates whether the Proposed Project would directly or indirectly induce economic, population, or housing growth in the surrounding environment.

Direct Growth-inducing Impacts in the Surrounding Environment

The Project involves construction and operation of a plant to extract lithium hydroxide, silica, bulk sulfide, and other commercially viable substances from geothermal brine. The Project would not include the construction of any housing and would not involve the development of any new public roadways, new water systems, or sewer. Therefore, the Project would not further facilitate additional development into outlying areas.

Indirect Growth-inducing Impacts in the Surrounding Environment

Indirect growth-inducing impacts typically include substantial new, permanent employment opportunities that can result from a project. The Project is located within the unincorporated area of Imperial County, and it does not involve the development of permanent residences that would directly result in population growth in the area. Approximately 200 to 250 workers are anticipated to be required at peak periods of Project construction. Beginning with startup operations, the Project is expected to be operated by a total staff of approximately 112 full-time, onsite employees. The unemployment rate in Imperial County as of December 2020 was 17.7 percent with 11,900 people unemployed (EDD 2021). The Applicant expects to utilize available workers from the local and regional area. Based on the unemployment rate and the

availability of the local workforce, the Project would not have a growth-inducing effect related to workers moving into the area and increasing the demand for housing and services.

FINDINGS

- 1) The Board finds, based on the Initial Study, the Final EIR and the whole of the record, that the Proposed Project would result in no unavoidable impacts with mitigation relating to growth-inducing impacts.

SECTION 8.0 – FINDINGS REGARDING PROJECT ALTERNATIVES

The Final EIR discussed several alternatives to the Proposed Project in order to present a reasonable range of options. The alternatives evaluated include:

- No Project Alternative
- Reduced Project Size Alternative

8.1 NO PROJECT ALTERNATIVE

Section 15126.6(e) of the CEQA Guidelines requires analysis of a No Project alternative that (1) discusses existing site conditions at the time the NOP is prepared or the Draft EIR is commenced, and (2) analyzes what is reasonably expected to occur in the foreseeable future based on current plans if the Proposed Project were not approved. Potential effects for the No Project Alternative were compared to the areas of potentially significant effects prior to mitigation that could be a result of the Proposed Project.

FINDINGS

- 1) While the No Project Alternative would not result in any significant environmental impacts, the Board finds this alternative to be infeasible and less desirable than the Proposed Project. The Board rejects this alternative, because the No Project Alternative would not contribute to the attainment of any of the Project Objectives. It would not provide a sustainable domestic source of lithium, a designated critical material identified by the U.S. Department of Energy, (2) produce 49.9MW (net) of geothermal green energy from within CTR's geothermal lease area.; or (3) minimize the distance between the geothermal power plant and lithium extraction plant for production efficiency and to reduce the extent of pipeline required to convey brine and steam to and from the geothermal power facility to the mineral extraction plant, therefore minimizing the overall industrial footprint of the combined power and mineral operations. Furthermore, the No Project Alternative may result in future projects other than and potentially with greater impacts than the Proposed Project.

8.2 REDUCED PROJECT SIZE ALTERNATIVE

The possibility of reducing the overall size of the Project was considered; however, this alternative was deemed infeasible. The Project has been designed using three different components crafted by three different companies, each having very specific parameters. Considering the components currently on market and available for sale to the Applicant, the current scale of the Project is the smallest system possible to execute Project objectives. The various vessels associated with the Project all have to match each other to ensure proper function of the facility and to uphold safety standards. Engineers have not been able to identify a feasible way to scale the Project down. As a result, the reduced Project alternative was considered but rejected from further review.

FINDINGS

- 1) While the Reduced Project Size Alternative would not result in any significant and unavoidable environmental impacts, the Board finds this alternative to be infeasible and less desirable than

the Proposed Project. The Board rejects this alternative, because it would not achieve the any Project Objectives.

8.3 CONCLUSION

Of the alternatives analyzed in the EIR, the No Project Alternative is considered the environmentally superior alternative as it would avoid or reduce most of the potential impacts associated with construction and operation of the Proposed Project.

CEQA Guidelines requires that if the No Project Alternative is determined to be the environmentally superior alternative, an environmentally superior alternative must also be identified among the remaining alternatives. As such, the No Project Alternative would result in the fewest environmental impacts as compared to the Proposed Project, and would not achieve any of the objectives of the Proposed Project.

SECTION 9.0 – FINDINGS ON MITIGATION MONITORING AND REPORTING PLAN

9.1 INTRODUCTION

In accordance with CEQA, the Imperial County is acting as the Lead Agency for this Proposed Project. Pursuant to CEQA and *CEQA Guidelines* Sections 15091(d) and 15097, the Lead Agency must adopt a program for monitoring or reporting mitigation measures identified in the EIR, if the Lead Agency makes findings of significant impacts during the process of certifying the EIR.¹ The primary purpose of the MMRP is to ensure that the mitigation measures identified in the EIR are implemented thereby reducing or avoiding identified environmental impacts.

9.2 PURPOSE OF MITIGATION MONITORING AND REPORTING PROGRAM

The purpose of the MMRP is to ensure the effective implementation of the mitigation measures imposed by the Imperial County for the Proposed Project. In addition, this MMRP provides a means for identifying corrective actions, if necessary, before irreversible environmental damage occurs. This plan includes:

- A brief description of each impact expected to occur from the Proposed Project;
- Mitigation measure(s) associated with each impact;
- Responsible monitoring party;
- Responsible implementing party;
- Implementation phase (i.e., pre-construction, construction, prior to occupancy, post occupancy); and
- Complete date/initials of reviewing party.

As the Lead Agency for the Proposed Project, the Imperial County will be required to comply with all applicable plans, permits, and conditions of approval for the Proposed Project, in addition to implementation of this MMRP. The mitigation measures presented in Table 1 will be implemented as indicated to avoid or minimize environmental impacts of the Proposed Project.

¹ CEQA. Public Resources Code (PRC), Section 21081.6. 2007.

Mitigation Measure	Implementation Time Frame	Monitoring Method	Implementation Responsibility	Verification Responsibility
<p>Air Quality</p> <p>Mitigation Measure AQ-1</p> <p>Prior to commencing construction, the Project proponent shall submit a Dust Control Plan to the Imperial County Air Pollution Control District (ICAPCD) for approval identifying all sources of PM10 and PM2.5 emissions and associated mitigation measures during the construction and operational phases of the Project. The Project proponent shall submit a Construction Notification Form to the ICAPCD ten days prior to the commencement of any earthmoving activity. This plan would provide a detailed list of control measures to reduce fugitive emissions from construction and operational activities, including but not limited to watering of unpaved roads, vehicle speed limits, windbreaks, transport container covers, and cleaning and sweeping procedures. The Dust Control Plan submitted to the ICAPCD shall meet all applicable requirements for control of fugitive dust emissions, including the following measures designed to achieve the no greater than 20-percent opacity performance standard for dust control:</p> <ul style="list-style-type: none"> • All disturbed areas, including bulk material storage, that is not being actively used shall be effectively stabilized; and visible emissions shall be limited to no greater than 20 percent opacity for dust emissions by using water, chemical stabilizers, dust suppressants, tarps, or other suitable material, such as vegetative groundcover. Bulk material is defined as earth, rock, silt, sediment, and other organic and/or inorganic material consisting of or containing PM with 5 percent or greater silt content. • All on- and off-site unpaved roadway segments being used for 50 or more average vehicle trips per day shall be effectively stabilized, and visible emissions shall be limited to no greater than 20 percent opacity for dust emissions by the use of restricting vehicle access, paving, chemical stabilizers, dust suppressants, and/or watering. 	<p>Prior to Construction</p>	<p>Develop Dust Control Plan</p>	<p>Applicant</p>	<p>Department of Planning and Development Services and ICAPCD</p>

<ul style="list-style-type: none"> • All unpaved traffic areas one acre or more in size with 75 or more average vehicle trips per day shall be effectively stabilized, and visible emissions shall be limited to no greater than 20 percent opacity for dust emissions by paving, chemical stabilizers, dust suppressants, and/or watering. • All track-out or carry-out, which includes bulk materials that adhere to the exterior surfaces of motor vehicles and/or equipment (including tires) that may then fall onto the pavement on paved public roads, shall be cleaned at the end of each workday or immediately when mud or dirt extends a cumulative distance of 50 linear feet or more onto a paved road in an urban area. • Movement of bulk material handling or transfer shall be stabilized prior to handling or at points of transfer with application of sufficient water or chemical stabilizers, or by sheltering or enclosing the operation and transfer line except, where such material or activity is exempted from stabilization by the rules of ICAPCD. • Any temporary unpaved road shall be effectively stabilized and visible emissions shall be limited to no greater than 20 percent opacity for dust emission by paving, chemical stabilizers, dust suppressants and/or watering. • Fugitive dust generation during construction would be minimized by watering as needed to meet Imperial County standards for fugitive dust control. To further reduce fugitive dust emissions, vehicle traffic on unpaved roads would be kept below 15 miles per hour. • During grading, the Project would be watering actively disturbed on-site areas at least three times a day as necessary to reduce fugitive dust emissions. • Access to the site would be via Highway 111, McDonald Road, and Davis Road. All workers, vendors and haul trucks would be required to utilize these roadways. • An agreement between County of Imperial Public Works and the applicant would be established requiring the applicant to improve a two-mile section of the unpaved Davis Road adjacent 				
---	--	--	--	--

<p>to the site by installing a 12- to 18-inch-thick engineered Class II base section. In addition, at the request of the County, the applicant would utilize the improved section during construction and would wet the site continuously during construction activities. The road would be immediately paved after construction prior to operations of the plant to avoid damaging a new asphalt section.</p> <ul style="list-style-type: none"> • During construction, the Project would be required to maintain daily dust suppression at the two-mile section of Davis Road adjacent to the site using a water truck operating continuously while vehicles are using the road. • The Project would provide wheel shakers at the exit(s) of the construction site to minimize dust being tracked off the Project site and onto the roadways. • Operational on-road trips shall not operate on unpaved dirt roads. 				
<p>Mitigation Measure AQ-2</p> <p>Prior to commencing construction, the Project proponent shall submit and commit to a Combustion Exhaust Emissions Control Program. This plan would provide a detailed list of control measures to minimize exhaust emissions during Project construction, including but not limited to fuel use, engine maintenance, and procedures:</p> <ul style="list-style-type: none"> • The Exhaust Emission Control Plan shall provide a detailed list of control measures to minimize exhaust emissions during Project construction, including but not limited to fuel use, engine maintenance, and procedures. • The construction contractor shall be required to utilize construction equipment using diesel engines less than 50 horsepower with certified NOx emissions rated as Tier 3 or better. All off-road diesel-powered equipment greater than 50 horsepower that is used on-site during construction of the Project shall meet USEPA Tier 4 offroad emission standards and Level 3 diesel particulate filters. 	<p>Prior to Construction</p>	<p>Develop Combustion Exhaust Emissions Control Program</p>	<p>Applicant</p>	<p>Department of Planning and Development Services and ICAPCD</p>

<ul style="list-style-type: none"> When commercially available, fossil fueled equipment shall be replaced with electrically driven equivalents (provided they are not run via a portable generator set). Idling times shall be minimized either by shutting equipment off when not in use or reducing the maximum idling time to five minutes (as required by the California Airborne Toxics Control Measure, Title 13, Section 2485 of California Code of Regulations). Clear signage shall be provided for construction workers at all access points. All construction equipment shall be maintained and properly tuned in accordance with manufacturer's specifications. All equipment shall be checked by a certified mechanic and determined to be running in proper condition prior to operation. Where access to alternative sources of power are available, portable diesel engines shall be prohibited. Haul truck shall be 2010 model year trucks or newer (a gross vehicle weight rating of at least 14,001 pounds), or best commercially available equipment, that meet the California Air Resources Board 2010 engine emissions standards at 0.01 g/horsepower-hour of particulate matter and 0.20 g/horsepower-hour of NOx emissions or newer, cleaner trucks. The volatile organic compounds (VOC) architectural coating limits specify that the use paints and solvents with a VOC content of 100 grams per liter or less for interior and 150 grams per liter or less for exterior surfaces shall be required. 				
Biological Resources				
<p>Mitigation Measure BIO-1. Designated Biologist: The Applicant shall retain the services of a Qualified Biologist. The Qualified Biologist will be employed during construction and all vegetation removal and ground-disturbing activities. The Qualified Biologist will document compliance with the projects mitigation measures and permits. The Qualified Biologist will have the authority to halt any Project activities that are in violation of the terms and conditions of the Project biological opinion(s) or incidental take permit, as appropriate.</p>	During construction	The Qualified Biologist will Document Compliance	Applicant	Department of Planning and Development Services

<p>Mitigation Measure BIO-2: Biological Monitors: Biological monitor(s) will be employed to assist the Designated Biologist in conducting preconstruction surveys and monitoring ground disturbance, grading, construction, decommissioning, and restoration activities. The biological monitor(s) will have sufficient education and field experience to understand resident wildlife species biology. To avoid and minimize effects to biological resources, the biological monitor(s) will assist the Designated Biologist with the following:</p> <ul style="list-style-type: none"> • Conduct inspections for listed species during ground-disturbing construction activities and document that habitat within the construction zone is not occupied by Yuma Ridgway's rail or desert pupfish. • Document compliance with all conservation measures, including but not limited to monitoring for presence of listed species; halting construction activity in the area if an individual listed species is found; and checking the staking/flagging of all disturbance areas to be sure that they are intact and that all construction activities are being kept within the staked/flagged limits. If a Yuma Ridgway's rail or desert pupfish is found within a work area, the Biological Monitor(s) will immediately notify the Designated Biologist, who will determine measures to be taken to ensure that the individual is not harmed, such as temporarily halting construction. 	<p>Prior to start of construction</p>	<p>Conduct Inspections</p>	<p>Applicant</p>	<p>Department of Planning and Development Services</p>
<p>Mitigation Measure BIO-3: Worker Environmental Awareness Program Training: A Worker Environmental Awareness Program will be implemented for construction crews prior to the commencement of Project activities. Training materials and briefings will include, but not be limited to, discussion of the federal and State statutes protecting threatened and endangered species, the consequence of noncompliance with these statutes, identification of values of wildlife and natural plant communities, hazardous substance spill prevention and containment measures, and review of all required conservation measures.</p>	<p>Prior to start of construction</p>	<p>Worker Environmental Awareness Program</p>	<p>Applicant</p>	<p>Department of Planning and Development Services</p>

<p>Mitigation Measure BIO-4: Flagging of Work Area Limits: All areas to be disturbed by the Project will be flagged prior to construction. All disturbance will be confined to these flagged areas, and all employees will be instructed that their activities must be confined to locations within the flagged areas.</p>	<p>Prior to Construction</p>	<p>Flagging Project Site</p>	<p>Applicant</p>	<p>Department of Planning and Development Services</p>
<p>Mitigation Measure BIO-5: Power Wash Equipment: All equipment used during construction of the Project will be required to be power washed prior to arrival at the Project site to prevent the transportation and establishment of noxious weeds in the area.</p>	<p>Prior to Construction</p>	<p>Power Wash Equipment</p>	<p>Applicant</p>	<p>Department of Planning and Development Services</p>

<p>Mitigation Measure BIO-6: Sediment and Erosion Control: The Project proponent will acquire the appropriate Clean Water Act regulatory permits, prepare a Stormwater Pollution and Prevention Plan (SWPPP), and implement BMPs prior to construction and site restoration. The SWPPP will identify specific actions and BMPs relating to the prevention of stormwater pollution from Project-related construction sources by identifying a practical sequence for site restoration, BMP implementation, contingency measures, responsible parties, and agency contacts. The SWPPP reflects localized surface hydrological conditions and will be reviewed by the USFWS prior to commencement of work. A SWPPP will be a condition of the contract with each contractor selected to build and decommission the Project. The SWPPP(s) at a minimum will incorporate soil stabilization and erosion control practices (e.g., hydroseeding, erosion control blankets, mulching), dewatering and/or flow diversion practices, sediment control practices (temporary sediment basins, fiber rolls), temporary and post-construction onsite and offsite runoff controls, and special considerations and BMPs for water crossings, wetlands, and drainages. The SWPPP will be prepared by a qualified SWPPP practitioner with BMPs selected to achieve maximum pollutant removal and that represent the best available technology that is economically achievable. Emphasis for BMPs is placed on controlling discharges of oxygen-depleting substances, floating material, oil and grease, acidic or caustic substances or compounds, and turbidity. Performance and effectiveness of these BMPs are determined either by visual means where applicable (i.e., observation of above-normal sediment release), or by actual water sampling in cases where verification of contaminant reduction or elimination (inadvertent petroleum release) is required to determine adequacy of the measure.</p>	<p>Prior to Construction</p>	<p>Develop SWPPP</p>	<p>Applicant</p>	<p>Department of Planning and Development Services</p>
---	------------------------------	----------------------	------------------	--

<p>Mitigation Measure BIO-7: Solid Waste Management: Solid waste will be properly contained in designated collection areas on site and regularly disposed of.</p>	<p>During Construction</p>	<p>Solid Waste Management</p>	<p>Applicant</p>	<p>Department of Planning and Development Services</p>
<p>Mitigation Measure BIO-8: A desert pupfish protection and relocation plan will be prepared prior to construction activities in any suitable habitat for desert pupfish. Its implementation will ensure construction in any suitable habitat for desert pupfish will be conducted with minimal effects on desert pupfish. This plan will be submitted to the Service and the CDFW for review and approval prior to any ground-disturbing activities that have a water component. This plan will provide:</p> <ol style="list-style-type: none"> 1. Protocols for pre-construction or pre-maintenance surveys to assess species presence and spawning within or immediately adjacent to work areas (e.g., in, or at the end of, the irrigation drains/drain canals, open water areas, and around the open water margins). The protocols will also outline the qualifications required for biologists to conduct desert pupfish survey, capture, and relocation activities and the process for biologist approval. 2. Capture (e.g., trapping in the irrigation drains for construction and maintenance; or trapping, dip netting, and seining in open water areas that are drained or if the water level is dropped) and transport methods to minimize handling and stress as well as exposure to heat, low dissolved oxygen (DO), and crowding. 3. Identification of locations for release of captured desert pupfish. 	<p>Prior to Construction</p>	<p>Desert Pupfish Protection and Relocation Plan</p>	<p>Applicant</p>	<p>Department of Planning and Development Services</p>

<p>4. Timing windows when construction or maintenance in open water areas and in the irrigation drain mouths/canals may be conducted with minimal effects on desert pupfish spawning.</p> <p>5. Adaptive management procedures that include assessment of mitigation measure effectiveness, development of revised measures to improve effectiveness, and similar assessment of revised measures to verify effectiveness. Yuma Ridgway's Rail Measures, Black Rail, and Other Marsh Bird Measures.</p>				
<p>Mitigation Measure BIO-9. Construction Timing: Construction activities within habitat for Yuma Ridgway's rail (i.e., cattail marsh) will be scheduled to avoid the nesting and molting flightless season (i.e., February 15 – September 15). Pile driving activities adjacent to Yuma Ridgway's rail habitat will avoid Yuma Ridgway's rail nesting season.</p>	<p>During Construction</p>	<p>Construction Timing</p>	<p>Applicant</p>	<p>Department of Planning and Development Services</p>
<p>Mitigation Measure BIO-10: Pre-Construction Surveys and Construction Monitoring for Yuma Ridgway's Rail and Black Rail: Pre-construction surveys for Yuma Ridgway's rail and black rail and construction monitoring will be conducted within all Project development areas within suitable habitat and a 500-foot buffer from suitable habitat. In the event that Yuma Ridgway's rail(s) or black rail(s) are detected within the work area (the area of active equipment use), all construction activities in the area will halt and the USFWS and CDFW will be notified no later than noon of the next business day. Project activities in the area may not proceed until the birds have left the work area. The USFWS and CDFW will also be notified if any Yuma Ridgway's rail are detected within 500 feet of the construction area. Project activities may proceed with caution in this buffer area under the direction of the Designated Biologist.</p>	<p>Prior to Construction</p>	<p>Pre-Construction Surveys and Construction Monitoring</p>	<p>Applicant</p>	<p>Department of Planning and Development Services</p>

<p>Mitigation Measure BIO-11: Reduced Vehicle Speed Adjacent to Rail Habitat: Vehicle speeds will be reduced to 15 miles per hour (mph) on access roads adjacent to Yuma Ridgway's rail habitat. These areas will be appropriately signed to identify the speed limit.</p>	<p>During Construction</p>	<p>Reduced Vehicle Speeds</p>	<p>Applicant</p>	<p>Department of Planning and Development Services</p>
<p>Mitigation Measure BIO-12: Noise Attenuation: The following noise attenuation measures will be implemented to minimize noise impacts on Yuma Ridgway's rail during the nesting season:</p> <ul style="list-style-type: none"> • At least 30 days prior to activities within 500 feet of Yuma Ridgway's rail habitat, the Applicant will conduct a noise study to evaluate the maximum predicted noise level within rail habitat. • If the maximum predicted noise is less than 60 A-weighted decibel scale (dBA) equivalent continuous sound level (Leq), no additional measures are required. • If the maximum predicted noise level exceeds 60 dBA Leq in rail habitat, noise attenuation measures such as noise walls or hay bales will be installed between the noise source and the suitable habitat. Noise monitors will be installed at the edge of the nearest Yuma Ridgway's rail habitat to assess the noise levels and verify that attenuation measures are successful. If necessary, additional noise reduction measures will be implemented to reduce the noise level to below 60 dBA at the edge of occupied habitat. 	<p>Prior to Construction</p>	<p>Noise Attenuation</p>	<p>Applicant</p>	<p>Department of Planning and Development Services</p>

<p>Mitigation Measure BIO-13: Habitat Conservation: To offset the loss of Yuma Ridgway's rail habitat, the Project proponent will preserve, create, or enhance habitat near the Project site for Yuma Ridgway's rail. The Project proponent will provide funding for construction and long-term management of the created habitat and will provide financial assurance for the construction of the wetland habitat in the form of performance bonds, escrow accounts, casualty insurance, or letters of credit. The performance bond, escrow account, casualty insurance, or letter of credit shall be of sufficient value to cover all construction, monitoring and reporting costs until the habitat is fully established. The financial assurance shall be in place prior to ground disturbance. Long-term management funding will be provided sufficient to cover, at a minimum, the management costs related to procurement of water from IID, weed control, levee and control structure maintenance, and control structure repair or replacement. The Applicant will prepare a detailed Habitat Enhancement Mitigation and Mitigation Monitoring Plan for review and approval by the USFWS, Corps, and CDFW prior to Project construction. Habitat creation activities will be conducted outside of the bird breeding season (February 15 – September 15) to avoid potential noise impacts on Yuma Ridgway's rail.</p>	<p>After Construction</p>	<p>Habitat Conservation</p>	<p>Applicant</p>	<p>Department of Planning and Development Services</p>
<p>Mitigation Measure BIO-14: Burrowing Owl. A pre-construction survey will be conducted for burrowing owls. The survey will be conducted during peak activity period (one hour before to two hours after sunrise or two hours before to one hour after sunset) no more than 14 days prior to the start of construction and within 500 feet surrounding the construction area. If owls are located during the pre-construction survey between February 1 and August 31 (nesting season), a buffer area will be established according to the guidelines in the 2012 Staff Report. A modified buffer reduction may be used with CDFW concurrence. If burrowing owls are located during the nonbreeding season, owls may be passively relocated in coordination with CDFW, by a qualified biologist according to the procedures outlined in the 2012 Staff Report on Burrowing Owl Mitigation. If burrowing owls are found on site during pre-construction surveys, the Project proponent shall contact CDFW to prepare a plan of action for buffers or passive relocation.</p>	<p>Prior To Construction</p>	<p>Burrowing Owl Surveys</p>	<p>Applicant</p>	<p>Department of Planning and Development Services</p>

<p>Mitigation Measure BIO-15: Lighting. Except as necessary for safety or security purposes, no lighting shall be allowed to impact wetland or riparian habitats.</p>	<p style="text-align: center;">During Construction</p>	<p style="text-align: center;">Lighting</p>	<p style="text-align: center;">Applicant</p>	<p style="text-align: center;">Department of Planning and Development Services</p>
<p>Mitigation Measure BIO-16: Nesting Bird Plan. Construction activities shall take place outside the general bird breeding season (February 15 to September 30), to the maximum extent practicable. Regardless of the time of year, prior to ground-disturbing activities, a qualified biologist shall conduct a nesting bird survey to comply with CDFW Code 3503 and 3503.5 and the Migratory Bird Treaty Act. The survey shall occur no more than three (3) days prior to initiation of proposed Project activities and shall include any potential habitat (including trees, shrubs, the ground, or nearby structures). Any occupied passerine and/or raptor nests occurring within the proposed Project area or the Project's zone of influence (generally 100-300 feet) shall be delineated and a no-disturbance buffer zone (as determined by the avian biologist) shall be established and maintained during Project activities. Additional follow-up surveys may be required by the resource agencies and Imperial County. The buffer zone shall be sufficient in size to prevent impacts to the nest. A qualified biologist shall monitor active nests to determine whether construction activities are disturbing nesting birds or nestlings. If the qualified biologist determines that construction activities pose a disturbance to nesting, construction work shall be stopped in the area of the nest and the no disturbance buffer shall be expanded. Once nesting has ceased and the fledglings are no longer using the nest area as confirmed by a qualified biologist, the buffer may be removed. A nesting bird survey report shall be provided to Imperial County and CDFW, if an active nest is encountered</p>	<p style="text-align: center;">Prior to Grading or Construction</p>	<p style="text-align: center;">Nesting Bird Plan</p>	<p style="text-align: center;">Applicant</p>	<p style="text-align: center;">Department of Planning and Development Services</p>

<p>during construction, construction shall stop immediately until a qualified biologist can determine the status of the nest and when work can proceed without risking violation to state or federal laws..</p>				
<p>Mitigation Measure BIO-18: Excavation Areas. Any open trench or excavated area shall be securely covered anytime Project activities within the excavated/trenched area have ceased. The designated biologist shall oversee the covering of all excavated, steep-walled holes or trenches by placing plywood or other barrier materials such that animals are unable to enter and become entrapped. The use of temporary fencing around the perimeter or trenches or holes may be an acceptable minimization measure, if deemed appropriate by the biological monitor. Before holes or trenches are filled, the Biological Monitors shall thoroughly inspect the areas for trapped animals. If any worker discovers that any animal has become trapped, they shall halt Project-related activities and notify the biological monitor immediately.</p>	<p style="text-align: center;">During Construction</p>	<p style="text-align: center;">Excavation Area</p>	<p style="text-align: center;">Applicant</p>	<p style="text-align: center;">Department of Planning and Development Services</p>

<p>Mitigation Measure BIO-19: Wetland and Riparian Area Restoration/Compensation. The Project will provide restoration/compensation for all unavoidable impacts on areas under the jurisdiction of USACE, RWQCB, and CDFW. Impacts on jurisdictional areas will be avoided to the extent feasible. Where avoidance of jurisdictional areas is not feasible, the Project applicant will provide the necessary mitigation required as part of wetland permitting, by creation, restoration, or preservation of suitable jurisdictional or equivalent habitat along with adequate buffers to protect the function and values of jurisdictional areas. The Mitigation ratio will be 1:1 or as approved by the permitting agencies. The proposed Mitigation Plan area is located in Section 35 approximately 2 miles north of the HKP1 and HKL1 Projects at the corner of Beach Road and Access Road. The proposed mitigation area will total 159.61 acres; approximately 152 acres will be created native wetland/open water habitat and approximately 7 acres will be enhanced native upland habitat. Proposed native wetland communities include Willow Scrub Shrub, Cattail Bullrush Marsh and Desert Riparian Woodlands. Proposed upland communities include Sonoran Desert Scrub/Alkali Sink.</p>	<p style="text-align: center;">During Construction</p>	<p style="text-align: center;">Wetland and Riparian Area Restoration/Compensation</p>	<p style="text-align: center;">Applicant</p>	<p style="text-align: center;">Department of Planning and Development Services</p>
Cultural Resources				
<p>Mitigation Measure CUL-1: The Applicant shall retain the services of a Qualified Archaeologist, meeting the Secretary of the Interior Standards or County standards, whichever is greater, and require that all initial ground-disturbing work be monitored by an archaeological specialist (monitor) proficient in artifact and feature identification in monitoring contexts. The Consultant (Qualified Archaeologist and/or monitor) shall be present at the Project construction phase kickoff meeting.</p>	<p style="text-align: center;">During Grading or construction</p>	<p style="text-align: center;">Monitoring during construction</p>	<p style="text-align: center;">Applicant/Contractor</p>	<p style="text-align: center;">Department of Planning and Development Services</p>
<p>Mitigation Measure CUL-2: Prior to commencing construction activities and thus prior to any ground disturbance in the Proposed Project site, the Consultant shall conduct initial Worker Environmental Awareness Program (WEAP) training to all construction personnel, including supervisors, present at the outset of the Project construction work phase, for which the Lead Contractor and all subcontractors shall make their personnel available. A tribal monitor shall be provided an opportunity to attend the preconstruction briefing, if requested. This WEAP training will educate construction personnel on how to work with the monitor(s) to identify and minimize impacts to archaeological resources and maintain environmental compliance. This WEAP</p>	<p style="text-align: center;">Prior to Commencing Construction Activities</p>	<p style="text-align: center;">Worker Environmental Awareness Program</p>	<p style="text-align: center;">Applicant</p>	<p style="text-align: center;">Department of Planning and Development Services</p>

<p>training will educate the monitor(s) of construction procedures to avoid construction-related injury or harm. This training may be performed periodically, such as for new personnel coming on to the Project as needed.</p>				
<p>Mitigation Measure CUL-3: The Contractor shall provide the Consultant with a schedule of initial potential ground-disturbing activities. A minimum of 48 hours will be provided to the Consultant of commencement of any initial ground-disturbing activities such as vegetation grubbing or clearing, grading, trenching, or mass excavation.</p> <p>A monitor shall be present on-site at the commencement of ground-disturbing activities related to the Project. The monitor, in consultation with the Qualified Archaeologist, shall observe initial ground-disturbing activities and, as they proceed, adjust the number of monitors as needed to provide adequate observation and oversight. All monitors will have stop-work authority to allow for recordation and evaluation of finds during construction. The monitor will maintain a daily record of observations to serve as an ongoing reference resource and to provide a resource for final reporting upon completion of the Project.</p> <p>The Consultant and the Lead Contractor and subcontractors shall maintain a line of communication regarding schedule and activity such that the monitor is aware of all ground-disturbing activities in advance to provide appropriate oversight.</p>	<p>Prior to Construction</p>	<p>Project Scheduling</p>	<p>Applicant</p>	<p>Department of Planning and Development Services</p>
<p>Mitigation Measure: CUL-4: In the event of the discovery of previously unidentified archaeological materials, the Contractor shall immediately cease all work activities within an area of no less than 100 feet of the discovery. After cessation of excavation, the Contractor shall immediately contact the County. Except in the case of cultural items that fall within the scope of the Native American Grave Protection and Repatriation Act (NAGPRA), California Health and Safety Code 7050.5, CEQA 15064.5, or California Public Resources Code 5097.98, the discovery of any cultural resource within the Project area shall not be grounds for a Project-wide "stop work" notice or otherwise interfere with the Project's continuation except as set forth in this paragraph. Additionally, all consulting Native American Tribal groups that requested notification of any unanticipated discovery of archaeological resources on the Project shall be notified appropriately. If a discovery results in the identification of cultural items that fall within the scope of NAGPRA, the Contractor shall immediately cease all work activities within an area of no less</p>	<p>During Construction</p>	<p>Identified Archaeological Materials Protocol</p>	<p>Applicant</p>	<p>Department of Planning and Development Services</p>

<p>than 100 feet (30 meters) of the discovery. In the event of an unanticipated discovery of archaeological materials during construction, the Applicant-retained Qualified Professional Archaeologist shall be contacted to evaluate the significance of the materials prior to resuming any construction-related activities near the find. If the Qualified Archaeologist determines that the discovery constitutes a significant resource under CEQA and it cannot be avoided, the Applicant shall implement an archaeological data recovery program.</p>				
<p>Mitigation Measure CUL-5: At the completion of all ground-disturbing activities, the Consultant shall prepare an Archaeological Resources Monitoring Report summarizing all monitoring efforts and observations, as performed, and any and all prehistoric or historic archaeological finds as well as providing follow-up reports of any finds to the SCCIC, as required.</p> <p>In the event unanticipated, buried prehistoric archaeological resources (lithic material, faunal, pottery, etc.) or historical archaeological resources (ceramics, building materials, glassware, etc.) are unearthed during construction or any ground disturbing activities within the Project area, additional resource treatments would become necessary. Once a potential resource has been identified, all work within 100 feet must be halted until the find can be assessed by a qualified archaeologist.</p>	<p>After Ground Disturbing Activities</p>	<p>Archaeological Resources Monitoring Report</p>	<p>Applicant</p>	<p>Department of Planning and Development Services</p>
Geology and Soils				
<p>Mitigation Measure GEO-1: A complete geotechnical engineering investigation shall be completed, with a Final Geotechnical Report to be prepared prior to submittal of a grading permit. The Final Geotechnical Report shall be prepared by a qualified consultant and be submitted to the County for review and approval. The investigation will include soil test borings; specific and detailed recommendations; soil and sediment analysis; detailed analysis and design standards; geotechnical design criteria; and detailed design recommendations.</p>	<p>Prior to Construction</p>	<p>Final Geotechnical Report</p>	<p>Applicant</p>	<p>Department of Planning and Development Services</p>
<p>Mitigation Measure GEO-2: All grading operations and construction shall be conducted in conformance with the recommendations included in the Geohazard Evaluation Report prepared on August 17, 2022, and Final Geotechnical Report on the Project site. Design, grading, and construction shall be performed in accordance with the recommendations of the project geotechnical consultant and corrosion engineer, subject to review by the County, prior to commencement of grading</p>	<p>During Grading and Construction</p>	<p>Conformance to Geohazard Evaluation Report</p>	<p>Applicant</p>	<p>Department of Planning and Development Services</p>

<p>activities.</p> <p>Mitigation Measure PALEO-1: The Applicant shall retain the services of a Qualified Paleontologist and require that all initial ground-disturbing work be monitored by someone trained in fossil identification in monitoring contexts. The Qualified Paleontologist shall prepare a Paleontological Resource Mitigation Plan to be implemented during ground-disturbing activity for the proposed Project. This program should outline the procedures for paleontological monitoring, including extent and duration; protocols for salvage and preparation of fossils; and the requirements for a final mitigation and monitoring report. The Qualified Paleontologist and a paleontological monitor shall be present at the Project construction-phase kickoff meeting.</p>	<p>During Grading and Excavation</p>	<p>Paleontological Resource Mitigation Plan</p>	<p>Applicant</p>	<p>Department of Planning and Development Services</p>
<p>Mitigation Measure PALEO-2: Prior to commencing construction activities and, thus, prior to any ground disturbance in the Proposed Project site, the Qualified Paleontologist and paleontological monitor shall conduct initial Worker Environmental Awareness Program (WEAP) training to all construction personnel, including supervisors, present at the start of the Project construction work phase, for which the Applicant, or their designated Contractor, and all subcontractors shall make their personnel available. This WEAP training will educate construction personnel on how to work with the monitor(s) to identify and minimize impacts to paleontological resources and maintain environmental compliance, and it shall be performed periodically for new personnel coming on to the Project as needed.</p>	<p>Prior to Construction Activities</p>	<p>Worker Environmental Awareness Program (WEAP)</p>	<p>Applicant</p>	<p>Department of Planning and Development Services</p>
<p>Mitigation Measure PALEO-3: The Applicant, or their designated Contractor, shall provide the Qualified Paleontologist with a schedule of initial potential ground-disturbing activities. A minimum of 48 hours will be provided to the consultant prior to the commencement of any initial ground-disturbing activities, such as vegetation grubbing or clearing, grading, trenching, or mass excavation.</p> <p>As detailed in the schedule provided, a paleontological monitor shall be present on-site at the commencement of ground-disturbing activities related to the Project. The monitor, in consultation with the Qualified Paleontologist, shall observe initial ground-disturbing activities and, as they proceed, make adjustments to the number of monitors as needed to provide adequate observation and oversight. All monitors will have stop-work authority to allow for recordation and evaluation of finds during construction. The monitor will maintain a daily record of</p>	<p>Prior to Construction Activities</p>	<p>Paleontologist Scheduling</p>	<p>Applicant</p>	<p>Department of Planning and Development Services</p>

observations as an ongoing reference resource and to provide a resource for final reporting upon completion of the Project. The Qualified Paleontologist, paleontological monitor, and the Applicant, or their designated Contractor, and subcontractors shall maintain a line of communication regarding schedule and activity such that the monitor is aware of all ground-disturbing activities in advance to provide appropriate oversight.	During Construction Activities	Resource Investigation	Applicant	Department of Planning and Development Services
Mitigation Measure PALEO-4: If paleontological resources are discovered, construction shall be halted within 50 feet of any paleontological finds and shall not resume until the Qualified Paleontologist can determine the significance of the find and/or the find has been fully investigated, documented, and cleared.	After Ground Disturbing Activities	Paleontological Resources Monitoring Report	Applicant	Department of Planning and Development Services
Mitigation Measure PALEO-5: At the completion of all ground-disturbing activities, the Qualified Paleontologist shall prepare a Paleontological Resources Monitoring Report summarizing all monitoring efforts and observations, as performed, and any and all paleontological finds and shall provide follow-up reports of any finds to the preferred paleontological repository, as required.				
Hazards and Hazardous Materials				
Mitigation Measure HAZ-1: To avoid health risks to construction workers, the Applicant shall require the contractor to prepare and implement a site Health and Safety Plan (HSP) if areas containing hazardous materials are to be disturbed. This plan will outline measures that will be employed to protect construction workers and the public from exposure to hazardous materials during construction activities. This plan shall be prepared prior to any ground-disturbing activities and shall be reviewed and approved by the Project Applicant. Workers shall review and sign the site HSP prior to proceeding with the assigned work.	Prior to Construction	Health and Safety Plan	Applicant	Department of Planning and Development Services
Mitigation Measure HAZ-2: For any gen-tie structures or other areas of project ground disturbance that are close to a REC, a Phase 2 limited soil sampling shall be conducted to determine if there are any hazardous materials present on-site. The soil sampling shall be conducted during final design and prior to construction. Soil sampling will determine the California Human Health Screening Levels (CHHSL) of the testing protocol (CAM 17 metals, a list of 17 metals found typically in hazardous materials and mining sites). The CHHSLs are a list of 54 hazardous chemicals in soil or soil gas that the California Environmental Protection Agency (CalEPA) considers to be below thresholds for risks to human health. The Imperial County Public Health Department, Division of Environmental Health	Prior to Construction Activities	Determination of Hazardous Materials	Applicant	Department of Planning and Development Services

<p>(DEH) shall review the soil sampling results. If the results are above the CHHSLs, then the DEH would refer the project to the California Department of Toxic Substances Control for proper soil handling and removal procedures.</p>				
Hydrology and Water Quality				
<p>Mitigation Measures HWQ-1: Prepare SWPPP and Implement BMPs Prior to Construction and Site Restoration. The Project applicant or its contractor shall prepare a Storm Water Pollution Prevention Plan (SWPPP) specific to the Project and be responsible for securing coverage under the State Water Resources Control Board's National Pollution Discharge Elimination System stormwater permit for general construction activity (Order 2009-0009-DWQ). The SWPPP shall identify specific actions and best management practices (BMPs) related to the prevention of stormwater pollution from Project-related construction sources by identifying a practical sequence for site restoration, BMP implementation, contingency measures, responsible parties, and agency contacts. The SWPPP shall reflect localized surface hydrological conditions and shall be reviewed and approved by the appropriate agency prior to commencement of work and shall be made conditions of the contract with the contractor selected to build and decommission the Project. The SWPPP shall incorporate control measures in the following categories:</p> <ul style="list-style-type: none"> - Soil stabilization and erosion control practices - Sediment control practices - Temporary and postconstruction on- and off-site runoff controls - Special considerations and BMPs for water crossings and drainages - Monitoring protocols for discharge(s) and receiving waters, with emphasis placed on the following water quality objectives: dissolved oxygen, floating material, oil and grease, potential of hydrogen (pH), and turbidity - Waste management, handling, and disposal control practices - Corrective action and spill contingency measures - Agency and responsible party contact information - Training procedures that shall be used to ensure that workers are aware of permit requirements and proper installation methods for BMPs specified in the SWPPP <p>The SWPPP shall be prepared by a Qualified SWPPP Practitioner</p>	<p>Prior to Construction</p>	<p>Storm Water Pollution Prevention Plan</p>	<p>Applicant</p>	<p>Department of Planning and Development Services</p>

<p>and/or Qualified SWPPP Developer, with BMPs selected to achieve maximum pollutant removal and representative of the best available technology that is economically achievable. Emphasis for BMPs shall be placed on controlling discharges of oxygen-depleting substances; floating material; oil and grease; acidic or caustic substances or compounds; and turbidity. BMPs for soil-stabilization, erosion-control, and sediment-control practices will also be required. Performance and effectiveness of these BMPs shall be determined either by visual means where applicable (i.e., observation of above-normal sediment release), or by actual water sampling in cases where verification of contaminant reduction or elimination, (inadvertent petroleum release) is required to determine adequacy of the measure.</p>				
<p>Mitigation Measures HWQ-2: Incorporate Postconstruction Runoff BMPs into Project Drainage Plan. The Project Drainage Plan shall adhere to the County's Engineering Guidelines Manual, IID Draft Hydrology Manual or other recognized source with approval by the County Engineer to control and manage the on- and off-site discharge of stormwater to existing drainage systems. Infiltration basins will be integrated into the Drainage Plan to the maximum extent practical. The Drainage Plan shall provide both short and long-term drainage solutions to ensure the proper sequencing of drainage facilities and management of runoff generated from Project-related impervious surfaces as necessary.</p>	<p>Post Construction</p>	<p>Project Drainage Plan</p>	<p>Applicant</p>	<p>Department of Planning and Development Services</p>
<p>Tribal Cultural Resources</p>				
<p>Mitigation Measures CUL1-CUL5 apply here</p>				
<p>Utilities and Service Systems</p>				
<p>Mitigation Measures UTIL-1: If the IID does not receive its annual 3.1 maf water apportionment according to the QSA obligations of Colorado River water during the Project's 30-year lifespan, the Applicant shall work with IID to ensure any reduction in water availability can be managed by the Project.</p>	<p>Prior to Construction</p>	<p>Water Apportionment</p>	<p>Applicant</p>	<p>Department of Planning and Development Services</p>

SECTION 10.0 – FINDINGS ON CHANGES TO THE DRAFT EIR AND RECIRCULATION

10.1 CHANGES TO DRAFT EIR

The Draft EIR has incorporated clarifications since its publication. These revisions have been incorporated into the Final EIR.

10.2 FINDINGS

Pursuant to CEQA, on the basis of the review and consideration of the Final EIR, the Board of Supervisors finds:

- Factual corrections and minor changes are set forth as additions and corrections to the Draft EIR.
- The factual and minor changes to the Draft EIR are not substantial changes that would deprive the public of a meaningful opportunity to comment on a substantial adverse environmental effect of the Proposed Project or any Proposed Project Alternative, a feasible way to mitigate or avoid such an effect, or a feasible Proposed Project alternative.
- The factual corrections and minor changes in the Draft EIR would not result in new significant environmental effects or substantially increase the severity of the previously identified significant effects disclosed in the Draft SEIR.
- The factual corrections and minor changes in the Draft EIR would not involve mitigation measures or alternatives that are considerably different from those analyzed in the Draft EIR that would substantially reduce one or more significant effect(s) on the environment.
- The Draft EIR is not fundamentally inadequate and/or so conclusionary in nature that meaningful public review and comment were precluded.

Thus, based on the Draft EIR, the Final EIR, and the whole of the record, none of the conditions set forth in *CEQA Guidelines* Section 15088.5 requiring recirculation of a Draft EIR have been met. Incorporation of the factual corrections and minor changes to the Draft EIR into the Final EIR does not require the Final EIR to be circulated for public and/or agency comment.

SECTION 12.0 – REFERENCES

California Department of Conservation (DOC)

2018 The Williamson Act Status Report 2016-17. Available online at:
https://www.conservation.ca.gov/dlrp/wa/Documents/stats_reports/2018%20WA%20Status%20Report.pdf.

2020a California Important Farmland Finder. Accessed October 2020. Available online at:
<https://maps.conservation.ca.gov/DLRP/CIFF/>

2020c Mines Online. Accessed October 2020. Available online at:
<https://maps.conservation.ca.gov/mol/index.html>.

California Department of Forestry and Fire Protection (CAL Fire)

2022 Fire Hazard Severity Zone Viewer. Accessed February 2023. Available online at:
<https://egis.fire.ca.gov/FHSZ/>.

County of Imperial (County)

1993 General Plan. Available online at: <http://www.icpds.com/?pid=571>

2007 Land Use Map. Available online at: <https://www.icpds.com/assets/planning/land-use-element/landuse-map.pdf>

2015a General Plan: Land Use Element. Available online at:
<https://www.icpds.com/assets/planning/land-use-element/land-use-element-2015.pdf>.

2021 Imperial County Multi-Jurisdictional Hazard Mitigation Plan (MHMP). Available online at:
https://firedept.imperialcounty.org/wp-content/uploads/2021/01/Imperial-County-MHMP-2021-Plan-Update-2021_01_11.pdf

Google

2022 Google Earth Pro, 2022.

Attachment F
Mitigation Monitoring and Reporting Program - Resolution

RESOLUTION NO.

A RESOLUTION OF THE BOARD OF SUPERVISORS OF THE COUNTY OF IMPERIAL, CALIFORNIA, FOR THE DENIAL OF APPEAL #23-0004 AND APPROVAL OF THE MITIGATION, MONITORING AND REPORTING PROGRAM FOR THE HELL'S KITCHEN POWER & LITHIUM PROJECT.

WHEREAS, a Mitigation Monitoring and Reporting Program (MM&RP) has been prepared in accordance with the requirements of the California Environmental Quality Act, the State CEQA Guidelines, and the County's "Rules and Regulations to Implement CEQA as Amended"; and

WHEREAS, the Board of Supervisors of the County of Imperial has the authority to approve the MM&RP and deny the Appeal #23-0004; and,

WHEREAS, public notice of said application has been given, and the Board of Supervisors has considered evidence presented by the Planning & Development Services Department and other interested parties at a public hearing held with respect to this item on January 23, 2024; and,

NOW THEREFORE, the Board of Supervisors of the County of Imperial **DOES HEREBY RESOLVE** as follows:

SECTION 1. The Board of Supervisors has considered the proposed Mitigation Monitoring and Reporting Program (MM&RP) prior to making a decision on the project. The Board of Supervisors finds and determines that the Environmental Impact Report is adequate and prepared in accordance with the requirements of the California Environmental Quality Act (CEQA), which analyzes environmental effects, based upon the following findings and determinations.

SECTION 2. That in accordance with State Planning and Zoning law and the County of Imperial regulations, the following findings for the approval and certification of the Final EIR, MM&RP and Findings of Fact have been made as follows:

1. That the Final Project EIR SCH #2022030704, Candidate CEQA Findings for the above projects have been prepared in accordance with the requirements of the California Environmental Quality Act, the State CEQA Guidelines, and the County's "Rules and Regulations to Implement CEQA as Amended".
2. That the County has reviewed, analyzed, and considered Final EIR, the environmental impacts therein identified for this Project, the Candidate CEQA Findings, and the Mitigation Monitoring and Reporting Program and the entire Record of Proceedings prior to approving this project.
3. That the Final EIR and the Candidate CEQA Findings reflect the independent judgment of the County.

**BOARD OF SUPERVISORS RESOLUTION FOR
MMRP**

Page 2 of 3

4. That the Candidate CEQA Findings are supported by substantial evidence and backed by information provided to the County by experts, including but not limited to the County staff and the EIR preparer, on whom the County relies.

5. That the County accept as its own, incorporate as if set forth in full herein, and make each and every one of the findings contained in the Candidate CEQA Findings, including feasibility of mitigation measures pursuant to Public Resources Code 21081(a)/CEQA Guidelines 15091.

6. That the Mitigation Monitoring and Reporting Program is designed to ensure that during project implementation, the Developer and any other responsible parties shall implement the Project components and comply with feasible mitigation measures identified in the CEQA Findings, the Project entitlements, and the Mitigation Monitoring and Reporting Program and that these measures are fully enforceable through permit conditions, agreements, and/or other measures, such as their inclusion in the Mitigation Monitoring and Reporting Program.

7. That the Project will not individually or cumulative have an adverse effect on fish and wildlife resources, as defined in Section 711.2 of the Fish and Game Code.

8. That the Record of Proceedings consists of the Final EIR (and all its technical reports and addendums thereto); the County staff reports; the CEQA Findings; the Mitigation Monitoring and Reporting Program; the various Project entitlements and documents referenced therein; all final reports, applications, memoranda, maps, letters, and other planning documents prepared by the EIR planning/environmental consultant; all final reports, memoranda, maps, letters, and other planning documents prepared by the County staff; all documents submitted by members of the public and public agencies in connection with the Final EIR; minutes and transcripts of all public meetings and public hearings; all written and verbal public testimony presented during a noticed public hearing for the proposed project which such testimony was taken and any and all other materials which constitute the record of proceeding pursuant to Public Resources Code section 21167.6(e); and matters of common knowledge to the County staff and Planning Commission, including, but not limited to the County General Plan, the County Land Use Ordinance, County policies, which may be found during regular business hours, and the Imperial County Planning & Development Services Department at 801 Main Street, El Centro, CA 92243.

9. That the County does hereby approve the Findings and the MM&RP and deny the Appeal #23-0004.

**BOARD OF SUPERVISORS RESOLUTION FOR
MMRP**

Page 3 of 3

NOW, THEREFORE, based on the above findings, the Imperial County Board of Supervisors **DOES HEREBY DENY APPEAL #23-0004** and **APPROVE** the **Mitigation, Monitoring and Reporting Program**.

PASSED, ADOPTED AND APPROVED by the Board of Supervisors of the County of Imperial on this 23rd day of January 2024.

AYES:

NOES:

ABSENT:

ABSTAIN:

Luis A. Plancarte, Chairman
Imperial County Board of Supervisors

ATTEST: _____
BLANCA ACOSTA, Clerk of the
Board of Supervisors, County of
Imperial, State of California

Mitigation Monitoring and Reporting Program

For:

HELL'S KITCHEN POWERCO 1 AND LITHIUMCO 1 PROJECT



Prepared By:

COUNTY OF IMPERIAL

Planning & Development Services Department

801 Main Street
El Centro, CA 92243
(442) 265-1736
www.icpds.com

December 2023

SECTION 1.0 – PURPOSE

Imperial County would adopt this Mitigation Monitoring and Reporting Program (MMRP) in accordance with Public Resources Code (PRC) Section 21081.6 and Section 15097 of the California Environmental Quality Act (CEQA) Guidelines. The purpose of the MMRP is to ensure that the Hell's Kitchen Powerco 1 And Lithium co 1 Project complies with all applicable environmental mitigation requirements identified in the Final Mitigated Negative Declaration (MND) for the Proposed Project. The mitigation measures for the Proposed Project would be adopted by the County, in conjunction with the adoption of the Final EIR. The mitigation measures from the Final EIR have been integrated into this MMRP. The MMRP provides a mechanism for monitoring the mitigation measures in compliance with the Final EIR, and general guidelines for the use and implementation of the monitoring program are described below. Within this document, the approved mitigation measures are organized and referenced by subject category. The specific mitigation measures are identified, as well as the method and timing of verification and the responsible party that would ensure that each action is implemented.

The mitigation measures applicable to the project include avoiding certain impacts altogether, minimizing impacts by limiting the degree or magnitude of the action and its implementation, and/or reducing or eliminating impacts over time by maintenance operations during the life of the action.

Public Resources Code Section 21081.6 requires the Lead Agency, for each project that is subject to CEQA, to monitor performance of the mitigation measures included in any environmental document to ensure that implementation takes place. The County is the designated Lead Agency for the MMRP. The County is responsible for reviewing all monitoring reports, enforcement actions, and document disposition. The Lead Agency is responsible for reviewing all monitoring reports, enforcement actions, and document disposition. The Imperial Irrigation District would rely on information provided by the monitor as accurate and up to date and would field check mitigation measure status as required.

A record of the MMRP would be maintained at County of Imperial Planning and Development Services Department Office at 801 Main Street, El Centro, CA 92243). All mitigation measures contained in the MND shall be made conditions of the project as may be further described below.

SECTION 2.0 – FORMAT

The mitigation measures applicable to the project involve minimizing impacts by limiting the degree or magnitude of the action and its implementation. Within this document, the approved mitigation measure is referenced by subject category. The mitigation measure has a numerical reference. The following items are identified for the mitigation measure.

- Mitigation Language and Numbering
- Mitigation Timing
- Methods for Monitoring and Reporting
- Responsible Parties

SECTION 3.0 – MITIGATION LANGUAGE AND NUMBERING

Provides the language of the mitigation measures in their entirety.

SECTION 4.0 – MITIGATION TIMING

The mitigation measures required for the project will be implemented prior to construction and during construction.

SECTION 5.0 – METHODS FOR MONITORING AND REPORTING

The MMRP includes the procedures for documenting and reporting mitigation implementation efforts. As the project proponent, the County is responsible for implementation of the mitigation measures.

SECTION 6.0 – RESPONSIBLE PARTIES

For the mitigation measures, the party responsible for implementation, monitoring and reporting, and verifying successful completion of the mitigation measures is identified

Mitigation Measure	Implementation Time Frame	Monitoring Method	Implementation Responsibility	Verification Responsibility
<p>Air Quality</p> <p>Mitigation Measure AQ-1</p> <p>Prior to commencing construction, the Project proponent shall submit a Dust Control Plan to the Imperial County Air Pollution Control District (ICAPCD) for approval identifying all sources of PM10 and PM2.5 emissions and associated mitigation measures during the construction and operational phases of the Project. The Project proponent shall submit a Construction Notification Form to the ICAPCD ten days prior to the commencement of any earthmoving activity. This plan would provide a detailed list of control measures to reduce fugitive emissions from construction and operational activities, including but not limited to watering of unpaved roads, vehicle speed limits, windbreaks, transport container covers, and cleaning and sweeping procedures. The Dust Control Plan submitted to the ICAPCD shall meet all applicable requirements for control of fugitive dust emissions, including the following measures designed to achieve the no greater than 20-percent opacity performance standard for dust control:</p> <ul style="list-style-type: none"> All disturbed areas, including bulk material storage, that is not being actively used shall be effectively stabilized; and visible emissions shall be limited to no greater than 20 percent opacity for dust emissions by using water, chemical stabilizers, dust suppressants, tarps, or other suitable material, such as vegetative groundcover. Bulk material is defined as earth, rock, silt, sediment, and other organic and/or inorganic material consisting of or containing PM with 5 percent or greater silt content. All on- and off-site unpaved roadway segments being used for 50 or more average vehicle trips per day shall be effectively stabilized, and visible emissions shall be limited to no greater than 20 percent opacity for dust emissions by the use of restricting vehicle access, paving, chemical stabilizers, dust suppressants, and/or watering. 	<p>Prior to Construction</p>	<p>Develop Dust Control Plan</p>	<p>Applicant</p>	<p>Department of Planning and Development Services and ICAPCD</p>

<ul style="list-style-type: none"> • All unpaved traffic areas one acre or more in size with 75 or more average vehicle trips per day shall be effectively stabilized, and visible emissions shall be limited to no greater than 20 percent opacity for dust emissions by paving, chemical stabilizers, dust suppressants, and/or watering. • All track-out or carry-out, which includes bulk materials that adhere to the exterior surfaces of motor vehicles and/or equipment (including tires) that may then fall onto the pavement on paved public roads, shall be cleaned at the end of each workday or immediately when mud or dirt extends a cumulative distance of 50 linear feet or more onto a paved road in an urban area. • Movement of bulk material handling or transfer shall be stabilized prior to handling or at points of transfer with application of sufficient water or chemical stabilizers, or by sheltering or enclosing the operation and transfer line except, where such material or activity is exempted from stabilization by the rules of ICAPCD. • Any temporary unpaved road shall be effectively stabilized and visible emissions shall be limited to no greater than 20 percent opacity for dust emission by paving, chemical stabilizers, dust suppressants and/or watering. • Fugitive dust generation during construction would be minimized by watering as needed to meet Imperial County standards for fugitive dust control. To further reduce fugitive dust emissions, vehicle traffic on unpaved roads would be kept below 15 miles per hour. • During grading, the Project would be watering actively disturbed on-site areas at least three times a day as necessary to reduce fugitive dust emissions. • Access to the site would be via Highway 111, McDonald Road, and Davis Road. All workers, vendors and haul trucks would be required to utilize these roadways. • An agreement between County of Imperial Public Works and the applicant would be established requiring the applicant to improve a two-mile section of the unpaved Davis Road adjacent to the site by installing a 12- to 18-inch- thick engineered Class II 			
---	--	--	--

<p>base section. In addition, at the request of the County, the applicant would utilize the improved section during construction and would wet the site continuously during construction activities. The road would be immediately paved after construction prior to operations of the plant to avoid damaging a new asphalt section.</p> <ul style="list-style-type: none"> • During construction, the Project would be required to maintain daily dust suppression at the two-mile section of Davis Road adjacent to the site using a water truck operating continuously while vehicles are using the road. • The Project would provide wheel shakers at the exit(s) of the construction site to minimize dust being tracked off the Project site and onto the roadways. • Operational on-road trips shall not operate on unpaved dirt roads. 			
<p>Mitigation Measure AQ-2</p> <p>Prior to commencing construction, the Project proponent shall submit and commit to a Combustion Exhaust Emissions Control Program. This plan would provide a detailed list of control measures to minimize exhaust emissions during Project construction, including but not limited to fuel use, engine maintenance, and procedures:</p> <ul style="list-style-type: none"> • The Exhaust Emission Control Plan shall provide a detailed list of control measures to minimize exhaust emissions during Project construction, including but not limited to fuel use, engine maintenance, and procedures. • The construction contractor shall be required to utilize construction equipment using diesel engines less than 50 horsepower with certified NOx emissions rated as Tier 3 or better. All off-road diesel-powered equipment greater than 50 horsepower that is used on-site during construction of the Project shall meet USEPA Tier 4 offroad emission standards and Level 3 diesel particulate filters. 	<p>Prior to Construction</p>	<p>Develop Combustion Exhaust Emissions Control Program</p>	<p>Applicant</p> <p>Department of Planning and Development Services and ICAPCD</p>

<ul style="list-style-type: none"> When commercially available, fossil fueled equipment shall be replaced with electrically driven equivalents (provided they are not run via a portable generator set). Idling times shall be minimized either by shutting equipment off when not in use or reducing the maximum idling time to five minutes (as required by the California Airborne Toxics Control Measure, Title 13, Section 2485 of California Code of Regulations). Clear signage shall be provided for construction workers at all access points. All construction equipment shall be maintained and properly tuned in accordance with manufacturer's specifications. All equipment shall be checked by a certified mechanic and determined to be running in proper condition prior to operation. Where access to alternative sources of power are available, portable diesel engines shall be prohibited. Haul truck shall be 2010 model year trucks or newer (a gross vehicle weight rating of at least 14,001 pounds), or best commercially available equipment, that meet the California Air Resources Board 2010 engine emissions standards at 0.01 g/horsepower-hour of particulate matter and 0.20 g/horsepower-hour of NOx emissions or newer, cleaner trucks. The volatile organic compounds (VOC) architectural coating limits specify that the use paints and solvents with a VOC content of 100 grams per liter or less for interior and 150 grams per liter or less for exterior surfaces shall be required. 				
Biological Resources				
<p>Mitigation Measure BIO-1. Designated Biologist: The Applicant shall retain the services of a Qualified Biologist. The Qualified Biologist will be employed during construction and all vegetation removal and ground-disturbing activities. The Qualified Biologist will document compliance with the projects mitigation measures and permits. The Qualified Biologist will have the authority to halt any Project activities that are in violation of the terms and conditions of the Project biological opinion(s) or incidental take permit, as appropriate.</p>	During construction	The Qualified Biologist will Document Compliance	Applicant	Department of Planning and Development Services

<p>Mitigation Measure BIO-2: Biological Monitors: Biological monitor(s) will be employed to assist the Designated Biologist in conducting preconstruction surveys and monitoring ground disturbance, grading, construction, decommissioning, and restoration activities. The biological monitor(s) will have sufficient education and field experience to understand resident wildlife species biology. To avoid and minimize effects to biological resources, the biological monitor(s) will assist the Designated Biologist with the following:</p> <ul style="list-style-type: none"> • Conduct inspections for listed species during ground-disturbing construction activities and document that habitat within the construction zone is not occupied by Yuma Ridgway's rail or desert pupfish. • Document compliance with all conservation measures, including but not limited to monitoring for presence of listed species; halting construction activity in the area if an individual listed species is found; and checking the staking/flagging of all disturbance areas to be sure that they are intact and that all construction activities are being kept within the staked/flagged limits. If a Yuma Ridgway's rail or desert pupfish is found within a work area, the Biological Monitor(s) will immediately notify the Designated Biologist, who will determine measures to be taken to ensure that the individual is not harmed, such as temporarily halting construction. 	<p>Prior to start of construction</p>	<p>Conduct Inspections</p>	<p>Applicant</p>	<p>Department of Planning and Development Services</p>
<p>Mitigation Measure BIO-3: Worker Environmental Awareness Program Training: A Worker Environmental Awareness Program will be implemented for construction crews prior to the commencement of Project activities. Training materials and briefings will include, but not be limited to, discussion of the federal and State statutes protecting threatened and endangered species, the consequence of noncompliance with these statutes, identification of values of wildlife and natural plant communities, hazardous substance spill prevention and containment measures, and review of all required conservation measures.</p>	<p>Prior to start of construction</p>	<p>Worker Environmental Awareness Program</p>	<p>Applicant</p>	<p>Department of Planning and Development Services</p>

<p>Mitigation Measure BIO-4: Flagging of Work Area Limits: All areas to be disturbed by the Project will be flagged prior to construction. All disturbance will be confined to these flagged areas, and all employees will be instructed that their activities must be confined to locations within the flagged areas.</p>	<p>Prior to Construction</p>	<p>Flagging Project Site</p>	<p>Applicant</p>	<p>Department of Planning and Development Services</p>
<p>Mitigation Measure BIO-5: Power Wash Equipment: All equipment used during construction of the Project will be required to be power washed prior to arrival at the Project site to prevent the transportation and establishment of noxious weeds in the area.</p>	<p>Prior to Construction</p>	<p>Power Wash Equipment</p>	<p>Applicant</p>	<p>Department of Planning and Development Services</p>

<p>Mitigation Measure BIO-6: Sediment and Erosion Control: The Project proponent will acquire the appropriate Clean Water Act regulatory permits, prepare a Stormwater Pollution and Prevention Plan (SWPPP), and implement BMPs prior to construction and site restoration. The SWPPP will identify specific actions and BMPs relating to the prevention of stormwater pollution from Project-related construction sources by identifying a practical sequence for site restoration, BMP implementation, contingency measures, responsible parties, and agency contacts. The SWPPP reflects localized surface hydrological conditions and will be reviewed by the USEFWS prior to commencement of work. A SWPPP will be a condition of the contract with each contractor selected to build and decommission the Project. The SWPPP(s) at a minimum will incorporate soil stabilization and erosion control practices (e.g., hydroseeding, erosion control blankets, mulching), dewatering and/or flow diversion practices, sediment control practices (temporary sediment basins, fiber rolls), temporary and considerations and BMPs for water crossings, wetlands, and drainages. The SWPPP will be prepared by a qualified SWPPP practitioner with BMPs selected to achieve maximum pollutant removal and that represent the best available technology that is economically achievable. Emphasis for BMPs is placed on controlling discharges of oxygen-depleting substances, floating material, oil and grease, acidic or caustic substances or compounds, and turbidity. Performance and effectiveness of these BMPs are determined either by visual means where applicable (i.e., observation of above-normal sediment release), or by actual water sampling in cases where verification of contaminant reduction or elimination (inadvertent petroleum release) is required to determine adequacy of the measure.</p>	<p>Prior to Construction</p>	<p>Develop SWPPP</p>	<p>Applicant</p>	<p>Department of Planning and Development Services</p>
--	------------------------------	----------------------	------------------	--

<p>Mitigation Measure BIO-7: Solid Waste Management: Solid waste will be properly contained in designated collection areas on site and regularly disposed of.</p>	<p>During Construction</p>	<p>Solid Waste Management</p>	<p>Applicant</p>	<p>Department of Planning and Development Services</p>
<p>Mitigation Measure BIO-8: A desert pupfish protection and relocation plan will be prepared prior to construction activities in any suitable habitat for desert pupfish. Its implementation will ensure construction in any suitable habitat for desert pupfish will be conducted with minimal effects on desert pupfish. This plan will be submitted to the Service and the CDFW for review and approval prior to any ground-disturbing activities that have a water component. This plan will provide:</p> <ol style="list-style-type: none"> 1. Protocols for pre-construction or pre-maintenance surveys to assess species presence and spawning within or immediately adjacent to work areas (e.g., in, or at the end of, the irrigation drains/drain canals, open water areas, and around the open water margins). The protocols will also outline the qualifications required for biologists to conduct desert pupfish survey, capture, and relocation activities and the process for biologist approval. 2. Capture (e.g., trapping in the irrigation drains for construction and maintenance; or trapping, dip netting, and seining in open water areas that are drained or if the water level is dropped) and transport methods to minimize handling and stress as well as exposure to heat, low dissolved oxygen (DO), and crowding. 3. Identification of locations for release of captured desert pupfish. 	<p>Prior to Construction</p>	<p>Desert Pupfish Protection and Relocation Plan</p>	<p>Applicant</p>	<p>Department of Planning and Development Services</p>

<p>4. Timing windows when construction or maintenance in open water areas and in the irrigation drain mouths/canals may be conducted with minimal effects on desert pupfish spawning.</p> <p>5. Adaptive management procedures that include assessment of mitigation measure effectiveness, development of revised measures to improve effectiveness, and similar assessment of revised measures to verify effectiveness. Yuma Ridgway's Rail Measures, Black Rail, and Other Marsh Bird Measures.</p>				
<p>Mitigation Measure BIO-9: Construction Timing: Construction activities within habitat for Yuma Ridgway's rail (i.e., cattail marsh) will be scheduled to avoid the nesting and molting flightless season (i.e., February 15 – September 15). Pile driving activities adjacent to Yuma Ridgway's rail habitat will avoid Yuma Ridgway's rail nesting season.</p>	<p>During Construction</p>	<p>Construction Timing</p>	<p>Applicant</p>	<p>Department of Planning and Development Services</p>
<p>Mitigation Measure BIO-10: Pre-Construction Surveys and Construction Monitoring for Yuma Ridgway's Rail and Black Rail: Pre-construction surveys for Yuma Ridgway's rail and black rail and construction monitoring will be conducted within all Project development areas within suitable habitat and a 500-foot buffer from suitable habitat. In the event that Yuma Ridgway's rail(s) or black rail(s) are detected within the work area (the area of active equipment use), all construction activities in the area will halt and the USFWS and CDFW will be notified no later than noon of the next business day. Project activities in the area may not proceed until the birds have left the work area. The USFWS and CDFW will also be notified if any Yuma Ridgway's rail are detected within 500 feet of the construction area. Project activities may proceed with caution in this buffer area under the direction of the Designated Biologist.</p>	<p>Prior to Construction</p>	<p>Pre-Construction Surveys and Construction Monitoring</p>	<p>Applicant</p>	<p>Department of Planning and Development Services</p>

<p>Mitigation Measure BIO-11: Reduced Vehicle Speed Adjacent to Rail Habitat: Vehicle speeds will be reduced to 15 miles per hour (mph) on access roads adjacent to Yuma Ridgway's rail habitat. These areas will be appropriately signed to identify the speed limit.</p>	<p>During Construction</p>	<p>Reduced Vehicle Speeds</p>	<p>Applicant</p>	<p>Department of Planning and Development Services</p>
<p>Mitigation Measure BIO-12: Noise Attenuation: The following noise attenuation measures will be implemented to minimize noise impacts on Yuma Ridgway's rail during the nesting season:</p> <ul style="list-style-type: none"> • At least 30 days prior to activities within 500 feet of Yuma Ridgway's rail habitat, the Applicant will conduct a noise study to evaluate the maximum predicted noise level within rail habitat. • If the maximum predicted noise is less than 60 A-weighted decibel scale (dBA) equivalent continuous sound level (Leq), no additional measures are required. • If the maximum predicted noise level exceeds 60 dBA Leq in rail habitat, noise attenuation measures such as noise walls or hay bales will be installed between the noise source and the suitable habitat. Noise monitors will be installed at the edge of the nearest Yuma Ridgway's rail habitat to assess the noise levels and verify that attenuation measures are successful. If necessary, additional noise reduction measures will be implemented to reduce the noise level to below 60 dBA at the edge of occupied habitat. 	<p>Prior to Construction</p>	<p>Noise Attenuation</p>	<p>Applicant</p>	<p>Department of Planning and Development Services</p>

<p>Mitigation Measure BIO-13: Habitat Conservation: To offset the loss of Yuma Ridgway's rail habitat, the Project proponent will preserve, create, or enhance habitat near the Project site for Yuma Ridgway's rail. The Project proponent will provide funding for construction and long-term management of the created habitat and will provide financial assurance for the construction of the wetland habitat in the form of performance bonds, escrow accounts, casualty insurance, or letters of credit. The performance bond, escrow account, casualty insurance, or letter of credit shall be of sufficient value to cover all construction, monitoring and reporting costs until the habitat is fully established. The financial assurance shall be in place prior to ground disturbance. Long-term management funding will be provided sufficient to cover, at a minimum, the management costs related to procurement of water from IID, weed control, levee and control structure maintenance, and control structure repair or replacement. The Applicant will prepare a detailed Habitat Enhancement Mitigation and Mitigation Monitoring Plan for review and approval by the USFWS, Corps, and CDFW prior to Project construction. Habitat creation activities will be conducted outside of the bird breeding season (February 15 – September 15) to avoid potential noise impacts on Yuma Ridgway's rail.</p>	<p>After Construction</p>	<p>Habitat Conservation</p>	<p>Applicant</p>	<p>Department of Planning and Development Services</p>
<p>Mitigation Measure BIO-14: Burrowing Owl: A pre-construction survey will be conducted for burrowing owls. The survey will be conducted during peak activity period (one hour before to two hours after sunrise or two hours before to one hour after sunset) no more than 14 days prior to the start of construction and within 500 feet surrounding the construction area. If owls are located during the pre-construction survey between February 1 and August 31 (nesting season), a buffer area will be established according to the guidelines in the 2012 Staff Report. A modified buffer reduction may be used with CDFW concurrence. If burrowing owls are located during the nonbreeding season, owls may be passively relocated in coordination with CDFW, by a qualified biologist according to the procedures outlined in the 2012 Staff Report on Burrowing Owl Mitigation. If burrowing owls are found on site during pre-construction surveys, the Project proponent shall contact CDFW to prepare a plan of action for buffers or passive relocation.</p>	<p>Prior To Construction</p>	<p>Burrowing Owl Surveys</p>	<p>Applicant</p>	<p>Department of Planning and Development Services</p>

<p>Mitigation Measure BIO-15: Lighting. Except as necessary for safety or security purposes, no lighting shall be allowed to impact wetland or riparian habitats.</p>	<p>During Construction</p>	<p>Lighting</p>	<p>Applicant</p>	<p>Department of Planning and Development Services</p>
<p>Mitigation Measure BIO-16: Nesting Bird Plan. Construction activities shall take place outside the general bird breeding season (February 15 to September 30), to the maximum extent practicable. Regardless of the time of year, prior to ground-disturbing activities, a qualified biologist shall conduct a nesting bird survey to comply with CDFW Code 3503 and 3503.5 and the Migratory Bird Treaty Act. The survey shall occur no more than three (3) days prior to initiation of proposed Project activities and shall include any potential habitat (including trees, shrubs, the ground, or nearby structures). Any occupied passerine and/or raptor nests occurring within the proposed Project area or the Project's zone of influence (generally 100-300 feet) shall be delineated and a no-disturbance buffer zone (as determined by the avian biologist) shall be established and maintained during Project activities. Additional follow-up surveys may be required by the resource agencies and Imperial County. The buffer zone shall be sufficient in size to prevent impacts to the nest. A qualified biologist shall monitor active nests to determine whether construction activities are disturbing nesting birds or nestlings. If the qualified biologist determines that construction activities pose a disturbance to nesting, construction work shall be stopped in the area of the nest and the no disturbance buffer shall be expanded. Once nesting has ceased and the fledglings are no longer using the nest area as confirmed by a qualified biologist, the buffer may be removed. A nesting bird survey report shall be provided to Imperial County and CDFW. If an active nest is encountered</p>	<p>Prior to Grading or Construction</p>	<p>Nesting Bird Plan</p>	<p>Applicant</p>	<p>Department of Planning and Development Services</p>

<p>during construction, construction shall stop immediately until a qualified biologist can determine the status of the nest and when work can proceed without risking violation to state or federal laws..</p>				
<p>Mitigation Measure BIO-18: Excavation Areas. Any open trench or excavated area shall be securely covered anytime Project activities within the excavated/trenched rea have ceased. The designated biologist shall oversee the covering of all excavated, steep-walled holes or trenches by placing plywood or other barrier materials such that animals are unable to enter and become entrapped. The use of temporary fencing around the perimeter or trenches or holes may be an acceptable minimization measure, if deemed appropriate by the biological monitor. Before holes or trenches are filled, the Biological Monitors shall thoroughly inspect the areas for trapped animals. If any worker discovers that any animal has become trapped, they shall halt Project-related activities and notify the biological monitor immediately.</p>	<p>During Construction</p>	<p>Excavation Area</p>	<p>Applicant</p>	<p>Department of Planning and Development Services</p>

<p>Mitigation Measure BIO-19: Wetland and Riparian Area Restoration/Compensation. The Project will provide restoration/compensation for all unavoidable impacts on areas under the jurisdiction of USACE, RWQCB, and CDFW. Impacts on jurisdictional areas will be avoided to the extent feasible. Where avoidance of jurisdictional areas is not feasible, the Project applicant will provide the necessary mitigation required as part of wetland permitting, by creation, restoration, or preservation of suitable jurisdictional or equivalent habitat along with adequate buffers to protect the function and values of jurisdictional areas. The Mitigation ratio will be 1:1 or as approved by the permitting agencies. The proposed Mitigation Plan area is located in Section 35 approximately 2 miles north of the HKP1 and HKL1 Projects at the corner of Beach Road and Access Road. The proposed mitigation area will total 159.61 acres; approximately 152 acres will be created native wetland/open water habitat and approximately 7 acres will be enhanced native upland habitat. Proposed native wetland communities include Willow Scrub Shrub, Cattail Bullrush Marsh and Desert Riparian Woodlands. Proposed upland communities include Sonoran Desert Scrub/Alkali Sink.</p>	<p>During Construction</p>	<p>Wetland and Riparian Area Restoration/Compensation</p>	<p>Applicant</p>	<p>Department of Planning and Development Services</p>
<p>Cultural Resources</p>				
<p>Mitigation Measure CUL-1: The Applicant shall retain the services of a Qualified Archaeologist, meeting the Secretary of the Interior Standards or County standards, whichever is greater, and require that all initial ground-disturbing work be monitored by archaeological specialist (monitor) proficient in artifact and feature identification in monitoring contexts. The Consultant (Qualified Archaeologist and/or monitor) shall be present at the Project construction phase kickoff meeting.</p>	<p>During Grading or construction</p>	<p>Monitoring during construction</p>	<p>Applicant/Contractor</p>	<p>Department of Planning and Development Services</p>
<p>Mitigation Measure CUL-2: Prior to commencing construction activities and thus prior to any ground disturbance in the Proposed Project site, the Consultant shall conduct initial Worker Environmental Awareness Program (WEAP) training to all construction personnel, including supervisors, present at the outset of the Project construction work phase, for which the Lead Contractor and all subcontractors shall make their personnel available. A tribal monitor shall be provided an opportunity to attend the preconstruction briefing, if requested. This WEAP training will educate construction personnel on how to work with the monitor(s) to identify and minimize impacts to archaeological resources and maintain environmental compliance. This WEAP</p>	<p>Prior to Commencing Construction Activities</p>	<p>Worker Environmental Awareness Program</p>	<p>Applicant</p>	<p>Department of Planning and Development Services</p>

<p>training will educate the monitor(s) of construction procedures to avoid construction-related injury or harm. This training may be performed periodically, such as for new personnel coming on to the Project as needed.</p>				
<p>Mitigation Measure CUL-3: The Contractor shall provide the Consultant with a schedule of initial potential ground-disturbing activities. A minimum of 48 hours will be provided to the Consultant of commencement of any initial ground-disturbing activities such as vegetation grubbing or clearing, grading, trenching, or mass excavation.</p>	<p>Prior to Construction</p>	<p>Project Scheduling</p>	<p>Applicant</p>	<p>Department of Planning and Development Services</p>
<p>A monitor shall be present on-site at the commencement of ground-disturbing activities related to the Project. The monitor, in consultation with the Qualified Archaeologist, shall observe initial ground-disturbing activities and, as they proceed, adjust the number of monitors as needed to provide adequate observation and oversight. All monitors will have stop-work authority to allow for recordation and evaluation of finds during construction. The monitor will maintain a daily record of observations to serve as an ongoing reference resource and to provide a resource for final reporting upon completion of the Project.</p>				
<p>The Consultant and the Lead Contractor and subcontractors shall maintain a line of communication regarding schedule and activity such that the monitor is aware of all ground-disturbing activities in advance to provide appropriate oversight.</p>	<p>During Construction</p>	<p>Identified Archaeological Materials Protocol</p>	<p>Applicant</p>	<p>Department of Planning and Development Services</p>
<p>Mitigation Measure: CUL-4: In the event of the discovery of previously unidentified archaeological materials, the Contractor shall immediately cease all work activities within an area of no less than 100 feet of the discovery. After cessation of excavation, the Contractor shall immediately contact the County. Except in the case of cultural items that fall within the scope of the Native American Grave Protection and Repatriation Act (NAGPRA), California Health and Safety Code 7050.5, CEQA 15064.5, or California Public Resources Code 5097.98, the discovery of any cultural resource within the Project area shall not be grounds for a Project-wide "stop work" notice or otherwise interfere with the Project's continuation except as set forth in this paragraph. Additionally, all consulting Native American Tribal groups that requested notification of any unanticipated discovery of archaeological resources on the Project shall be notified appropriately. If a discovery results in the identification of cultural items that fall within the scope of NAGPRA, the Contractor shall immediately cease all work activities within an area of no less than 100 feet (30 meters) of the discovery. In the event of an</p>				

<p>unanticipated discovery of archaeological materials during construction, the Applicant-retained Qualified Professional Archaeologist shall be contacted to evaluate the significance of the materials prior to resuming any construction-related activities near the find. If the Qualified Archaeologist determines that the discovery constitutes a significant resource under CEQA and it cannot be avoided, the Applicant shall implement an archaeological data recovery program.</p>				
<p>Mitigation Measure CUL-5: At the completion of all ground-disturbing activities, the Consultant shall prepare an Archaeological Resources Monitoring Report summarizing all monitoring efforts and observations, as performed, and any and all prehistoric or historic archaeological finds as well as providing follow-up reports of any finds to the SCCIC, as required.</p> <p>In the event unanticipated, buried prehistoric archaeological resources (lithic material, faunal, pottery, etc.) or historical archaeological resources (ceramics, building materials, glassware, etc.) are unearthed during construction or any ground disturbing activities within the Project area, additional resource treatments would become necessary. Once a potential resource has been identified, all work within 100 feet must be halted until the find can be assessed by a qualified archaeologist.</p>	<p>Applicant</p>	<p>Archaeological Resources Monitoring Report</p>	<p>After Ground Disturbing Activities</p>	<p>Department of Planning and Development Services</p>
Geology and Soils				
<p>Mitigation Measure GEO-1: A complete geotechnical engineering investigation shall be completed, with a Final Geotechnical Report to be prepared prior to submittal of a grading permit. The Final Geotechnical Report shall be prepared by a qualified consultant and be submitted to the County for review and approval. The investigation will include soil test borings; specific and detailed recommendations; soil and sediment analysis; detailed analysis and design standards; geotechnical design criteria; and detailed design recommendations.</p>	<p>Applicant</p>	<p>Final Geotechnical Report</p>	<p>Prior to Construction</p>	<p>Department of Planning and Development Services</p>
<p>Mitigation Measure GEO-2: All grading operations and construction shall be conducted in conformance with the recommendations included in the Geohazard Evaluation Report prepared on August 17, 2022, and Final Geotechnical Report on the Project site. Design, grading, and construction shall be performed in accordance with the recommendations of the project geotechnical consultant and corrosion engineer, subject to review by the County, prior to commencement of grading activities.</p>	<p>Applicant</p>	<p>Conformance to Geohazard Evaluation Report</p>	<p>During Grading and Construction</p>	<p>Department of Planning and Development Services</p>

<p>Mitigation Measure PALEO-1: The Applicant shall retain the services of a Qualified Paleontologist and require that all initial ground-disturbing work be monitored by someone trained in fossil identification in monitoring contexts. The Qualified Paleontologist shall prepare a Paleontological Resource Mitigation Plan to be implemented during ground-disturbing activity for the proposed Project. This program should outline the procedures for paleontological monitoring, including extent and duration; protocols for salvage and preparation of fossils; and the requirements for a final mitigation and monitoring report. The Qualified Paleontologist and a paleontological monitor shall be present at the Project construction-phase kickoff meeting.</p>	<p>During Grading and Excavation</p>	<p>Paleontological Resource Mitigation Plan</p>	<p>Applicant</p>	<p>Department of Planning and Development Services</p>
<p>Mitigation Measure PALEO-2: Prior to commencing construction activities and, thus, prior to any ground disturbance in the Proposed Project site, the Qualified Paleontologist and paleontological monitor shall conduct initial Worker Environmental Awareness Program (WEAP) training to all construction personnel, including supervisors, present at the start of the Project construction work phase, for which the Applicant, or their designated Contractor, and all subcontractors shall make their personnel available. This WEAP training will educate construction personnel on how to work with the monitor(s) to identify and minimize impacts to paleontological resources and maintain environmental compliance, and it shall be performed periodically for new personnel coming on to the Project as needed.</p>	<p>Prior to Construction Activities</p>	<p>Worker Environmental Awareness Program (WEAP)</p>	<p>Applicant</p>	<p>Department of Planning and Development Services</p>
<p>Mitigation Measure PALEO-3: The Applicant, or their designated Contractor, shall provide the Qualified Paleontologist with a schedule of initial potential ground-disturbing activities. A minimum of 48 hours will be provided to the consultant prior to the commencement of any initial ground-disturbing activities, such as vegetation grubbing or clearing, grading, trenching, or mass excavation.</p> <p>As detailed in the schedule provided, a paleontological monitor shall be present on-site at the commencement of ground-disturbing activities related to the Project. The monitor, in consultation with the Qualified Paleontologist, shall observe initial ground-disturbing activities and, as they proceed, make adjustments to the number of monitors as needed to provide adequate observation and oversight. All monitors will have stop-work authority to allow for recordation and evaluation of finds during construction. The monitor will maintain a daily record of observations as an ongoing reference resource and to provide a</p>	<p>Prior to Construction Activities</p>	<p>Paleontologist Scheduling</p>	<p>Applicant</p>	<p>Department of Planning and Development Services</p>

resource for final reporting upon completion of the Project. The Qualified Paleontologist, paleontological monitor, and the Applicant, or their designated Contractor, and subcontractors shall maintain a line of communication regarding schedule and activity such that the monitor is aware of all ground-disturbing activities in advance to provide appropriate oversight.					Department of Planning and Development Services
Mitigation Measure PALEO-4: If paleontological resources are discovered, construction shall be halted within 50 feet of any paleontological finds and shall not resume until the Qualified Paleontologist can determine the significance of the find and/or the find has been fully investigated, documented, and cleared.	During Construction Activities	Resource Investigation	Applicant		Department of Planning and Development Services
Mitigation Measure PALEO-5: At the completion of all ground-disturbing activities, the Qualified Paleontologist shall prepare a Paleontological Resources Monitoring Report summarizing all monitoring efforts and observations, as performed, and any and all paleontological finds and shall provide follow-up reports of any finds to the preferred paleontological repository, as required.	After Ground Disturbing Activities	Paleontological Resources Monitoring Report	Applicant		Department of Planning and Development Services
Hazards and Hazardous Materials					
Mitigation Measure HAZ-1: To avoid health risks to construction workers, the Applicant shall require the contractor to prepare and implement a site Health and Safety Plan (HSP) if areas containing hazardous materials are to be disturbed. This plan will outline measures that will be employed to protect construction workers and the public from exposure to hazardous materials during construction activities. This plan shall be prepared prior to any ground-disturbing activities and shall be reviewed and approved by the Project Applicant. Workers shall review and sign the site HSP prior to proceeding with the assigned work.	Prior to Construction	Health and Safety Plan	Applicant		Department of Planning and Development Services
Mitigation Measure HAZ-2: For any gen-tie structures or other areas of project ground disturbance that are close to a REC, a Phase 2 limited soil sampling shall be conducted to determine if there are any hazardous materials present on-site. The soil sampling shall be conducted during final design and prior to construction. Soil sampling will determine the California Human Health Screening Levels (CHHSL) of the testing protocol (CAM 17 metals, a list of 17 metals found typically in hazardous materials and mining sites). The CHHSLs are a list of 54 hazardous chemicals in soil or soil gas that the California Environmental Protection Agency (CalEPA) considers to be below thresholds for risks to human health. The Imperial County Public Health Department, Division of Environmental Health (DEH) shall review the soil sampling results. If the results are above the CHHSLs, then the DEH would refer the project to the	Prior to Construction Activities	Determination of Hazardous Materials	Applicant		Department of Planning and Development Services

<p>California Department of Toxic Substances Control for proper soil handling and removal procedures.</p>				
Hydrology and Water Quality				
<p>Mitigation Measures HWQ-1: Prepare SWPPP and Implement BMPs Prior to Construction and Site Restoration. The Project applicant or its contractor shall prepare a Storm Water Pollution Prevention Plan (SWPPP) specific to the Project and be responsible for securing coverage under the State Water Resources Control Board's National Pollution Discharge Elimination System stormwater permit for general construction activity (Order 2009-0009-DWQ). The SWPPP shall identify specific actions and best management practices (BMPs) related to the prevention of stormwater pollution from Project-related construction sources by identifying a practical sequence for site restoration, BMP implementation, contingency measures, responsible parties, and agency contacts. The SWPPP shall reflect localized surface hydrological conditions and shall be reviewed and approved by the appropriate agency prior to commencement of work and shall be made conditions of the contract with the contractor selected to build and decommission the Project. The SWPPP shall incorporate control measures in the following categories:</p>			<p>Prior to Construction</p>	<p>Storm Water Pollution Prevention Plan</p>
<ul style="list-style-type: none"> - Soil stabilization and erosion control practices - Sediment control practices - Temporary and postconstruction on- and off-site runoff controls - Special considerations and BMPs for water crossings and drainages - Monitoring protocols for discharge(s) and receiving waters, with emphasis place on the following water quality objectives: dissolved oxygen, floating material, oil and grease, potential of hydrogen (pH), and turbidity - Waste management, handling, and disposal control practices - Corrective action and spill contingency measures - Agency and responsible party contact information - Training procedures that shall be used to ensure that workers are aware of permit requirements and proper installation methods for BMPs specified in the SWPPP 			<p>Applicant</p>	<p>Department of Planning and Development Services</p>
<p>The SWPPP shall be prepared by a Qualified SWPPP Practitioner and/or Qualified SWPPP Developer, with BMPs selected to achieve maximum pollutant removal and representative of the</p>				

<p>best available technology that is economically achievable. Emphasis for BMPs shall be placed on controlling discharges of oxygen-depleting substances; floating material; oil and grease; acidic or caustic substances or compounds; and turbidity. BMPs for soil-stabilization, erosion-control, and sediment-control practices will also be required. Performance and effectiveness of these BMPs shall be determined either by visual means where applicable (i.e., observation of above-normal sediment release), or by actual water sampling in cases where verification of contaminant reduction or elimination, (inadvertent petroleum release) is required to determine adequacy of the measure.</p>			
<p>Mitigation Measures HWQ-2: Incorporate Postconstruction Runoff BMPs into Project Drainage Plan. The Project Drainage Plan shall adhere to the County's Engineering Guidelines Manual, ID Draft Hydrology Manual or other recognized source with approval by the County Engineer to control and manage the on- and off-site discharge of stormwater to existing drainage systems. Infiltration basins will be integrated into the Drainage Plan to the maximum extent practical. The Drainage Plan shall provide both short and long-term drainage solutions to ensure the proper sequencing of drainage facilities and management of runoff generated from Project-related impervious surfaces as necessary.</p>	<p>Project Drainage Plan</p>	<p>Applicant</p>	<p>Department of Planning and Development Services</p>
Tribal Cultural Resources			
<p>Mitigation Measures CUL1-CUL5 apply here</p>			
Utilities and Service Systems			
<p>Mitigation Measures UTIL-1: If the IID does not receive its annual 3.1 maf water apportionment according to the QSA obligations of Colorado River water during the Project's 30-year lifespan, the Applicant shall work with IID to ensure any reduction in water availability can be managed by the Project.</p>	<p>Prior to Construction</p>	<p>Water Apportionment</p>	<p>Applicant</p>
			<p>Department of Planning and Development Services</p>

Attachment G
Conditional Use Permit # 21-0020 - Resolution

RESOLUTION NO.

A RESOLUTION OF THE BOARD OF SUPERVISORS OF THE COUNTY OF IMPERIAL, CALIFORNIA, FOR THE DENIAL OF APPEAL #23-0004 AND APPROVAL OF “CONDITIONAL USE PERMIT # 21-0020” FOR THE HELL’S KITCHEN POWERCO 1, LLC PROJECT.

WHEREAS, the Hell’s Kitchen PowerCo 1 LLC submitted an application for Conditional Use Permit #21-0020 for the construction, operation, maintenance and decommissioning of a geothermal power plant facility; and,

WHEREAS, an Environmental Impact Report and CEQA Findings have been prepared in accordance with the requirements of the California Environmental Quality Act, the State Guidelines, and the County’s “Rules and Regulations to Implement CEQA, as Amended”; and,

WHEREAS, the Planning Commission of the County of Imperial has approved Conditional Use Permit #21-0020, APNs

020-010-012	HKP1 and HKL1 Shared Facilities	S-1-G and S-2-G
020-010-013	HKP1 and HKL1 Shared Facilities	S-1-G
020-070-060	HKP1 and HKL1 Shared Facilities	S-1-G
020-010-042	Gen-Tie and Power Line	S-1-G
020-060-001	Gen-Tie and Power Line	S-1-G
020-060-002	Gen-Tie and Power Line	S-1-G
020-060-039	Gen-Tie and Power Line	S-1-G
020-060-040	Gen-Tie and Power Line	S-1-G
020-070-026	Gen-Tie and Power Line	S-1-G
020-070-025	Gen-Tie and Power Line	S-1-G
020-070-029	Gen-Tie and Power Line	S-1-G
020-070-055	Gen-Tie and Power Line	S-1-G
020-010-031	Gen-Tie and Power Line	S-1-G
020-010-032	Gen-Tie and Power Line	S-1-G
020-010-035	Gen-Tie and Power Line	M-2-G-PE
020-100-044	Gen-Tie and Power Line	M-2-G-PE

and project site is located approximately 3.8 miles Southwest of the Townsite of Niland; and,

WHEREAS, public notice of said application has been given, and the Board of Supervisors has considered evidence presented by the Imperial County Planning and Development Services Department and has heard, received and considered all oral and

written protests, objections and evidence presented by interested parties at a public hearing held with respect to this item on January 23, 2024; and

WHEREAS, on August 30, 2023, the Draft EIR was submitted to the State Clearinghouse and circulated for 50+ days. All comments are due by October 23, 2023; and,

WHEREAS, Appeal #23-0004 was received from Comite Civico del Valle by the Planning & Development Services Department on Friday, December 22, 2023 requesting an appeal of the Planning Commission approval of the Hell's Kitchen Projects.

THEREFORE, the Board of Supervisors of the County of Imperial **DOES HEREBY RESOLVE** as follows:

SECTION 1. The Board of Supervisors has considered the appeal for the approved Conditional Use Permit #21-0020 and the County's consideration of the project was noticed in compliance with the law.

SECTION 2. That the project complies with the requirements of the Imperial County Code and is in accordance with State Planning and Zoning law, therefore, the following findings are made pursuant to Imperial County Code §90203.09 as follows:

A. The proposed use is consistent with goals and policies of the adopted County General Plan. (Imperial County Code §90203.09.A)

The General Plan designates the subject site as "Agriculture" and the Renewable Energy and Transmission Element designates the subject site within one of the four Geothermal Overlay Zones that were approved previously by the County to be incorporated into the Renewable Energy Overlay Zone. The Land Use Ordinance, Division 17, authorizes the development and operation of renewable energy projects, including geothermal projects, within the Renewable Energy Overlay Zone with an approved Conditional Use Permit (CUP), the CUP is subject to the discretionary approval of the Imperial County Planning Commission. Additionally, an analysis of the project's consistency with the General Plan goals and objectives relevant to the project is provided in the Final EIR and the project is considered consistent with the applicable policies of the Final EIR.

The Board of Supervisors has also examined the relevant, applicable portions of the Imperial County General Plan's, *Land Use Element* and the *Geothermal/Alternative Energy & Transmission Element* and has determined that

the *Land Use Element* provides that the evaluation and approval of non-agricultural uses on lands designated agriculture will occur through the implementation of zoning and the conditional use permit (CUP) review process. Further, the Land Use Compatibility Matrix in the ICGP provides that a conditionally compatible category could be found to be compatible when additional use restrictions can be included by use of an “overlay”, the proposed project is within the Geothermal Overlay zone, therefore, pursuant to Land Use Ordinance, Section 91703.04, a geothermal project is permitted with approval of a Conditional Use Permit.

The County further finds that the project does not have a significant adverse effect on agricultural production. “...Significant adverse effect on agricultural production...” means a significant unmitigated impact, as defined under CEQA, to agricultural resources resulting from the permanent elimination of agricultural uses or resulting from removal agricultural land from the “Agricultural” land use category.

The proposed use provides a clear long term economic benefit to the County. The mineral extraction facility will provide economic growth to the region and economic benefit to the County and Goal 2 of the *Land Use Element* states that the County should “...[d]iversify employment and economic opportunities in the County while preserving agricultural activity...” the project shall create jobs and other economic opportunities in the County at a time of high County unemployment.

B. The proposed use is consistent with the purpose of the zone or sub-zone within which the use will be used. (Imperial County Code §90203.09.B)

The purpose of the project is for the construction of geothermal power plant facility. Pursuant to Title 9, Division 5, Sections 90518.02, 90519.02, and 90516.02, Major facilities relating to the generation and transmission of electrical energy is a use that is permitted in the S-1-G (Open Space, Geothermal Overlay), S-2-G (Open Space/Recreation, Geothermal Overlay), and M-2-G (Medium Industrial, Geothermal Overlay) Zone subject to approval of a CUP from the County. Therefore, the proposed use is consistent with the purpose of the zone or sub-zone within which the uses will be located.

C. The proposed use is listed as a use within the zone or sub-zone or is found to be similar to a listed conditional use according to the procedures of Section 90203.00. (Imperial County Code §90203.09.C)

The proposed geothermal power plant facility is listed as a use subject to a Conditional Use Permit in Land Use Ordinance, Sections 90518.02, 90519.02, and

90516.02 under Major facilities relating to the generation and transmission of electrical energy. Geothermal projects within the Renewable Energy Overlay Zone are also listed as a use subject to a Conditional Use Permit in Land Use Ordinance Division 17, Section 91703.04.

D. The proposed use meets the minimum requirements of this Title applicable to the use and complies with all applicable laws, ordinances and regulation of the County of Imperial and the State of California. (Imperial County Code §90203.09.D)

The project complies with the minimum requirements of this Title by, among other things, obtaining a CUP, complying with the California Environmental Quality Act, and participating in the public review and hearing process. Development standards have been established for the Project pursuant to these processes, and will be enforced via imposition and enforcement of the Mitigation Monitoring and Reporting Program recommended for approval by separate Resolution, as well as the conditions of approval imposed on this CUP. The Conditions of Approval will further insure that the project complies with all applicable regulations of the County of Imperial and the State of California. Therefore, the proposed project will meet the minimum requirements of the Land Use Ordinance, Section 90203.00.

E. The proposed use will not be detrimental to the health, safety, and welfare of the public or to the property and residents in the vicinity. (Imperial County Code §90203.09.E)

The geothermal facility is not in near proximity to very large residential areas and are generally surrounded by agricultural uses and IID managed marshlands to the north, east and south.

The closest residence is located over two miles to the northwest of the project site. A commercial algae production facility is located southeast of the site but is no longer in operation with a mobile home on-site. Noise associated with operation and maintenance would also meet the County's noise ordinance requirements at the project property lines. Further, the project's structural facilities, with the exception of the overhead transmission lines would generally be below 55 feet in height. A variance is submitted for any structures over 35 feet in height. The Environmental Impact Report prepared for the project analyzed the project's potential effects on the health, safety, and welfare of the public and property and found that, with mitigation, the Project has less than significant affects in all resource areas. Finally, the Permittee has agreed to conditions of approval that

support and promote the protection of the health, safety, and welfare of the County's citizens and property, and ensures that the County will not be negatively impacted environmentally or fiscally.

F. The proposed use does not violate any other law or ordinance. (Imperial County Code §90203.09.F)

The proposed project will be subject to the Conditional Use Permit and current Federal, State and Local regulations. State Planning and Zoning Law (Cal. Govt. Code §§ 65000-66035) establishes minimum statewide standards for the regulation of local land use through planning and zoning. The County regulates local land use via Title 9 of the Imperial County Code. As found above, the proposed project is conditioned to be consistent with Imperial County, Title 9, Land Use Ordinance and CEQA mitigation measures and therefore complies with both State and local laws and ordinance. Pursuant to CEQA, the County has prepared an EIR for the Project, which EIR analyzes the Project's compliance and consistency with other federal, state, and local laws and ordinances regulating the environment. Substantial evidence supports the conclusions in the EIR that the project complies with said environmental laws. The County is aware of no other laws or ordinances that might be implicated by the Project, and thus the finds that the proposed use does not violate any other law or ordinance. The proposed project will be subject to the Conditional Use Permit and current Federal, State and local regulations.

G. The proposed use is not granting a special privilege. (Imperial County Code §90203.09.G)

A Major geothermal project within the Renewable Energy Overlay Zone is a permitted use subject to approval of a Conditional Use Permit under Land Use Ordinance, Division 17, Section 91703.04 *et. seq.* and will not grant a special privilege.

SECTION 3. Approval of the Project are conditioned upon the terms and conditions set forth in the Agreement for Conditional Use Permit No. 21-0020, attached hereto and incorporated herein by this reference.

NOW, THEREFORE, based on the above findings, the Imperial County Board of Supervisors **DOES HEREBY DENY APPEAL #23-0004** and **APPROVE CONDITIONAL USE PERMIT #21-0020**, subject to the attached Conditions of Approval.

PASSED, ADOPTED AND APPROVED by the Board of Supervisors of the County of Imperial on this 23rd day of January 2024.

AYES:

NOES:

ABSENT:

ABSTAIN:

Luis A. Plancarte, Chairman
Imperial County Board of Supervisors

ATTEST: _____
BLANCA ACOSTA, Clerk of the
Board of Supervisors, County of
Imperial, State of California

S:\AllUsers\APN\020\010\012\HELLS KITCHEN POWER & LITHIUM\BOARD OF SUPERVISORS FOLDER\CUPs & RESOL\updated 11 30 resolutions\RESOLUTION CUP 21 0020_Mariela Edits.docx

1 Recorded Requested By and
When Recorded Return To:

2 _____
Imperial County Planning & Development Services
3 801 Main Street
El Centro California 92243
4 _____

5
6 **AGREEMENT FOR CONDITIONAL USE PERMIT CUP #21-0020**
7 (Hell's Kitchen PowerCo1 LLC)
8 (020-010-012-000)
9 **(Approved at Board of Supervisors January 23, 2024)**

10 This agreement is hereby made and entered into on this ____ day of _____, by and between
11 Controlled Thermal Resources (US) Inc. via its subsidiary Hell's Kitchen PowerCo 1, LLC
12 hereinafter referred to as the Permittee, and the COUNTY OF IMPERIAL, a political
13 subdivision of the State of California, (hereinafter referred to as "COUNTY").

14 **RECITALS**

15 **WHEREAS**, Permittee is the owner, lessee or successor-in-interest in certain land in
16 Imperial County with the applicant proposing Hell's Kitchen PowerCo 1 (HKP1) to construct
17 and operate a commercial geothermal, Hell's Kitchen LithiumCo 1, LLC is proposing the
18 Hell's Kitchen LithiumCo 1 (HKL1). The geothermal plant (HKP1) and lithium facilities
19 (HKL1) project is within portions of Sections 11 and 12 of Township 11 South, Range 13
20 East, S.B.B.M.; the gen-tie/power line ROW corridor is located within portions of Sections
21 12, 13 and 14 of Township 11 South, Range 13 East, S.B.B.M., and is approximately 3.8
22 miles southwest of the Townsite of Niland, Assessor Parcel Numbers:

18	020-010-012	HKP1 and HKL1 Shared Facilities	S-1-G and S-2-G
19	020-010-013	HKP1 and HKL1 Shared Facilities	S-1-G
20	020-070-060	HKP1 and HKL1 Shared Facilities	S-1-G
21	020-010-042	Gen-Tie and Power Line	S-1-G
22	020-060-001	Gen-Tie and Power Line	S-1-G
23	020-060-002	Gen-Tie and Power Line	S-1-G
24	020-060-039	Gen-Tie and Power Line	S-1-G
25	020-060-040	Gen-Tie and Power Line	S-1-G
26	020-070-026	Gen-Tie and Power Line	S-1-G
27	020-070-025	Gen-Tie and Power Line	S-1-G
28	020-070-029	Gen-Tie and Power Line	S-1-G
	020-070-055	Gen-Tie and Power Line	S-1-G
	020-010-031	Gen-Tie and Power Line	S-1-G
	020-010-032	Gen-Tie and Power Line	S-1-G
	020-010-035	Gen-Tie and Power Line	M-2-G-PE
	020-100-044	Gen-Tie and Power Line	M-2-G-PE

29 **WHEREAS**, Permittee has applied to the County of Imperial for a Conditional Use
30 Permit #21-0020 allowing for the geothermal facility and associated interconnections to the
31 proposed Hell's Kitchen Geothermal Plant that includes pipelines, conveyors, conduits and

1 other mechanical connections to/from plant, additionally, the Permittee has applied for a
2 variance for height increase needed for facility construction and operation.

3 The letter "G" shows the "GENERAL CONDITIONS". These conditions are conditions that
4 either routinely and commonly are included in all Conditional Use Permits as "standardized
5 conditions and/or are conditions that the Imperial County Planning Commission has
6 established as a requirement on all CUP's for consistent application and enforcement. The
7 Permittee is hereby advised that the General Conditions are as applicable as the SITE
8 SPECIFIC conditions.

9 **GENERAL CONDITIONS:**

10 **G-1 GENERAL LAW:**

11 The Permittee shall comply with all local, state and/or federal laws, rules, regulations,
12 ordinances, and/or standards (LORS) as they may pertain to the Project whether specified
13 herein or not.

14 **G-2 PERMITS/LICENSES:**

15 The Permittee shall obtain all local, state and/or federal permits, licenses, and/or other
16 approvals for the construction and/or operation of the Project. This shall include, but not be
17 limited to, local requirements for Health, Building, Sanitation, ICAPCD, Public Works, County
18 Sheriff, Fire Protection/Office of Emergency Services, Regional Water Quality Control
19 Board, California Division of Oil, Gas and Geothermal Resources (CDOGGR), among
20 others. Permittee shall likewise comply with all such permit requirements. Additionally,
21 Permittee shall if so requested submit a copy of such additional permit and/or licenses to
22 the Planning & Development Services Department within thirty (30) days of receipt, including
23 amendments or alternatives thereto.

24 **G-3 RECORDATION:**

25 This permit shall not be effective until CUP is recorded at the Imperial County Recorder's
26 Office and payment of the recordation fee shall be the responsibility of the Permittee. If the
27 Permittee fails to pay the recordation fee within six (6) months from the date of approval,
28 this permit shall be deemed null and void. The Planning & Development Department will
submit the executed Permit to the Imperial County Recorder's office for recordation
purposes. Permittee shall commence construction of the permitted activities or provide
evidence of substantial process within twelve (12) months from the effective date of this
permit, i.e. approval date. The Planning Director shall have the authority to extend this time
limit not to exceed 24 months if so requested by the Permittee.

G-4 CONDITION PRIORITY:

The Project shall be constructed and operated as described in this Permit, the project
description and as specified herein. If a conflict occurs between the permitting/regulatory
agencies, the most stringent condition shall govern and takes precedence.

G-5 INDEMNIFICATION:

1
2 As a condition of this permit, Permittee agrees to defend, indemnify, hold harmless, and
3 release the County, its agents, officers, attorneys, and employees from any claim, action, or
4 proceeding brought against any of them, the purpose of which is to attack, set aside, void,
5 or annul the permit or adoption of the environmental document which accompanies it. This
6 indemnification obligation shall include, but not be limited to, damages, costs, expenses,
7 attorney's fees, or expert witness fees that may be asserted by any person or entity,
8 including the Permittee, arising out of or in connection with the approval of this permit,
9 whether there is concurrent, passive or active negligence on the part of the County, its
10 agents, officers, attorneys, or employees.

11
12
13
14
15
16
17 **G-6 INSURANCE:**

18 The Permittee shall secure and maintain liability in tort and property damage, insurance at a
19 minimum of \$1,000,000.00 or proof of financial responsibility to protect persons or property from
20 injury or damage caused in any way by construction, or operation, of permitted facilities. The
21 Permittee and/or operator shall require that proper Workers' Compensation insurance covers all
22 laborers working on such facilities, e.g. construction and operational activities, as required by the
23 State of California. The Permittee shall also secure liability insurance and such other insurance as
24 may be required by the State and/or Federal Law.

25 Evidence of such insurance shall be provided to the County prior to commencement of any activities
26 authorized by this permit, e.g. a Certificate of Insurance is to be provided to the Planning &
27 Development Services Department by the insurance carrier and said insurance and certificate shall
28 be kept current for the life of the permitted Project. Certificate(s) of insurance shall be sent directly
to the Planning & Development Services Department by the insurance carrier and shall name the
Department as a recipient of both renewal and cancellation notices.

17 **G-7 INSPECTION AND RIGHT OF ENTRY:**

18 The County reserves the right to enter the premises to make appropriate inspection(s) and to
19 determine if the condition(s) of this permit are complied with. The owner or operator shall allow
20 authorized County representative(s) access upon the presentation of credentials and other
21 documents as may be required by law to:

22 (a) Enter at reasonable times upon the owner's or operator's premises where a permitted
23 facility or activity is located or conducted, or where records must be kept under the conditions of the
24 permit;

25 (b) Have access to and copy, at reasonable times, any records that must be kept under
26 the conditions of the permit; and,

27 (c) Inspect at reasonable times any facilities, equipment (including monitoring and control
28 equipment), practices, or operations regulated or required under the permit.

26 **G-8 SEVERABILITY:**

27 Should any condition(s) of this permit be determined by a Court or other agency with proper
28 jurisdiction to be invalid for any reason, such determination shall not invalidate the remaining
provision(s) of this permit.

G-9 PROVISION TO RUN WITH THE LAND/PROJECT:

1
2 The provisions of this project are to run with the land/project and shall bind the current and future
3 owner(s), successor(s)-in-interest, assignee(s) and/or transferee(s) of said project. Permittee shall
4 not without prior notification to the Planning & Development Services Department assign, sell or
5 transfer, or grant control of project or any right or privilege therein. The Permittee shall provide a
6 minimum of sixty (60) days written notice prior to such proposed transfer becoming effective. The
7 permitted use identified herein is limited for use upon the permitted properties described herein and
8 may not be transferred to any another parcels.

9
10
11 **G-10 TIME LIMIT:**

12 Unless otherwise specified within the specific conditions, this permit shall be limited to a maximum
13 of thirty (30) years from the recordation of the CUP. The CUP may be extended for a successive
14 thirty (30) year period by the Planning Director upon a finding by the Planning & Development
15 Services Department that the project is in compliance with all conditions of the CUP as stated herein
16 and any applicable Land Use regulation of the County of Imperial.

17 If an extension is necessary, the Permittee shall file a written extension request with the Planning
18 Director at least sixty (60) days prior to the expiration date of the Permit. Such an extension request
19 shall include the appropriate extension fee, pursuant to the Land Use Ordinance, Title 9, Division 9,
20 Section 90901.03 *et. seq.*, General Planning fees. If the original approval was granted by the
21 Planning Commission and/or the Board of Supervisors, such an extension shall only be considered
22 by the approving body, after a noticed public hearing. Nothing stated or implied within this permit
23 shall constitute a guarantee that an extension will be granted. An extension may not be granted if
24 the project is in violation of any one or all of the conditions or if there is a history of non-compliance
25 with the permit conditions.

26 **G-11 COST:**

27 The Permittee shall pay any and all amounts determined by the County Planning & Development
28 Services Department to defray any and all cost(s) for the review of reports, field investigations,
subsidence/seismicity monitoring, provisions for geothermal waste services, and other activities
directly related to the enforcement/monitoring for compliance of this Permit, County Ordinance or
any other applicable law as provided in the Land Use Ordinance, Section 90901.03 *et. seq.*, General
Planning fees. All County Departments', directly involved in the monitoring/enforcement of this
project may bill Permittee under this provision; however, said billing shall only be through and with
the approval of the Planning & Development Services Department.

G-12 REPORTS/INFORMATION:

If requested in writing by the Planning Director, Permittee shall provide any such
documentation/report as necessary to ascertain compliance with the Permit. The format, content
and supporting documentation shall be as required by the Planning Director.

G-13 DEFINITIONS:

In the event of a dispute the meaning(s) or the intent of any word(s), phrase(s) and/or conditions or
sections herein shall be determined by the Planning Commission of the County of Imperial. Their
determination shall be final unless an appeal is made to the Board of Supervisors within the required
time, i.e. ten (10) calendar days, pursuant to the Land Use Ordinance, Title 9, Division 1, Chapter 4,
Section 90104.05, *Appeal from Decision*.

1
2 **G-14 MINOR AMENDMENTS:**

3 The Planning Director may approve minor changes or modifications to the design, construction,
4 and/or operation of the Project provided said changes are necessary for the project to meet other
5 laws, regulations, codes, or conditions of the CUP and provided further, that such changes will not
6 result in any additional environmental impacts.

7
8 **G-15 SPECIFICITY:**

9 The issuance of this permit does not authorize the Permittee to construct or operate the Project in
10 violation of any state, federal, local law nor beyond the specified boundaries of the Project as shown
11 in the application/project description/permit, nor shall this permit allow any accessory or ancillary use
12 not specified herein. This permit does not provide any prescriptive right or use to the Permittee for
13 future addition and/or modifications to the Project.

14
15 **G-16 NON-COMPLIANCE (ENFORCEMENT & TERMINATION):**

16 Should the Permittee violate any condition herein, the County shall give notice of such violation. If
17 Permittee does not act to correct the identified violation, and after having given reasonable notice
18 and opportunity, the County may revoke the permit.

19 (a) If the Planning Commission finds and determines that the Permittee or successor-in-interest has
20 not complied with the terms and conditions of the CUP, or cannot comply with the terms and
21 conditions of the CUP, or the Planning Commission determines that the permitted activities constitute
22 a public nuisance, the Planning Director shall provide Permittee with notice and a reasonable
23 opportunity to comply with the enforcement or abatement order; and,

24 (b) If after receipt of the order, (1) Permittee fails to comply, and/or (2) Permittee cannot comply with
25 the conditions set forth in the CUP, then the matter shall be referred to the Planning Commission for
26 permit modification, suspension, or termination, or to the appropriate prosecuting authority.

27
28 **G-17 GENERAL WELFARE:**

All construction and operations shall be conducted with consistency with all laws, conditions, adopted
County policies, plans and the application so that the Project will be in harmony with the area and
not conflict with the public health, safety, comfort, convenience, and general welfare.

G-18 PERMITS OF OTHER AGENCIES INCORPORATED:

Permits granted by other governmental agencies in connection with the Project are incorporated
herein by reference. The County reserves the right to apply conditions of those permits, as the
County deems appropriate; provided that enforcement of a permit granted by another governmental
agency shall require concurrence by the respective agency.

G-19 HEALTH HAZARD:

If the County Health Officer determines that a significant health hazard exists to the public, the Health
Officer may require appropriate measures and the Permittee shall implement such measures to
mitigate the health hazard. If the hazard to the public is determined to be imminent, such measures
may be imposed immediately and may include temporary suspension of permitted activities, the
measures imposed by the County Health Officer shall not prohibit the Permittee from requesting a
special Planning Commission meeting, provided Permittee bears all related costs.

1
2
3
4
5
6
7
8
9
10
11
12
13
14
15
16
17
18
19
20
21
22
23
24
25
26
27
28

G-20 APPROVALS AND CONDITIONS SUBSEQUENT TO GRANTING PERMIT:

Permittee acceptance of this permit shall be deemed to constitute agreement with the terms and conditions contained herein.

- Where requirements are imposed in this permit that Permittee shall conduct monitoring and where the County has reserved the right to impose or modify conditions with which the Permittee must comply based on data obtained therefrom.
- Where Permittee is required to prepare specific plans for County approval and disagreement arises, the Permittee, operator and/or agent, the Planning Director or other affected party, to be determined by the Planning Director, may request that a hearing be conducted before the Planning Commission whereby they may state the requirements which will implement the applicable conditions as intended herein. Upon receipt of a request, the Planning Commission shall conduct a hearing and make a written determination. The Planning Commission may request support and advice from a technical advisory committee. Failure to take any action shall constitute endorsement of staff's determination.

G-21 CHANGE OF OWNER/OPERATOR:

In the event the ownership of the site or the operation of the site transfers from the current Permittee to a new successor Permittee, the successor Permittee shall be bound by all terms and conditions of this permit as if said successor was the original Permittee. Current Permittee shall inform the County Planning and Development Services Department in writing at least 60 days prior to any such transfer. Failure of a notice of change of ownership or change of operator shall be grounds for the immediate revocation of the CUP. In the event of a change, the new Owner/Operator shall file with the Department, via certified mail, a letter stating that they are fully aware of all conditions and acknowledge that they will adhere to all. If this permit or any subservient or associated permit requires financial surety, the transfer of this permit shall not be effective until the new Permittee has requisite surety on file. Furthermore existing surety shall not be released until replacement surety is accepted by County. Failure to provide timely notice of transfer by Permittee shall forfeit current surety.

G-22 COMPLIANCE WITH ORDINANCE:

Permittee is aware of, has been provided a current copy of and has agreed to be bound by and maintain compliance with the "Communications Ordinance", being Title 9, Division 24 of the County's codified ordinances.

(The remainder of this page is intentionally left blank)

1 **CUP #21-0020 GEOTHERMAL POWER PLANT FACILITY :**

2
3 **SITE SPECIFIC CONDITIONS:**

4 **S-1 AUTHORIZED SCOPE OF ACTIVITIES:**

5 The Permittee is authorized to construct and operate the following facilities in compliance with the
6 County's General Plan, Renewable Energy and Transmission Element, Land Use Ordinance, CUP
7 application and all other applicable local, state, and federal laws, ordinances, regulations and
8 standards (LORS):

9 The Proposed Project is the construction and operation of a geothermal power facility (HKP1) and
10 commercial geothermal mineral extraction and production plant (HKL1) within the Salton Sea
11 geothermal field in Imperial County (County), California (Project). HKP1 involves the development of
12 a geothermal power plant that will produce up to 49.9 megawatts (MW) net of geothermal power.
13 The Proposed Project would consist of the following activities:

- 14 • Construction and operation of a 49.9 MW geothermal power plant;
- 15 • Construction of well pads with geothermal production and injection wells;
- 16 • Construction of pipelines between HKP1 and HKL1 to facilitate the movement of brine
17 between the facilities;
- 18 • Construction of ingress and egress to the Project site from Davis Road;
- 19 • Paving of Davis Road from McDonald Road to Noffsinger Road (approximately 2 miles);
- 20 • Construction of a 230-kV gen-tie line and collocated power line (approximately 2 miles south)
21 ultimately deeding this gen-tie line and its appurtenances to the Imperial Irrigation District for
22 operation; and
- 23 • Construction of shared administrative facilities, offices, repair facilities, shipping and receiving
24 facilities, and other infrastructure components.
- 25 • On June 14, 2017, the County authorized Geothermal CUP #16-0001, which allowed
26 construction of up to four well pads as well as drilling and maintenance of up to six
27 separate geothermal exploratory wells on the Project site. A well pad, Well Pad 1,
28 north of Alcott Road and west of Davis Road, and two geothermal wells were
constructed on the site in 2021. Rough grading for Well Pad 3, south of Noffsinger
Road and east of Davis Road began in November 2021. The remaining Project site
is undeveloped..

24 **Structures:**

25 The HKP1 will include construction of the following structures:

- 26 • Production and injection wells and well pads.
- 27 • Geothermal fluid production and injection pipelines
- 28 • A brine processing facility
- A brine pond
- 49.9 MW net geothermal turbine generator facility
- A cooling tower
- Material equipment and storage

- 1 • A control building
- 2 • Administrative and warehouse buildings
- 3 • A water storage pond and water storage tank
- 4 • An on-site substation
- 5 • A 230-kV gen-tie line to the IID interconnect station

6 Implementation of these project(s) requires an approval of Conditional Use Permit(s) and Variance(s) to allow for the construction and operation of the proposed 49.9MW net geothermal power plant and mineral extraction and processing facility.

7 **S-2 AESTHETICS:**

8 The Permittee shall design and maintain all permanent structures to be harmonious in appearance and compatible with the approved landscaping plans for screening and restoration of laydown areas, facility painting/treatment plan and lighting plan.

9 Permittee shall install a six (6) foot (minimum) perimeter security fence. Landscaping will be installed between the fence and the public roadway along the frontage of the property with special attention at the entrance. The landscaping will need design approval from the Imperial County Planning & Development Services Department prior to installation.

13 **Site Abandonment Plan:**

14 Prior to the first building permit being issued, Hell's Kitchen PowerCo 1 LLC shall submit to the County of Imperial Planning & Development Services Department, a Site Abandonment Plan to return the property to its previous condition. The first building permit shall be exclusive of a temporary electrical permit or the grading permit.

15 The Site Abandonment Plan shall include a reclamation cost estimate prepared by a California-licensed general contractor or civil engineer. Permittee shall provide financial assurance/bonding in the amount equal to the reclamation cost estimate to restore the site to its pre-construction condition including removal of all structures and equipment, soil testing for and clean-up of contaminants in the soil and any other clean up and repair necessary to return the land to its previous condition within 180days of the first building permit being issued. The term "building permit" shall not include a temporary power permit or a grading permit.

22 **S-3 AGRICULTURE:**

23 **Agricultural Commission Conditions:**

24 The Project shall:

- 25 • Monitor for all pests including insects, vertebrates, weeds, and pathogens. Promptly control or eradicate pests when found, or when notified by the Agricultural Commissioner's office that a pest problem is present on the project site. A qualified applicator or a licensed pest control operator must perform all treatments.
- 26 • "Control" means to reduce the population of common pests below economically damaging levels, and includes attempts to exclude pests before infestation, and

1 effective control methods after infestation. Effective control methods may include
2 physical/mechanical removal, biocontrol, cultural control, or chemical treatments.
3 • Allow access by Agricultural Commissioner staff for routine visual and trap pest
surveys, compliance inspections, eradication of exotic pests, and other official duties.

Reimbursement:

- The project shall reimburse the Agricultural Commissioner's office for the actual cost of investigations, inspections, or other required non-routine responses to the site that are not funded by other sources if the investigation shows that the Permittee created the problem alleged in the complaint.

S-4 AIR QUALITY:

7 The project site shall comply with the Imperial County APCD (ICAPCD) Rule VIII regulations
8 for compliance with the following measures:

Obtain Authority to Construct (ATC) and Permit to Operate (PTO):

10 The Project shall submit, in a timely manner, an application for an Authority to Construct
11 (ATC) and an application for a Permit to Operate (PTO) to the ICAPCD prior to any
12 construction and operation of the Project as required by Rule 207, New and Modified Source
13 Review. The Project shall comply with all review design conditions contained in the
14 ATC/PTO including but not limited to plant design, which shall include a system that controls
15 emissions assuring compliance with Federal and State standards, testing and verification
requirements. All harmful and noxious odors shall be controlled according to the ATC/PTO
conditions to ensure that quantities released because of plant operations do not exceed
Federal or State standards.

16 The Project will be required to comply with all offset requirements in the event that potential
17 emissions exceed Rule 207 thresholds.

18 Permittee shall submit two dust control plans. The first dust control plan shall be the
19 "Construction" Dust Control Plan and shall be submitted to and approved by the ICAPCD
20 prior to issuance of any construction permit. The second dust control plan shall be an
21 "Operational" Dust Control Plan and shall be submitted to and approved by the ICAPCD
22 prior to the start of operations. Both Dust Control Plans shall identify existing and potential
sources of fugitive PM 10 and shall identify the mitigation measures, which shall be applied
to maintain visible dust emissions below 20% opacity and where applicable, provide
evidence that the area is stabilized.

23 NOx Controls, the project shall comply with all applicable standard mitigation measures for
24 construction combustion equipment for the reduction of excess NOx emissions:

- 25 a. Utilize all Tier 3 or Tier 4 construction equipment;
- 26 b. Prohibit idling of equipment not in use; for equipment in use reduce idling time to a
27 maximum of 5 minutes;
- 28 c. Where feasible replace fossil fuel burning equipment with electrically driven
equivalents provided they are not powered via a portable generator;
- d. Register all portable engines 50 horse power or greater with the ICAPCD;

- 1 e. Submit to the ICAPCD prior to any earthmoving activity a complete list of all
2 construction equipment to be utilized during the construction phase identifying Make,
3 Model, Year, Horsepower, estimated hours of usage per equipment and total number
of each piece of equipment.

4 The project shall also apply enhanced dust control plan with measures to assure reduced
5 levels of NOx are maintained during the construction phase of the project: In the event, NOx
6 emissions are calculated to exceed ICAPCD thresholds for construction; the Permittee shall
7 provide for "offsite" mitigation or comply with Policy number 5. Policy number 5 allows a
project to pay in-lieu impact fees utilizing the most current Carl Moyer Cost Effective
methodology to reduce excess NOx emissions.

- 8 a. A construction Equipment List in Excel format detailing the equipment type, make,
9 model, year horsepower, hours of daily operation, date arrived onsite, and date
removed from site must be submitted to the Air District on a regular basis.
10 b. Formal written notification must be given to the Air District 10 days prior to the start of
construction.
11 c. Any generator greater than 50 brake horsepower must be permitted through the
12 Permitting and Engineering.
13 d. Watering must be performed continuously at all times on all roadways with record
keeping to document such.
14 e. Reduced speed for all vehicle types not to exceed 40 mph on paved surfaces/roadways
and no more than 15 mph on unpaved surfaces/roadways.

15
16 **S-5 BIOLOGICAL RESOURCES:**

17 In order to minimize potential impacts to burrowing owl, the following shall be implemented
18 prior to and during construction activities:

19 **BIO-1:** The Applicant shall ensure that prior to and during construction, onsite occupied
burrows shall be avoided during nesting season (February 1 through August 31).

20 **BIO-2:** The Applicant shall conduct a preconstruction survey within 30 days of ground-
21 breaking activities to identify any burrowing owls on site.

22 **BIO-3:** If burrowing owls are found within the Project site, a Burrowing Owl Mitigation Plan
23 must be prepared by a qualified biologist and approved by CDFW prior to any ground-
disturbing activities.

24 **BIO-4:** The construction or site manager shall ensure that no construction occurs within 250
25 feet of the artificial burrows or other active or occupied burrows unless active or occupied
burrows are sheltered with hay bales and monitored by a qualified biologist; if this is done,
26 work may occur within 20 feet of active or occupied burrows. If qualified biologists observe
burrowing owls' agitation, work in the vicinity will stop. Additional shelter materials can be
27 added until burrowing owls remain calm during construction activities.

1 BIO-5: If passive relocation is required, it shall be done by a qualified biologist from
2 September 1 to January 31 and will follow the CDFW Staff Report on Burrowing Owl
3 Mitigation Guidelines (CDFW 2012).

4 **S-6 CONSTRUCTION STANDARDS:**

5 The geothermal and other structures shall be built in accordance with the County Building
6 Code requirements applicable to "Seismic Category D". All structures and facilities shall be
7 designed in accordance with the publication entitled "Recommended Lateral Force
8 Requirements and Commentary by the Structural Engineers Association of California". The
9 structural components of the permitted facilities shall be reviewed by the County Building
10 Official/Planning Director. Building permits shall be procured for all non-electric utility
11 facilities from the County prior to commencement of any construction.

12 **S-7 EMERGENCY RESPONSE PLAN (ERP):**

13 An Emergency Response Plan shall be prepared covering possible emergencies, e.g. blow-
14 outs, major fluid spills, earthquakes, fires, floods and other foreseeable accidents and
15 emergencies. At all times, there shall be at least one employee either on the facility premises
16 or on call (i.e., available to respond to an emergency by reaching the facility within a short
17 period of time) with the responsibility of coordinating all emergency response measures.
18 This Emergency Coordinator shall be thoroughly familiar with all aspects of the facility's
19 Emergency Response Plan, all operations and activities at the facility, location of all records
20 within the facility and the facility layout. This person shall have the authority to commit the
21 resources needed to carry out the contingency plan to include appropriate first aid provisions
22 during project construction and operation with appropriate first aid training for Project
23 employees. Adequate personnel and equipment shall be available to respond to
24 emergencies and to insure compliance with the conditions of the permit.

25 (a) The Emergency Response Plan shall be prepared in consultation with, but not be
26 limited to, the Regional Water Quality Control Board (RWQCB), Imperial County Office of
27 Emergency Services, and local emergency service agencies, and other appropriate state
28 and county agencies and shall include information useful in combating the emergency. The
Plan shall be available on-site, and provided to agencies responsible for preparing for and
addressing emergencies, on request. The plan shall include a notification list of response
agencies which shall be notified immediately upon the discovery of a reportable
unauthorized discharge and the list shall include: Imperial Fire/Office of Emergency
Services, Planning & Development Services Department, Environmental Health
Services/Health Department, RWQCB, Imperial Irrigation District (IID), Department of Public
Works (DPW), Sheriff's office, as applicable.

29 (b) A Hazardous Materials Business Plan shall be prepared and be submitted to
30 the Certified Unified Program Agency, Imperial County Hazardous Materials/Waste Unit and
31 shall be maintained by the Permittee. The Permittee shall provide adequate safety devices
32 against the hazard of fire and explosion for activities that involve the use and storage of
33 flammable, explosive or highly corrosive or reactive materials as well as adequate fire-
34 fighting and fire suppression equipment and devices standard in the industry with
35 compliance with applicable state and local laws as determined by the Imperial County Fire
36 Chief.

1 (c) The Permittee shall meet all NFPA requirements, and also submit an
2 Engineer-certified (California-licensed Engineer) fire suppression/protection plan to the
3 Imperial County Fire/OES Department, prior to issuance of a building permit.

4 All designated employees shall be provided with communication devices, cell phones or
5 walkie-talkies, in the event of an emergency situation on-site.

6 **S-8 FIRST AID:**

7 Appropriate first aid provisions for facility operations shall be made for emergency response
8 during project construction and operation with appropriate first aid training for project
9 employees. During construction, a member of each working crew shall be trained in basic
10 first aid and supplied with necessary medical equipment to respond to emergencies as
11 provided for in the Emergency Response Plan required hereinabove.

12 **S-9 GEOTECHNICAL:**

13 The Permittee shall conduct applicable on-site geotechnical investigations of soil
14 characteristics affecting the permitted facilities by qualified persons at the Permittee's
15 expense and any soil reports shall be made available to the County.

16 **S-10 GEOLOGY & SOILS & GEOLOGIC HAZARDS:**

17 All grading operations and construction shall be conducted in conformance with the
18 recommendations included in the Preliminary Geotechnical Report on the Project site that
19 has been prepared by Land-Mark Geo-Engineers and Geologists (Land-Mark) in August
20 2020. Design, grading, and construction shall be performed in accordance with the
21 recommendations of the project geotechnical consultant as summarized in a final written
22 report, subject to review by the County, prior to commencement of grading activities.

23 **S-11 HAZARDS & HAZARDOUS MATERIALS:**

24 A comprehensive Hazardous Materials Business Plan shall be prepared for the project in
25 accordance with the California Accidental Release Prevention Program. The Hazardous
26 Materials Management Plan (HMMP) shall include (1) an Inventory and Site Map, (2) an
27 Emergency Response Plan (ERP) and Owner/Operator Identification, and (3) employee
28 training.

The HMMP will be prepared and submitted to the California Department of Toxic Substances
Control (DTSC), as the Certified Unified Program Agency (CUPA) for Imperial County. The
HMMP will be maintained and revised as necessary.

The DTSC ICUPA understands that you are conducting a business in Imperial County (Email
from Nyein Aung/Roger Vintze, DTSC Imperial CUPA, dated May 8, 2014)

California Health and Safety Code, Chapter 6.95, Section 25500 requires you to establish
an implement Hazardous Materials Release Response Plan and Inventory (Business Plan)
for emergency response to any hazardous material mishap, if at any one time your facility
handles a hazardous waste in quantities equal to or greater than 55 gallons for liquids, 500

1 pounds for solids, and 200 cubic feet for compressed gases. With the passage of Assembly
2 Bill (AB) 408 on October 8, 2011, the inventory reporting quantities were changed as follows:

3 For a solid or liquid hazardous material that is classified as a hazard solely as an irritant or
4 sensitizer, the new reporting quantity is 5,000 pounds;

5 For a hazardous material that is a gas, at standard temperature or pressure, and for which
6 the only health and physical hazards are simple asphyxiation and the release of pressure,
7 the new reporting quantity is 1,000 cubic feet (Reporting of gases in a cryogenic state
8 remains unchanged);

9 For oil-filled electrical equipment that is not contiguous to an electrical facility, the new
10 reporting quantity for the oil is 1,320 gallons. Moreover, if you generate, store or handle any
11 amount of hazardous waste at any one time must report to DTSC ICUPA and register for
12 hazardous waste generator program.

13 **S-12 LAND USE:**

14 The Permittee shall prepare an appropriate parking plan for the permitted facilities and any
15 signs shall require compliance with the Land Use Ordinance provisions and provide the
16 necessary laydown/staging areas for permitted facilities.

17 **S-13 HYDROLOGY AND WATER QUALITY:**

18 The Permittee shall furnish a Drainage and Grading Plan/Study to provide for property
19 grading and drainage control, which shall also include prevention of sedimentation of
20 damage to off-site properties. The Study/Plan shall be submitted to the Department of
21 Public Works for review and approval. The Permittee shall implement the approved plan.
22 Employment of the appropriate Best Management Practices (BMP's) shall be included.
23 Implementation of a SWPPP:

24 The project could violate water quality standards or waste discharge requirements unless
25 mitigated as follows:

- 26 1. Prior to the issuance of grading permits, Permittee shall obtain coverage under the
27 SWRCB's General Permit for Stormwater Discharges Associated with Construction
28 Activity Permittee shall prepare a SWPPP to be administered during grading and
Project construction. The SWPPP must contain BMPs and construction techniques
accepted by the County for use in the Project area at the time of construction that
meet the technical standards of the General Construction Permit to ensure that
potential water quality impacts (including on- and off-site erosion) during construction
phases are minimized, that shall reduce the potential for runoff, and the release,
mobilization, and exposure of pollutants from the construction area, and that no water
quality standards are violated.
1. The SWPPP must address spill prevention and include a countermeasure plan
describing measures to ensure proper collection and disposal of all pollutants
handled or produced on the site during construction, including sanitary wastes,
cement, and petroleum products. Countermeasures may include measures to
prevent or clean up spills of hazardous waste and of hazardous materials used for
equipment operation, and emergency procedures for responding to spills. BMPs

1 included in the SWPPP must be consistent with the California Stormwater Best
2 Management Practices Handbook for Construction.

- 3 3. The SWPPP must be submitted to California RWQCB CRB and Imperial County for
4 review prior to the issuance of grading permits.
- 5 4. The SWPPP shall identify and specify the pollutants that are likely to be used during
6 construction that could be present in stormwater drainage and non-stormwater
7 discharges, including fuels, lubricants, and other types of materials used for
8 equipment operation and the means of waste disposal.
- 9 5. The SWPPP shall specify personnel training requirements and procedures that shall
10 be used to ensure that workers are aware of permit requirements and proper
11 installation methods for BMPs specified in the SWPPP.
- 12 6. The SWPPP shall also specify the appropriate personnel responsible for supervisory
13 duties related to implementation of the SWPPP.
- 14 7. Permittee shall file a Notice of Intent with the SWQCB to comply with the NPDES
15 General Stormwater Permit and prepare a SWPPP that meets the
16 Linear/Underground Overhead provisions in Attachment A of the General Permit.
- 17 8. A copy of the approved SWPPP(s) shall be maintained and available at all times on
18 the construction site(s).

12 **S-14 POTABLE WATER TREATMENT PLANT:**

13 Permittee shall provide potable water meeting California state standards. At a minimum this
14 includes obtaining a State Domestic Water Supply Permit for a non-transient non-community
15 public water system through the Imperial County Public Health Department (ICPHD).
16 Permittee under CUP #21-0020 may provide potable water under one of the following
17 options:

- 18 (a) The Hell's Kitchen Power Plant would expand its water system, located within the
19 footprint of this property, to provide water for both facilities;
- 20 (b) Hell's Kitchen PowerCo 1 and LithiumCo 1 facilities would form a separate corporate
21 entity to provide potable water to both plants. Under this option, the water treatment
22 system would be expanded to provide potable water to both facilities,
- 23 (c) Hell's Kitchen PowerCo 1 and LithiumCo 1 would form a special district, which then
24 can provide potable water to anyone within that district. Formation of the "special
25 district" would require approval from the Imperial County Local Agency Formation
26 Commission (LAFCO)
- 27 (d) Hells Kitchen PowerCo 1 would build a water treatment facility for the facility on the
28 Permittee property.

26 **S-15 ODOR CONTROL:**

27 The Permittee shall control hydrogen sulfide and other non-condensable emissions to
28 insure that quantities released do not exceed the mandatory standards. The Permittee
shall control all harmful or noxious emissions and the odors shall be controlled to insure
that quantities or air contaminants released as a result of the permitted facilities do not
exceed State or Federal standards.

1
2 **S-16 OPERATIONS:**

3 Permittee shall have a responsible agent on-site whose name, title, e-mail address and
4 telephone number (office & cell #'s) shall be provided to the CUPA (Imperial County
5 Hazardous Materials/Waste Unit), Department of Toxic Substances Control, County
6 Department of Public Works, County Fire/OES Department, County Environmental Health
7 Services/Health Department, Sheriff's Department and the County Planning & Development
8 Services Department.

7 **S-17 PERMITS:**

8 Except as specifically authorized in this permit, separate permits shall be required for any
9 supplemental activities required to operate the geothermal facility .

10 **S-18 PROJECT DESIGN:**

11 The following shall be the Project design:

12 (a) Construction and maintenance activities relating to the brine pipelines to and
13 from the geothermal resource shall be coordinated.

14 (b) All facility access on public rights-of-way and visitor parking areas within the
15 plant site shall be constructed to standards approved by the ICPDSD and/or DPW.

16 (c) Shrubs, trees and ground cover shall be planted and maintained to compliment
17 the appearance of permitted facilities, in accordance with any landscaping plan approved by
18 the County Planning and Development Services Department. The exterior finish of building
19 materials shall be painted an earth tone color to blend into the background. Exterior finishes
20 shall be limited to non-reflective materials such as concrete, masonry, or stucco, though
21 metal or synthetic wall panels with similar appearance to the aforementioned materials may
22 also be acceptable as determined by the Planning and Development Services Department.

23 (d) All equipment, pipes, tanks and lines used at the geothermal facility to handle,
24 transfer or pump geothermal fluids and on-site hazardous materials shall be maintained in
25 a manner that prevents leaking and spilling, e.g. effective performance, adequate funding,
26 operator staffing and training, and adequate laboratory and process controls, including
27 appropriate quality assurance procedures, with the operation of back-up or auxiliary facilities
28 when necessary to achieve compliance with the permit conditions.

(e) The facility shall be designed not interfere with the irrigation and drainage
pattern, and shall comply with the requirements and regulations of the Imperial Irrigation
District.

(f) All permanent sumps, brine ponds, waste holding ponds, and any other pond,
shall be designed and constructed to meet sound engineering standards and the regulations
and requirements of the RWQCB under the supervision of a California-licensed Civil
Engineer.

1 (g) Prior to site restoration and abandonment, it shall be the Permittee's
2 responsibility to comply with all regulations of the County and state, including the purging of
3 on-site brine ponds when the project ceases, salts removed from the dikes and bottoms and
4 the berms then leveled to the satisfaction of the landowners and the County Planning and
5 Development Services Department.

6 (h) Permittee shall utilize and comply with applicable California Building Code
7 requirements for the geothermal plant and related power distribution lines.

8 **S-19 RETURN OF SPENT BRINE:**

9 Any processed brine that is not used by Hell's Kitchen LithiumCo 1 shall be sent back to the
10 Hell's Kitchen PowerCo 1 Geothermal Plant.

11 **S-20 SPILLS AND RUNOFF:**

12 The Permittee shall design and construct the permitted facilities to prevent spills from
13 endangering adjacent properties and waterways, and to prevent runoff from any source
14 being channeled or directed in an unnatural way so as to cause erosion, siltation, or other
15 detriments. The plant site shall be graded and constructed so that all spills shall drain into
16 the on-site ponding areas.

17 **S-21 SYSTEM CLOSURE AND SITE RESTORATION:**

18 The Permittee shall comply with all closure requirements and site restoration, when
19 operation of the permitted facilities herein authorized has ceased. All plant facilities shall be
20 dismantled, all brine pipelines and related facilities shall be demolished and the site restored
21 as required by the County and the land involved be made compatible with the surrounding
22 uses or as requested by the landowner and as agreed to by the County Planning Director.
23 In the event that some structures are still viable for a permitted use on-site, such as the
24 manufacturing facilities, office, warehouse, and maintenance shop or other potentially
25 usable structures, the structures may remain on-site if the Permittee and landowner so
26 request and Planning Director so approves.

27 **S-22 TRANSPORTATION AND CIRCULATION:**

28 In order to prevent traffic delays related to the Project, the Applicant shall comply with
mitigation measures as listed in the Certified EIR.

A Commute Trip Reduction (CTR) program shall be implemented to discourage single-
occupancy vehicle trips and encourage alternative modes of transportation such as
carpooling, taking transit, walking, and biking. The CTR program could include features such
as carpooling encouragement, ride-matching assistance, preferential carpool parking, half-
time transportation coordinator, vanpool assistance, and bicycle end-trip facilities (parking,
showers, and lockers) and provide employees with assistance in using alternative modes of
travel.

S-23 WATER CONSERVATION:

1 The Permittee shall consult with the Imperial Irrigation District and comply with the approved
2 water contract. If the IID does not receive its annual 3.1 maf water apportionment according
3 to the QSA obligations of Colorado River water during the Project's 30-year lifespan, the
4 Applicant shall work with IID to ensure any reduction in water availability can be managed
5 by the Project.

6 **S-24 WATER FACILITIES:**

7 The Permittee shall obtain and comply with applicable General NPDES Permit for
8 Discharges of Water Associated with Construction and Waste Discharge Requirements for
9 permitted facilities as well as developing and implementing an applicable Storm Water
10 Pollution Prevention Plan for the facilities. The Permittee shall prepare and implement a
11 Drainage, Erosion and Sedimentation Control Plan relating to the permitted facilities.

12 **S-25 WASTE DISPOSAL:**

13 The Permittee shall insure that all wastes, liquid or solid, shall be disposed in compliance
14 with appropriate local, state, and federal regulations, in effect or subsequently duly and
15 legally enacted.

16 (a) Any discharge of wastes into surface water shall meet all requirements of the
17 Regional Water Quality Control Board, e.g. National Pollution Discharge Elimination System
18 permit restrictions to include a water quality monitoring program as approved by applicable
19 law.

20 (b) All solid wastes shall be disposed of in any approved solid waste disposal site
21 in accordance with County, State and Federal regulations. However, nothing herein is
22 intended to define any portion of the geothermal brine resource as a waste or to prohibit the
23 extraction of resources from spent geothermal brine or materials for useful purposes as
24 either allowed herein or later applied for and approved.

25 **S-26 SALES TAXES BENEFIT**

26 **SALES TAX ALLOCATION REQUIREMENT.**

27 To the extent permitted by applicable law, Developer will require that all qualifying
28 contractors and subcontractors exercise their option to obtain a California Department of
Tax and Fee Administration ("CDTFA") sub-permit for the jobsite and allocate all eligible
sales and use tax payments to County and the Local Transit Authority ("LTA"). Prior to
commencement of any construction activity on-site, Developer shall require that the
contractor or subcontractor provide County with a copy of their CDTFA account number and
sub-permit. Developer shall either cause its construction contractor to treat the Project in
accordance with California Sales and Use Tax Regulation 1521(b)(2)(B), California Sales
and Use Tax Regulation 1521(c)(13)(B), and California Sales and Use Tax Regulation
1826(b) for sales and use tax purposes, or form a "Buying Company" as defined in the
California Sales and Use Tax Regulation 1699(h). Developer may adopt an alternate
methodology to accomplish this goal if such methodology is approved by the County's
Executive Officer prior to issuance of any building permit. No later than forty-five (45) days after
the due date for filing sales and use tax returns for each calendar quarter, occurring after
the commencement of any construction activity on-site through including the first

1 anniversary of commercial operating date ("COD"), developer shall report, or cause its
2 general contractor to report to County, the total amount of sales and use taxes related to the
3 Project that are allocated to the County, and reported on Developer's, general contractor's
and subcontractors' applicable California sales and use tax returns.

4 Should Developer become aware of a change in circumstances that would materially
5 affect the sales/use tax allocation requirement, then Developer shall, within forty-five (45)
6 days of learning of such change in circumstances, inform the County in writing of the change
7 in circumstances. If the County determines that such change in circumstances warrants an
8 adjustment to the sales/use tax allocation requirement, then County shall negotiate in good
9 faith with Developer in revising the sales/use tax allocation requirement. If the Parties are
unable to agree upon a revised allocation, then the dispute shall be referred to an
independent accountant mutually acceptable to both Parties. The costs for such nonbinding
mediation shall be borne by Developer. Failure of the Developer to inform the County of the
change in circumstances shall constitute a waiver of Developer's ability to seek any
adjustment to the sales/use tax allocation based on such change in circumstances

11 The complete sales / use tax allocation amount due to County and LTA for the Project must
12 be received within one (1) year after COD for this Project, or such later date as any
13 applicable sales / use tax is due or is transmitted from the CDTFA, unless it is delayed due
14 to causes beyond Developer's control or for which Developer is not responsible. If, within
15 one (1) year after issuance of the final certificate of occupancy, or such later date as any
applicable sales / use tax is due or is transmitted from the CDTFA, the sales / use taxes
received by the County are less than the sales / use tax allocation amounts mandated under
paragraph B, then Developer shall pay the difference to the County.

16 Payments to County and LTA as a result of a shortfall shall be due within forty-five (45)
17 calendar days of Developer's receipt of written notice of shortfall from the County.

18 Failure to make such payment within the forty-five (45) day timeframe shall be considered a
19 default pursuant to section VI paragraph Q. of this Agreement, and may lead to termination
20 of this Agreement. Developer hereby agrees to pay interest at the rate of six percent (6%)
21 per annum of the payment due for any payment received by County beyond the forty-five
22 (45) day due date. The obligation to pay interest shall survive the termination of this
23 Agreement. The obligation to pay interest shall be stayed for up to thirty (30) calendar days
24 when such amounts are disputed in good faith, so long as Developer submits the payments
25 "under written protest" with a complete explanation of the reasons for the protest. Upon
26 resolution of the protested payment, such late charges may be assessed if it is determined
27 by County that the dispute was not made in good faith.

28 Repeated protests of the same point rejected in a prior protest shall be considered a protest
in bad faith. Any such payments later found not to be due by Developer shall be refunded
by County promptly, and in all events within thirty (30) calendar days after the determination
of the amounts owing is made.

In the event that Developer repowers or replaces the equipment onsite, to the extent
permitted under then applicable law, each site shall be designated as the "point of sale" so
as to create an additional local tax-funding source for the County of Imperial.

1. Hell's Kitchen PowerCo 1 LLC shall be the master developer and shall be responsible as for all improvements, septic, water plant, roads and other

1 improvements, Conditional Use Permit Application and CUP Conditions, EIR, and
2 MM&RP.

- 3 2. If Hell's Kitchen PowerCo 1, LLC sells all or part of this project, an approved
4 agreement shall be in place for new owner to build and maintain as agreed to by the
5 previous conditions. The Planning and Development Services Director shall approve
6 of any agreement between permittee and a new master developer.

6 **S-27 DURATION OF THIS PERMIT:**

7 The time limit under condition G-10 shall allow for the plant to be constructed and the 30
8 years shall commence upon issuance of the Certificate of Occupancy and/or the official
9 starting date of commercial operations, whichever is later.

9 **S-28 JOINT USE FACILITIES:**

10 Permittee may construct and/or operate certain facilities within the project area of both the
11 Hell's Kitchen PowerCo 1 LLC and Hell's Kitchen LithiumCo 1 LLC projects that are of a
12 common use, including but not limited to the storm-water retention basin, the wastewater
13 treatment system, and/or the potable water treatment system. Additionally, Permittee may
14 construct connection, interconnection and/or return lines, including communication, power
15 and control systems, between the projects, which may be necessary and incidental to the
16 operation of the facilities.

15 **Additional Conditions**

16 **PALEO-1:** The Applicant shall retain the services of a Qualified Paleontologist and require
17 that all initial ground- disturbing work be monitored by someone trained in fossil identification
18 in monitoring contexts. The Qualified Paleontologist shall prepare a Paleontological
19 Resource Mitigation Plan to be implemented during ground- disturbing activity for the
20 proposed Project. This program should outline the procedures for paleontological
21 monitoring, including extent and duration; protocols for salvage and preparation of fossils;
22 and the requirements for a final mitigation and monitoring report. The Qualified
23 Paleontologist and a paleontological monitor shall be present at the Project construction-
24 phase kickoff meeting.

22 **PALEO-2:** Prior to commencing construction activities and, thus, prior to any ground
23 disturbance in the Proposed Project site, the Qualified Paleontologist and paleontological
24 monitor shall conduct initial Worker Environmental Awareness Program (WEAP) training to
25 all construction personnel, including supervisors, present at the start of the Project
26 construction work phase, for which the Applicant, or their designated Contractor, and all
27 subcontractors shall make their personnel available. This WEAP training will educate
28 construction personnel on how to work with the monitor(s) to identify and minimize impacts
29 to paleontological resources and maintain environmental compliance, and it shall be
30 performed periodically for new personnel coming on to the Project as needed.

27 **PALEO-3:** The Applicant, or their designated Contractor, shall provide the Qualified
28 Paleontologist with a schedule of initial potential ground-disturbing activities. A minimum of
48 hours will be provided to the consultant prior to the commencement of any initial ground-
disturbing activities, such as vegetation grubbing or clearing, grading, trenching, or mass

1 excavation. As detailed in the schedule provided, a paleontological monitor shall be present
2 on-site at the commencement of ground-disturbing activities related to the Project. The
3 monitor, in consultation with the Qualified Paleontologist, shall observe initial ground-
4 disturbing activities and, as they proceed, make adjustments to the number of monitors as
5 needed to provide adequate observation and oversight. All monitors will have stop- work
6 authority to allow for recordation and evaluation of finds during construction. The monitor
7 will maintain a daily record of observations as an ongoing reference resource and to provide
8 a resource for final reporting upon completion of the Project.

9 The Qualified Paleontologist, paleontological monitor, and the Applicant, or their designated
10 Contractor, and subcontractors shall maintain a line of communication regarding schedule
11 and activity such that the monitor is aware of all ground-disturbing activities in advance to
12 provide appropriate oversight.

13 **PALEO-4:** If paleontological resources are discovered, construction shall be halted within
14 50 feet of any paleontological finds and shall not resume until the Qualified Paleontologist
15 can determine the significance of the find and/or the find has been fully investigated,
16 documented, and cleared.

17 **PALEO-5:** At the completion of all ground-disturbing activities, the Qualified Paleontologist
18 shall prepare a Paleontological Resources Monitoring Report summarizing all monitoring
19 efforts and observations, as performed, and any and all paleontological finds and shall
20 provide follow-up reports of any finds to the preferred paleontological repository, as required.

21 Rest of page is left intentionally blank

1
2
3
4
5
6
7
8
9
10
11
12
13
14
15
16
17
18
19
20
21
22
23
24
25
26
27
28

NOW THEREFORE, County hereby issues the Conditional Use Permit CUP #21-0020 and Permittee hereby accepts permit upon the terms and conditions set forth herein.

IN WITNESS THEREOF, the parties hereto have executed this Agreement the day and year first written.

PERMITTEE

Jim Turner, President

Date

COUNTY OF IMPERIAL, a political subdivision of the STATE OF CALIFORNIA

James A. Minnick, Director
Planning & Development Services

Date

1 **PERMITTEE NOTARIZATION**

2 A notary public or other officer completing this certificate verifies only the identity of the individual who signed the document to
3 which this certificate is attached, and not the truthfulness, accuracy, or validity of that document.

4 STATE OF CALIFORNIA

5 COUNTY OF _____ } S.S.

6
7 On _____ before me, _____ a
8 Notary Public in and for said County and State, personally appeared
9 _____, who proved to on the basis of
10 satisfactory evidence to be the person(s) whose name(s) is/are subscribed to the within
11 instrument and acknowledged to me that he/she/they executed the same in his/her/their
12 authorized capacity(ies), and that by his/her/their signature(s) on the instrument the
13 person(s), or the entity upon behalf of which the person(s) acted, executed the instrument.

14 I certify under PENALTY OF PERJURY under the laws of the State of California that the
15 foregoing paragraph is true and correct.

16 WITNESS my hand and official seal

17 Signature _____

18 ATTENTION NOTARY: Although the information requested below is OPTIONAL, it could
19 prevent fraudulent attachment of this certificate to unauthorized document.

20 Title or Type of Document _____

21 Number of Pages _____ Date of Document _____

22 Signer(s) Other Than Named Above _____

23 Dated _____

1 **COUNTY NOTARIZATION**

2 A notary public or other officer completing this certificate verifies only the identity of the individual who signed the document to
3 which this certificate is attached, and not the truthfulness, accuracy, or validity of that document.

4 STATE OF CALIFORNIA

5 COUNTY OF IMPERIAL} S.S.

6 On _____ before me, _____
7 a Notary Public in and for said County and State, personally appeared
8 _____, who proved to me on the
9 basis of satisfactory evidence to be the person(s) whose name(s) is/are subscribed to the
10 within instrument and acknowledged to me that he/she/they executed the same in
11 his/her/their authorized capacity(ies), and that by his/her/their signature(s) on the instrument
12 the person(s), or the entity upon behalf of which the person(s) acted, executed the
13 instrument.

14 I certify under PENALTY OF PERJURY under the laws of the State of California that the
15 foregoing paragraph is true and correct.

16 WITNESS my hand and official seal

17 Signature _____

18 ATTENTION NOTARY: Although the information requested below is OPTIONAL, it could
19 prevent fraudulent attachment of this certificate to unauthorized document.

20 _____
21 Title or Type of Document _____
22 Number of Pages _____ Date of Document _____
23 Signer(s) Other Than Named Above _____
24
25
26
27
28

Attachment H
Conditional Use Permit #21-0021 - Resolution

RESOLUTION NO.

A RESOLUTION OF THE BOARD OF SUPERVISORS OF THE COUNTY OF IMPERIAL, CALIFORNIA, FOR THE DENIAL OF APPEAL #23-0004 AND APPROVAL OF “CONDITIONAL USE PERMIT #20-0021” FOR THE HELL’S KITCHEN LITHIUMCO 1, LLC PROJECT.

WHEREAS, Hell’s Kitchen LithiumCo 1, LLC submitted an application for Conditional Use Permit #21-0021 for the construction, operation, maintenance and decommissioning of a mineral extraction and production facility adjacent to a proposed geothermal flash power plant; and,

WHEREAS, an Environmental Impact Report and CEQA Findings have been prepared in accordance with the requirements of the California Environmental Quality Act, the State Guidelines, and the County’s “Rules and Regulations to Implement CEQA, as Amended”; and,

WHEREAS, the Planning Commission of the County of Imperial approved Conditional Use Permit #21-0021 at a regular scheduled public hearing on December 13, 2023, APNs

020-010-012	HKP1 and HKL1 Shared Facilities	S-1-G and S-2-G
020-010-013	HKP1 and HKL1 Shared Facilities	S-1-G
020-070-060	HKP1 and HKL1 Shared Facilities	S-1-G
020-010-042	Gen-Tie and Power Line	S-1-G
020-060-001	Gen-Tie and Power Line	S-1-G
020-060-002	Gen-Tie and Power Line	S-1-G
020-060-039	Gen-Tie and Power Line	S-1-G
020-060-040	Gen-Tie and Power Line	S-1-G
020-070-026	Gen-Tie and Power Line	S-1-G
020-070-025	Gen-Tie and Power Line	S-1-G
020-070-029	Gen-Tie and Power Line	S-1-G
020-070-055	Gen-Tie and Power Line	S-1-G
020-010-031	Gen-Tie and Power Line	S-1-G
020-010-032	Gen-Tie and Power Line	S-1-G
020-010-035	Gen-Tie and Power Line	M-2-G-PE
020-100-044	Gen-Tie and Power Line	M-2-G-PE

and project site is located approximately 3.8 miles Southwest of the Townsite of Niland; and,

WHEREAS, public notice of said application has been given, and the Board of Supervisors has considered evidence presented by the Imperial County Planning and Development Services Department and has heard, received and considered all oral and written protests, objections and evidence presented by interested parties at a public hearing held with respect to this item on January 23, 2024; and

WHEREAS, on August 30, 2023, the Draft EIR was submitted to the State Clearinghouse and circulated for 50+ days. All comments are due by October 23, 2023; and,

WHEREAS, Appeal #23-0004 was received from Comite Civico del Valle by the Planning & Development Services Department on Friday, December 22, 2023 requesting an appeal of the Planning Commission approval of the Hell's Kitchen Projects.

THEREFORE, the Board of Supervisors of the County of Imperial **DOES HEREBY RESOLVE** as follows:

SECTION 1. The Board of Supervisors has considered the appeal on the Planning Commission approval for Conditional Use Permit #21-0021 and prior to the consideration on appeal, the County's consideration of the project was noticed in compliance with the law.

SECTION 2. That the project complies with the requirements of the Imperial County Code and is in accordance with State Planning and Zoning law, therefore, the following findings are made pursuant to Imperial County Code §90203.09 as follows:

A. The proposed use is consistent with goals and policies of the adopted County General Plan. (Imperial County Code §90203.09. A)

The General Plan designates the subject site as "Agriculture" and the Renewable Energy and Transmission Element designates the subject site within one of the four Geothermal Overlay Zones that were approved previously by the County to be incorporated into the Renewable Energy Overlay Zone. The Land Use Ordinance, Division 17, authorizes the development and operation of renewable energy projects, including geothermal projects, within the Renewable Energy Overlay Zone with an approved Conditional Use Permit (CUP), the CUP is subject to the discretionary approval of the Imperial County Planning Commission. Additionally, an analysis of the project's consistency with the General Plan goals and objectives relevant to the project is provided in the Final EIR and the project is considered consistent with the applicable policies of the Final EIR.

The Board of Supervisors has also examined the relevant, applicable portions of the Imperial County General Plan's, *Land Use Element* and the *Geothermal/Alternative Energy & Transmission Element* and has determined that the *Land Use Element* provides that the evaluation and approval of non-agricultural uses on lands designated agriculture will occur through the implementation of zoning and the conditional use permit (CUP) review process. Further, the Land Use Compatibility Matrix in the ICGP provides that a conditionally compatible category could be found to be compatible when additional use restrictions can be included by use of an "overlay", the proposed project is within the Geothermal Overlay zone, therefore, pursuant to Land Use Ordinance, Section 91703.04, a geothermal project is permitted with approval of a Conditional Use Permit.

The County further finds that the project does not have a significant adverse effect on agricultural production. "...Significant adverse effect on agricultural production..." means a significant unmitigated impact, as defined under CEQA, to agricultural resources resulting from the permanent elimination of agricultural uses or resulting from removal agricultural land from the "Agricultural" land use category.

The proposed use provides a clear long term economic benefit to the County. The mineral extraction facility will provide economic growth to the region and economic benefit to the County and Goal 2 of the *Land Use Element* states that the County should "...[d]iversify employment and economic opportunities in the County while preserving agricultural activity..." the project shall create jobs and other economic opportunities in the County at a time of high County unemployment.

B. The proposed use is consistent with the purpose of the zone or sub-zone within which the use will be used. (Imperial County Code §90203.09.B)

The purpose of the project is for the construction of a mineral extraction facility using geothermal brine. The proposed project is zoned S-1-G (Open Space, Geothermal Overlay), S-2-G (Open Space/Recreation, Geothermal Overlay), and M-2-G (Medium Industrial, Geothermal Overlay). Pursuant to Title 9, Division 17, Section 91703.04, geothermal is a use permitted subject to approval of a CUP from the County. The purpose of the Geothermal Overlay zone is to designate areas that "...could be developed with any form of renewable energy technology, including geothermal production..." with an approved CUP. Therefore, the proposed use is consistent with the purpose of the zone or sub-zone within which the uses will be located.

C. The proposed use is listed as a use within the zone or sub-zone or is found to be similar to a listed conditional use according to the procedures of Section 90203.00. (Imperial County Code §90203.09.C)

Geothermal projects within the Renewable Energy Overlay Zone are listed as a use subject to a Conditional Use Permit in Land Use Ordinance Division 17, Section 91703.04. Production facilities for Geothermal Projects shall include, but are not limited to power plants, extraction plants, and separators (§91703.00.I). Therefore, the proposed mineral extraction and processing facility is consistent with the procedures of Section 90203.00.

D. The proposed use meets the minimum requirements of this Title applicable to the use and complies with all applicable laws, ordinances and regulation of the County of Imperial and the State of California. (Imperial County Code §90203.09.D)

The project complies with the minimum requirements of this Title by, among other things, obtaining a CUP, complying with the California Environmental Quality Act, and participating in the public review and hearing process. Development standards have been established for the Project pursuant to these processes, and will be enforced via imposition and enforcement of the Mitigation Monitoring and Reporting Program recommended for approval by separate Resolution, as well as the conditions of approval imposed on this CUP. The Conditions of Approval will further insure that the project complies with all applicable regulations of the County of Imperial and the State of California. Therefore, the proposed project will meet the minimum requirements of the Land Use Ordinance, Section 90203.00.

E. The proposed use will not be detrimental to the health, safety, and welfare of the public or to the property and residents in the vicinity. (Imperial County Code §90203.09.E)

The mineral extraction/production facility is not in near proximity to very large residential areas and are generally surrounded by open space including agricultural uses and IID managed marshlands to the north, east and south.

The closest residence is located approximately two+ miles to the northwest of the project site. A commercial algae production facility is located southeast of the site but is no longer in operation with a mobile home on-site. Noise associated with operation and maintenance would also meet the County's noise ordinance requirements at the project property lines. Further, the project's structural facilities,

with the exception of the overhead transmission lines would generally be below 55 feet in height. A variance was submitted for review and approval for structures over the thirty-five (35) height limit for S-1, S-2 and M-2 zones limits. The Environmental Impact Report prepared for the project analyzed the project's potential effects on the health, safety, and welfare of the public and property and found that, with mitigation, the Project has less than significant affects in all resource areas. Finally, the Permittee has agreed to conditions of approval that support and promote the protection of the health, safety, and welfare of the County's citizens and property, and ensures that the County will not be negatively impacted environmentally or fiscally.

F. The proposed use does not violate any other law or ordinance. (Imperial County Code §90203.09. F)

The proposed project will be subject to the Conditional Use Permit and current Federal, State and Local regulations. State Planning and Zoning Law (Cal. Govt. Code §§ 65000-66035) establishes minimum statewide standards for the regulation of local land use through planning and zoning. The County regulates local land use via Title 9 of the Imperial County Code. As found above, the proposed project is conditioned to be consistent with Imperial County, Title 9, Land Use Ordinance and CEQA mitigation measures and therefore complies with both State and local laws and ordinance. Pursuant to CEQA, the County has prepared an EIR for the Project, which EIR analyzes the Project's compliance and consistency with other federal, state, and local laws and ordinances regulating the environment. Substantial evidence supports the conclusions in the EIR that the project complies with said environmental laws. The County is aware of no other laws or ordinances that might be implicated by the Project, and thus the finds that the proposed use does not violate any other law or ordinance. The proposed project will be subject to the Conditional Use Permit and current Federal, State and local regulations.

G. The proposed use is not granting a special privilege. (Imperial County Code §90203.09.G)

The mineral extraction/production from geothermal brine is associated with the geothermal project and is compatible with the Geothermal Overlay Zone, Major Geothermal projects within the Renewable Energy Overlay Zone are a permitted use subject to approval of a Conditional Use Permit under Land Use Ordinance, Division 17, Section 91703.04 *et. seq.* and will not grant a special privilege.

SECTION 3. Approval of the Project are conditioned upon the terms and conditions set forth in the Agreement for Conditional Use Permit No. 21-0021, attached hereto and incorporated herein by this reference.

NOW, THEREFORE, based on the above findings, the Imperial County Board of Supervisors **DOES HEREBY DENY APPEAL #23-0004** and **APPROVE CONDITIONAL USE PERMIT #21-0021**, subject to the attached Conditions of Approval.

PASSED, ADOPTED AND APPROVED by the Board of Supervisors of the County of Imperial on this 23rd day of January 2024.

AYES:
NOES:
ABSENT:
ABSTAIN:

Luis A. Plancarte, Chairman
Imperial County Board of Supervisors

ATTEST: _____
BLANCA ACOSTA, Clerk of the
Board of Supervisors, County of
Imperial, State of California

S:\AllUsers\APN\020\010\012\HELLS KITCHEN POWER & LITHIUM\BS FOLDER\CUPs & RESOL\BOARD OF SUPERVISORS\RESOLUTION CUP 21 0021 on denial.docx

1 Recorded Requested By and
When Recorded Return To:

2 _____
Imperial County Planning & Development Services
3 801 Main Street
El Centro California 92243
4 _____

5
6 **AGREEMENT FOR CONDITIONAL USE PERMIT CUP #21-0021**
(Hell's Kitchen LithiumCo 1 LLC)
7 **(Approved at Board of Supervisors January 23, 2024)**

8 This agreement is hereby made and entered into on this _____ day of _____, by and
9 between Controlled Thermal Resources (US) Inc. via its subsidiary Hell's Kitchen LithiumCo
10 1, LLC hereinafter referred to as the Permittee, and the COUNTY OF IMPERIAL, a political
subdivision of the State of California, (hereinafter referred to as "COUNTY").

11 **RECITALS**

12 **WHEREAS**, Permittee is the owner, lessee or successor-in-interest in certain land in
13 Imperial County with the applicant proposing Hell's Kitchen LithiumCo 1 (HKL1) to construct
14 and operate a commercial geothermal mineral extraction processing plant, Hell's Kitchen
LithiumCo 1, LLC is proposing the Hell's Kitchen LithiumCo 1 (HKL1). The geothermal plant
15 (HKP1) and lithium facilities (HKL1) project is within portions of Sections 11 and 12 of
Township 11 South, Range 13 East, S.B.B.M.; the gen-tie/power line ROW corridor is
16 located within portions of Sections 12, 13 and 14 of Township 11 South, Range 13 East,
S.B.B.M., approximately 3.8 miles southwest of the Townsite of Niland, Assessor's Parcel
17 Numbers:

18 020-010-012	HKP1 and HKL1 Shared Facilities	S-1-G and S-2-G
19 020-010-013	HKP1 and HKL1 Shared Facilities	S-1-G
20 020-070-060	HKP1 and HKL1 Shared Facilities	S-1-G
020-010-042	Gen-Tie and Power Line	S-1-G
21 020-060-001	Gen-Tie and Power Line	S-1-G
22 020-060-002	Gen-Tie and Power Line	S-1-G
020-060-039	Gen-Tie and Power Line	S-1-G
23 020-060-040	Gen-Tie and Power Line	S-1-G
020-070-026	Gen-Tie and Power Line	S-1-G
24 020-070-025	Gen-Tie and Power Line	S-1-G
020-070-029	Gen-Tie and Power Line	S-1-G
25 020-070-055	Gen-Tie and Power Line	S-1-G
020-010-031	Gen-Tie and Power Line	S-1-G
26 020-010-032	Gen-Tie and Power Line	S-1-G
020-010-035	Gen-Tie and Power Line	M-2-G-PE
27 020-100-044	Gen-Tie and Power Line	M-2-G-PE

28 **WHEREAS**, Permittee has applied to the County of Imperial for a Conditional Use
Permit #20-0021 allowing for the construction and operation of a geothermal lithium mineral

1 extraction facility and associated interconnections to the Geothermal Plant that includes
2 pipelines, conveyors, conduits and other mechanical connections to/from geothermal plant,
3 additionally, the Permittee has applied for a variance for height increase needed for facility
construction and operation.

4 The letter "G" shows the "GENERAL CONDITIONS". These conditions are conditions that
5 either routinely and commonly are included in all Conditional Use Permits as "standardized
6 conditions and/or are conditions that the Imperial County Planning Commission has
7 established as a requirement on all CUP's for consistent application and enforcement. The
Permittee is hereby advised that the General Conditions are as applicable as the SITE
SPECIFIC conditions.

8 **GENERAL CONDITIONS:**

9
10 **G-1 GENERAL LAW:**

11 The Permittee shall comply with all local, state and/or federal laws, rules, regulations,
12 ordinances, and/or standards (LORS) as they may pertain to the Project whether specified
herein or not.

13 **G-2 PERMITS/LICENSES:**

14 The Permittee shall obtain all local, state and/or federal permits, licenses, and/or other
15 approvals for the construction and/or operation of the Project. This shall include, but not be
16 limited to, local requirements for Health, Building, Sanitation, ICAPCD, Public Works, County
17 Sheriff, Fire Protection/Office of Emergency Services, Regional Water Quality Control
18 Board, California Division of Oil, Gas and Geothermal Resources (CDOGGR), among
19 others. Permittee shall likewise comply with all such permit requirements. Additionally,
Permittee shall if so requested submit a copy of such additional permit and/or licenses to
the Planning & Development Services Department within thirty (30) days of receipt, including
amendments or alternatives thereto.

20 **G-3 RECORDATION:**

21 This permit shall not be effective until CUP is recorded at the Imperial County Recorder's
22 Office and payment of the recordation fee shall be the responsibility of the Permittee. If the
23 Permittee fails to pay the recordation fee within six (6) months from the date of approval,
24 this permit shall be deemed null and void. The Planning & Development Department will
25 submit the executed Permit to the Imperial County Recorder's office for recordation
26 purposes. Permittee shall commence construction of the permitted activities or provide
evidence of substantial process within twelve (12) months from the effective date of this
permit, i.e. approval date. The Planning Director shall have the authority to extend this time
limit not to exceed 24 months if so requested by the Permittee.

27 **G-4 CONDITION PRIORITY:**

28

1 The Project shall be constructed and operated as described in this Permit, the project
2 description and as specified herein. If a conflict occurs between the permitting/regulatory
3 agencies, the most stringent condition shall govern and takes precedence.

4 **G-5 INDEMNIFICATION:**

5 As a condition of this permit, Permittee agrees to defend, indemnify, hold harmless, and
6 release the County, its agents, officers, attorneys, and employees from any claim, action, or
7 proceeding brought against any of them, the purpose of which is to attack, set aside, void,
8 or annul the permit or adoption of the environmental document which accompanies it. This
9 indemnification obligation shall include, but not be limited to, damages, costs, expenses,
10 attorney's fees, or expert witness fees that may be asserted by any person or entity,
11 including the Permittee, arising out of or in connection with the approval of this permit,
12 whether there is concurrent, passive or active negligence on the part of the County, its
13 agents, officers, attorneys, or employees. This indemnification shall include Permittee's
14 actions involved in construction, operation or abandonment of the permitted activities.

15 **G-6 INSURANCE:**

16 The Permittee shall secure and maintain liability in tort and property damage, insurance at
17 a minimum of \$1,000,000.00 or proof of financial responsibility to protect persons or property
18 from injury or damage caused in any way by construction, or operation, of permitted facilities.
19 The Permittee and/or operator shall require that proper Workers' Compensation insurance
20 covers all laborers working on such facilities, e.g. construction and operational activities, as
21 required by the State of California. The Permittee shall also secure liability insurance and
22 such other insurance as may be required by the State and/or Federal Law.

23 Evidence of such insurance shall be provided to the County prior to commencement of any
24 activities authorized by this permit, e.g. a Certificate of Insurance is to be provided to the
25 Planning & Development Services Department by the insurance carrier and said insurance
26 and certificate shall be kept current for the life of the permitted Project. Certificate(s) of
27 insurance shall be sent directly to the Planning & Development Services Department by the
28 insurance carrier and shall name the Department as a recipient of both renewal and
cancellation notices.

G-7 INSPECTION AND RIGHT OF ENTRY:

The County reserves the right to enter the premises to make appropriate inspection(s) and
to determine if the condition(s) of this permit are complied with. The owner or operator shall
allow authorized County representative(s) access upon the presentation of credentials and
other documents as may be required by law to:

(a) Enter at reasonable times upon the owner's or operator's premises where a
permitted facility or activity is located or conducted, or where records must be kept under
the conditions of the permit;

(b) Have access to and copy, at reasonable times, any records that must be kept
under the conditions of the permit; and,

1 (c) Inspect at reasonable times any facilities, equipment (including monitoring and
2 control equipment), practices, or operations regulated or required under the permit.

3 **G-8 SEVERABILITY:**

4 Should any condition(s) of this permit be determined by a Court or other agency with proper
5 jurisdiction to be invalid for any reason, such determination shall not invalidate the remaining
6 provision(s) of this permit.

7 **G-9 PROVISION TO RUN WITH THE LAND/PROJECT:**

8 The provisions of this project are to run with the land/project and shall bind the current and
9 future owner(s), successor(s)-in-interest, assignee(s) and/or transferee(s) of said project.
10 Permittee shall not without prior notification to the Planning & Development Services
11 Department assign, sell or transfer, or grant control of project or any right or privilege therein.
12 The Permittee shall provide a minimum of sixty (60) days written notice prior to such
13 proposed transfer becoming effective. The permitted use identified herein is limited for use
14 upon the permitted properties described herein and may not be transferred to any another
15 parcels.

16 **G-10 TIME LIMIT:**

17 Unless otherwise specified within the specific conditions, this permit shall be limited to a
18 maximum of thirty (30) years from the recordation of the CUP. The CUP may be extended
19 for a successive thirty (30) year period by the Planning Director upon a finding by the
20 Planning & Development Services Department that the project is in compliance with all
21 conditions of the CUP as stated herein and any applicable Land Use regulation of the County
22 of Imperial.

23 If an extension is necessary, the Permittee shall file a written extension request with the
24 Planning Director at least sixty (60) days prior to the expiration date of the Permit. Such an
25 extension request shall include the appropriate extension fee, pursuant to the Land Use
26 Ordinance, Title 9, Division 9, Section 90901.03 *et. seq.*, General Planning fees. If the
27 original approval was granted by the Planning Commission and/or the Board of Supervisors,
28 such an extension shall only be considered by the approving body, after a noticed public
hearing. Nothing stated or implied within this permit shall constitute a guarantee that an
extension will be granted. An extension may not be granted if the project is in violation of
any one or all of the conditions or if there is a history of non-compliance with the permit
conditions.

G-11 COST:

The Permittee shall pay any and all amounts determined by the County Planning &
Development Services Department to defray any and all cost(s) for the review of reports,
field investigations, subsidence/seismicity monitoring, provisions for geothermal waste
services, and other activities directly related to the enforcement/monitoring for compliance
of this Permit, County Ordinance or any other applicable law as provided in the Land Use
Ordinance, Section 90901.03 *et. seq.*, General Planning fees. All County Departments',
directly involved in the monitoring/enforcement of this project may bill Permittee under this

1 provision; however, said billing shall only be through and with the approval of the Planning
2 & Development Services Department.

3 **G-12 REPORTS/INFORMATION:**

4 If requested in writing by the Planning Director, Permittee shall provide any such
5 documentation/report as necessary to ascertain compliance with the Permit. The format,
6 content and supporting documentation shall be as required by the Planning Director.

7 **G-13 DEFINITIONS:**

8 In the event of a dispute the meaning(s) or the intent of any word(s), phrase(s) and/or
9 conditions or sections herein shall be determined by the Planning Commission of the County
10 of Imperial. Their determination shall be final unless an appeal is made to the Board of
11 Supervisors within the required time, i.e. ten (10) calendar days, pursuant to the Land Use
12 Ordinance, Title 9, Division 1, Chapter 4, Section 90104.05, *Appeal from Decision*.

13 **G-14 MINOR AMENDMENTS:**

14 The Planning Director may approve minor changes or modifications to the design,
15 construction, and/or operation of the Project provided said changes are necessary for the
16 project to meet other laws, regulations, codes, or conditions of the CUP and provided further,
17 that such changes will not result in any additional environmental impacts.

18 **G-15 SPECIFICITY:**

19 The issuance of this permit does not authorize the Permittee to construct or operate the
20 Project in violation of any state, federal, local law nor beyond the specified boundaries of the
21 Project as shown in the application/project description/permit, nor shall this permit allow any
22 accessory or ancillary use not specified herein. This permit does not provide any
23 prescriptive right or use to the Permittee for future addition and/or modifications to the
24 Project.

25 **G-16 NON-COMPLIANCE (ENFORCEMENT & TERMINATION):**

26 Should the Permittee violate any condition herein, the County shall give notice of such
27 violation. If Permittee does not act to correct the identified violation, and after having given
28 reasonable notice and opportunity, the County may revoke the permit.

(a) If the Planning Commission finds and determines that the Permittee or successor-in-
interest has not complied with the terms and conditions of the CUP, or cannot comply with
the terms and conditions of the CUP, or the Planning Commission determines that the
permitted activities constitute a public nuisance, the Planning Director shall provide
Permittee with notice and a reasonable opportunity to comply with the enforcement or
abatement order; and,

(b) If after receipt of the order, (1) Permittee fails to comply, and/or (2) Permittee cannot
comply with the conditions set forth in the CUP, then the matter shall be referred to the

1 Planning Commission for permit modification, suspension, or termination, or to the
2 appropriate prosecuting authority.

3 **G-17 GENERAL WELFARE:**

4 All construction and operations shall be conducted with consistency with all laws, conditions,
5 adopted County policies, plans and the application so that the Project will be in harmony
6 with the area and not conflict with the public health, safety, comfort, convenience, and
7 general welfare.

8 **G-18 PERMITS OF OTHER AGENCIES INCORPORATED:**

9 Permits granted by other governmental agencies in connection with the Project are
10 incorporated herein by reference. The County reserves the right to apply conditions of those
11 permits, as the County deems appropriate; provided that enforcement of a permit granted
12 by another governmental agency shall require concurrence by the respective agency.

13 **G-19 HEALTH HAZARD:**

14 If the County Health Officer determines that a significant health hazard exists to the public,
15 the Health Officer may require appropriate measures and the Permittee shall implement
16 such measures to mitigate the health hazard. If the hazard to the public is determined to be
17 imminent, such measures may be imposed immediately and may include temporary
18 suspension of permitted activities, the measures imposed by the County Health Officer shall
19 not prohibit the Permittee from requesting a special Planning Commission meeting, provided
20 Permittee bears all related costs.

21 **G-20 APPROVALS AND CONDITIONS SUBSEQUENT TO GRANTING PERMIT:**

22 Permittee acceptance of this permit shall be deemed to constitute agreement with the terms
23 and conditions contained herein.

- 24 • Where requirements are imposed in this permit that Permittee shall conduct
25 monitoring and where the County has reserved the right to impose or modify
26 conditions with which the Permittee must comply based on data obtained therefrom.
- 27 • Where Permittee is required to prepare specific plans for County approval and
28 disagreement arises, the Permittee, operator and/or agent, the Planning Director or
other affected party, to be determined by the Planning Director, may request that a
hearing be conducted before the Planning Commission whereby they may state the
requirements which will implement the applicable conditions as intended herein.
Upon receipt of a request, the Planning Commission shall conduct a hearing and
make a written determination. The Planning Commission may request support and
advice from a technical advisory committee. Failure to take any action shall constitute
endorsement of staff's determination.

29 **G-21 CHANGE OF OWNER/OPERATOR:**

30 In the event the ownership of the site or the operation of the site transfers from the current
31 Permittee to a new successor Permittee, the successor Permittee shall be bound by all terms
32 and conditions of this permit as if said successor was the original Permittee. Current
33 Permittee shall inform the County Planning and Development Services Department in writing

1 at least 60 days prior to any such transfer. Failure of a notice of change of ownership or
2 change of operator shall be grounds for the immediate revocation of the CUP. In the event
3 of a change, the new Owner/Operator shall file with the Department, via certified mail, a
4 letter stating that they are fully aware of all conditions and acknowledge that they will adhere
5 to all. If this permit or any subservient or associated permit requires financial surety, the
6 transfer of this permit shall not be effective until the new Permittee has requisite surety on
file. Furthermore existing surety shall not be released until replacement surety is accepted
by County. Failure to provide timely notice of transfer by Permittee shall forfeit current
surety.

7 **G-22 COMPLIANCE WITH ORDINANCE:**

8 Permittee is aware of, has been provided a current copy of and has agreed to be bound by
9 and maintain compliance with the "Communications Ordinance", being Title 9, Division 24
of the County's codified ordinances.

11 (The remainder of this page is intentionally left blank)

1 **CUP #21-0021 GEOTHERMAL MINERAL EXTRACTION:**

2
3 **SITE SPECIFIC CONDITIONS:**

4 **S-1 AUTHORIZED SCOPE OF ACTIVITIES:**

5 The Permittee is authorized to construct and operate the following facilities in compliance
6 with the County's General Plan, Renewable Energy and Transmission Element, Land Use
7 Ordinance, CUP application and all other applicable local, state, and federal laws,
ordinances, regulations and standards (LORS):

8 The Proposed Project is the construction and operation of a geothermal power facility
9 (HKP1) and commercial geothermal mineral extraction and production plant (HKL1) within
10 the Salton Sea geothermal field in Imperial County, California (Project). HKL1 involves to
11 develop mineral extraction and processing facilities capable of producing lithium hydroxide,
silica, and polymetallic products for commercial sale. The Project would consist of the
following activities:

- 12 • Construction of pipelines between HKP1 and HKL1 to facilitate the movement of
brine between the facilities;
- 13 • Construction and operation of a mineral-extraction facility to extract lithium
14 hydroxide, silica, and polymetallic products, and possibly other mineral compounds
from the geothermal brine;
- 15 • Construction of ingress and egress to the Project site from Davis Road;
- 16 • Paving of Davis Road from McDonald Road to Noffsinger Road (approximately 2
miles);
- 17 • Construction of an interconnection line with IID substation located at Davis Road;
and
- 18 • Construction of shared administrative facilities, offices, repair facilities, shipping and
receiving facilities, and other infrastructure components.

19 **Structures**

20 HKL1 will include the construction of the following structures:

- 21 • Geothermal pipelines to transfer brine from HKP1
- 22 • A cooling tower
- 23 • Truck entrance security
- 24 • Brine crystallizers, clarifiers, thickeners, and filter presses
- 25 • A lithium recovery resin vessel and systems
- 26 • Raw water filtration, fire-water storage, and reverse osmosis facilities
- 27 • Electrical buildings to house electric power switchgear and electrical metering
- 28 • Reagent storage and preparation buildings
- Two motor-control centers
- Lithium product handling and packing buildings (that will house the filtration and
drying equipment for the lithium products and bagging and palletizing of finished
products)
- Polymetallic product handling facilities
- Bulk boron containing product handling facilities

- Two lime silos
- Hydrochloric acid offloading and storage tanks
- A reverse osmosis water treatment facility or similar technology

Implementation of these project(s) requires an approval of Conditional Use Permit(s) and Variance(s) to allow for the construction and operation of the proposed 49.9MW net geothermal power plant and mineral extraction and processing facility.

S-2 AESTHETICS:

The Permittee shall design and maintain all permanent structures to be harmonious in appearance and compatible with the approved landscaping plans for screening and restoration of laydown areas, facility painting/treatment plan and lighting plan. The Permittee shall coordinate the painting of all mineral production facilities and pipelines with the County and blend in with the existing environment as discussed above.

Permittee shall install a six (6) foot (minimum) perimeter security fence. Landscaping will be installed between the fence and the public roadway along the frontage of the property with special attention at the entrance. The landscaping will need design approval from the Imperial County Planning & Development Services Department prior to installation.

Site Abandonment Plan:

Prior to the first building permit being issued, Hell's Kitchen LithiumCo 1 LLC shall submit to the County of Imperial Planning & Development Services Department, a Site Abandonment Plan to return the property to its previous condition. The first building permit shall be exclusive of a temporary electrical permit or the grading permit. The Site Abandonment Plan shall include a reclamation cost estimate prepared by a California-licensed general contractor or civil engineer. Permittee shall provide financial assurance/bonding in the amount equal to the reclamation cost estimate to restore the site to its pre-construction condition including removal of all structures and equipment, soil testing for and clean-up of contaminants in the soil and any other clean up and repair necessary to return the land to its previous condition within 180days of the first building permit being issued. The term "building permit" shall not include a temporary power permit or a grading permit.

S-3 AGRICULTURE:

Agricultural Commission Conditions:

The Project shall:

- Monitor for all pests including insects, vertebrates, weeds, and pathogens. Promptly control or eradicate pests when found, or when notified by the Agricultural Commissioner's office that a pest problem is present on the project site. A qualified applicator or a licensed pest control operator must perform all treatments.
- "Control" means to reduce the population of common pests below economically damaging levels, and includes attempts to exclude pests before infestation, and effective control methods after infestation. Effective control methods may include physical/mechanical removal, biocontrol, cultural control, or chemical treatments.

- 1 • Allow access by Agricultural Commissioner staff for routine visual and trap pest
2 surveys, compliance inspections, eradication of exotic pests, and other official duties.

3 **Reimbursement:**

- 4 • The project shall reimburse the Agricultural Commissioner's office for the actual cost
5 of investigations, inspections, or other required non-routine responses to the site that
6 are not funded by other sources if the investigation shows that the Permittee created
7 the problem alleged in the complaint.

8 **S-4 AIR QUALITY:**

9 The project site shall comply with the Imperial County APCD (ICAPCD) Rule VIII regulations
10 for compliance with the following measures:

11 **Obtain Authority to Construct (ATC) and Permit to Operate (PTO):**

12 The Project shall submit, in a timely manner, an application for an Authority to Construct
13 (ATC) and an application for a Permit to Operate (PTO) to the ICAPCD prior to any
14 construction and operation of the Project as required by Rule 207, New and Modified Source
15 Review. The Project shall comply with all review design conditions contained in the
16 ATC/PTO including but not limited to plant design, which shall include a system that controls
17 emissions assuring compliance with Federal and State standards, testing and verification
18 requirements. All harmful and noxious odors shall be controlled according to the ATC/PTO
19 conditions to ensure that quantities released because of plant operations do not exceed
20 Federal or State standards.

21 The Project will be required to comply with all offset requirements in the event that potential
22 emissions exceed Rule 207 thresholds.

23 Permittee shall submit two dust control plans. The first dust control plan shall be the
24 "Construction" Dust Control Plan and shall be submitted to and approved by the ICAPCD
25 prior to issuance of any construction permit. The second dust control plan shall be an
26 "Operational" Dust Control Plan and shall be submitted to and approved by the ICAPCD
27 prior to the start of operations. Both Dust Control Plans shall identify existing and potential
28 sources of fugitive PM 10 and shall identify the mitigation measures, which shall be applied
to maintain visible dust emissions below 20% opacity and where applicable, provide
evidence that the area is stabilized.

NOx Controls, the project shall comply with all applicable standard mitigation measures for
construction combustion equipment for the reduction of excess NOx emissions:

- 23 a. Utilize all Tier 3 or Tier 4 construction equipment; as practicable and available.
24 b. Prohibit idling of equipment not in use; for equipment in use reduce idling time to a
25 maximum of 5 minutes;
26 c. Where feasible replace fossil fuel burning equipment with electrically driven
27 equivalents provided they are not powered via a portable generator;
28 d. Register all portable engines 50 horse power or greater with the ICAPCD;
e. Submit to the ICAPCD prior to any earthmoving activity a complete list of all
construction equipment to be utilized during the construction phase identifying Make,

1 Model, Year, Horsepower, estimated hours of usage per equipment and total number
2 of each piece of equipment.

3 The project shall also apply enhanced dust control plan with measures to assure reduced
4 levels of NOx are maintained during the construction phase of the project: In the event, NOx
5 emissions are calculated to exceed ICAPCD thresholds for construction; the Permittee shall
6 provide for "offsite" mitigation or comply with Policy number 5. Policy number 5 allows a
project to pay in-lieu impact fees utilizing the most current Carl Moyer Cost Effective
methodology to reduce excess NOx emissions.

- 7 a. A construction Equipment List in Excel format detailing the equipment type, make,
8 model, year horsepower, hours of daily operation, date arrived onsite, and date
9 removed from site must be submitted to the Air District on a regular basis.
- 10 b. Formal written notification must be given to the Air District 10 days prior to the start of
11 construction.
- 12 c. Any generator greater than 50 brake horsepower must be permitted through the
13 Permitting and Engineering.
- 14 d. Watering must be performed continuously at all times on all roadways with record
15 keeping to document such.
- 16 e. Reduced speed for all vehicle types not to exceed 40 mph on paved surfaces/roadways
17 and no more than 15 mph on unpaved surfaces/roadways.

14 **S-5 BIOLOGICAL RESOURCES:**

15 In order to minimize potential impacts to burrowing owl, the following shall be implemented
16 prior to and during construction activities:

17 BIO-1: The Applicant shall ensure that prior to and during construction, onsite occupied
18 burrows shall be avoided during nesting season (February 1 through August 31).

19 BIO-2: The Applicant shall conduct a preconstruction survey within 30 days of ground-
20 breaking activities to identify any burrowing owls on site.

21 BIO-3: If burrowing owls are found within the Project site, a Burrowing Owl Mitigation Plan
22 must be prepared by a qualified biologist and approved by CDFW prior to any ground-
23 disturbing activities.

24 BIO-4: The construction or site manager shall ensure that no construction occurs within 250
25 feet of the artificial burrows or other active or occupied burrows unless active or occupied
26 burrows are sheltered with hay bales and monitored by a qualified biologist; if this is done,
27 work may occur within 20 feet of active or occupied burrows. If qualified biologists observe
28 burrowing owls' agitation, work in the vicinity will stop. Additional shelter materials can be
added until burrowing owls remain calm during construction activities.

BIO-5: If passive relocation is required, it shall be done by a qualified biologist from
September 1 to January 31 and will follow the CDFW Staff Report on Burrowing Owl
Mitigation Guidelines (CDFW 2012).

S-6 CONSTRUCTION STANDARDS:

1
2 The mineral extraction plant and other structures shall be built in accordance with the County
3 Building Code requirements applicable to "Seismic Category D". All structures and facilities
4 shall be designed in accordance with the publication entitled "Recommended Lateral Force
5 Requirements and Commentary by the Structural Engineers Association of California". The
6 structural components of the permitted facilities shall be reviewed by the County Building
7 Official/Planning Director. Building permits shall be procured for all non-electric utility
8 facilities from the County prior to commencement of any construction.

6 **S-7 EMERGENCY RESPONSE PLAN (ERP):**

7 An Emergency Response Plan shall be prepared covering possible emergencies, e.g. blow-
8 outs, major fluid spills, earthquakes, fires, floods and other foreseeable accidents and
9 emergencies. At all times, there shall be at least one employee either on the facility premises
10 or on call (i.e., available to respond to an emergency by reaching the facility within a short
11 period of time) with the responsibility of coordinating all emergency response measures.
12 This Emergency Coordinator shall be thoroughly familiar with all aspects of the facility's
13 Emergency Response Plan, all operations and activities at the facility, location of all records
14 within the facility and the facility layout. This person shall have the authority to commit the
15 resources needed to carry out the contingency plan to include appropriate first aid provisions
16 during project construction and operation with appropriate first aid training for Project
17 employees. Adequate personnel and equipment shall be available to respond to
18 emergencies and to insure compliance with the conditions of the permit.

15 (a) The Emergency Response Plan shall be prepared in consultation with, but not be
16 limited to, the Regional Water Quality Control Board (RWQCB), Imperial County Office of
17 Emergency Services, and local emergency service agencies, and other appropriate state
18 and county agencies and shall include information useful in combating the emergency. The
19 Plan shall be available on-site, and provided to agencies responsible for preparing for and
20 addressing emergencies, on request. The plan shall include a notification list of response
21 agencies which shall be notified immediately upon the discovery of a reportable
22 unauthorized discharge and the list shall include: Imperial Fire/Office of Emergency
23 Services, Planning & Development Services Department, Environmental Health
24 Services/Health Department, RWQCB, Imperial Irrigation District (IID), Department of Public
25 Works (DPW), Sheriff's office, as applicable.

22 (b) A Hazardous Materials Business Plan shall be prepared and be submitted to
23 the Certified Unified Program Agency, Imperial County Hazardous Materials/Waste Unit and
24 shall be maintained by the Permittee. The Permittee shall provide adequate safety devices
25 against the hazard of fire and explosion for activities that involve the use and storage of
26 flammable, explosive or highly corrosive or reactive materials as well as adequate fire-
27 fighting and fire suppression equipment and devices standard in the industry with
28 compliance with applicable state and local laws as determined by the Imperial County Fire
29 Chief.

27 (c) The Permittee shall meet all NFPA requirements, and also submit an
28 Engineer-certified (California-licensed Engineer) fire suppression/protection plan to the
Imperial County Fire/OES Department, prior to issuance of a building permit.

1 All designated employees shall be provided with communication devices, cell phones or
2 walkie-talkies, in the event of an emergency situation on-site.

3 **S-8 FIRST AID:**

4 Appropriate first aid provisions for facility operations shall be made for emergency response
5 during project construction and operation with appropriate first aid training for project
6 employees. During construction, a member of each working crew shall be trained in basic
7 first aid and supplied with necessary medical equipment to respond to emergencies as
8 provided for in the Emergency Response Plan required hereinabove.

9 **S-9 GEOTECHNICAL:**

10 The Permittee shall conduct applicable on-site geotechnical investigations of soil
11 characteristics affecting the permitted facilities by qualified persons at the Permittee's
12 expense and any soil reports shall be made available to the County.

13 **S-10 GEOLOGY & SOILS & GEOLOGIC HAZARDS:**

14 All grading operations and construction shall be conducted in conformance with the
15 recommendations included in the Preliminary Geotechnical Report on the Project site that
16 has been prepared by Land-Mark Geo-Engineers and Geologists (Land-Mark) in August
17 2020. Design, grading, and construction shall be performed in accordance with the
18 recommendations of the project geotechnical consultant as summarized in a final written
19 report, subject to review by the County, prior to commencement of grading activities.

20 **S-11 HAZARDS & HAZARDOUS MATERIALS:**

21 A comprehensive Hazardous Materials Business Plan shall be prepared for the project in
22 accordance with the California Accidental Release Prevention Program. The Hazardous
23 Materials Management Plan (HMMP) shall include (1) an Inventory and Site Map, (2) an
24 Emergency Response Plan (ERP) and Owner/Operator Identification, and (3) employee
25 training.

26 The HMMP will be prepared and submitted to the California Department of Toxic Substances
27 Control (DTSC), as the Certified Unified Program Agency (CUPA) for Imperial County. The
28 HMMP will be maintained and revised as necessary.

California Health and Safety Code, Chapter 6.95, Section 25500 requires you to establish
an implement Hazardous Materials Release Response Plan and Inventory (Business Plan)
for emergency response to any hazardous material mishap, if at any one time your facility
handles a hazardous waste in quantities equal to or greater than 55 gallons for liquids, 500
pounds for solids, and 200 cubic feet for compressed gases. With the passage of Assembly
Bill (AB) 408 on October 8, 2011, the inventory reporting quantities were changed as follows:

For a solid or liquid hazardous material that is classified as a hazard solely as an irritant or
sensitizer, the new reporting quantity is 5,000 pounds;

1 For a hazardous material that is a gas, at standard temperature or pressure, and for which
2 the only health and physical hazards are simple asphyxiation and the release of pressure,
3 the new reporting quantity is 1,000 cubic feet (Reporting of gases in a cryogenic state
remains unchanged);

4 For oil-filled electrical equipment that is not contiguous to an electrical facility, the new
5 reporting quantity for the oil is 1,320 gallons. Moreover, if you generate, store or handle any
6 amount of hazardous waste at any one time must report to DTSC ICUPA and register for
hazardous waste generator program.

7 **S-12 LAND USE:**

8 The Permittee shall prepare an appropriate parking plan for the permitted facilities and any
9 signs shall require compliance with the Land Use Ordinance provisions and provide the
necessary laydown/staging areas for permitted facilities.

10 **S-13 HYDROLOGY AND WATER QUALITY:**

11 The Permittee shall furnish a Drainage and Grading Plan/Study to provide for property
12 grading and drainage control, which shall also include prevention of sedimentation of
13 damage to off-site properties. The Study/Plan shall be submitted to the Department of
14 Public Works for review and approval. The Permittee shall implement the approved plan.
Employment of the appropriate Best Management Practices (BMP's) shall be included.
Implementation of a SWPPP:

15 The project could violate water quality standards or waste discharge requirements unless
16 mitigated as follows:

- 17 1. Prior to the issuance of grading permits, Permittee shall obtain coverage under the
18 SWRCB's General Permit for Stormwater Discharges Associated with Construction
19 Activity Permittee shall prepare a SWPPP to be administered during grading and
20 Project construction. The SWPPP must contain BMPs and construction techniques
21 accepted by the County for use in the Project area at the time of construction that
22 meet the technical standards of the General Construction Permit to ensure: That
potential water quality impacts (including on- and off-site erosion) during construction
23 phases are minimized, that shall reduce the potential for runoff, and the release,
24 mobilization, and exposure of pollutants from the construction area, and that no water
25 quality standards are violated.
- 26 2. The SWPPP must address spill prevention and include a countermeasure plan
describing measures to ensure proper collection and disposal of all pollutants
27 handled or produced on the site during construction, including sanitary wastes,
28 cement, and petroleum products. Countermeasures may include measures to
prevent or clean up spills of hazardous waste and of hazardous materials used for
equipment operation, and emergency procedures for responding to spills. BMPs
included in the SWPPP must be consistent with the California Stormwater Best
Management Practices Handbook for Construction.
3. The SWPPP must be submitted to California RWQCB CRB and Imperial County for
review prior to the issuance of grading permits.
4. The SWPPP shall identify and specify the pollutants that are likely to be used during
construction that could be present in stormwater drainage and non-stormwater

1 discharges, including fuels, lubricants, and other types of materials used for
2 equipment operation and the means of waste disposal.

- 3 5. The SWPPP shall specify personnel training requirements and procedures that shall
4 be used to ensure that workers are aware of permit requirements and proper
5 installation methods for BMPs specified in the SWPPP.
- 6 6. The SWPPP shall also specify the appropriate personnel responsible for supervisory
7 duties related to implementation of the SWPPP.
- 8 7. Permittee shall file a Notice of Intent with the SWQCB to comply with the NPDES
9 General Stormwater Permit and prepare a SWPPP that meets the
10 Linear/Underground Overhead provisions in Attachment A of the General Permit.
- 11 8. A copy of the approved SWPPP(s) shall be maintained and available at all times on
12 the construction site(s).

8 **S-14 POTABLE WATER TREATMENT PLANT:**

9
10 Permittee shall provide potable water meeting California state standards. At a minimum this
11 includes obtaining a State Domestic Water Supply Permit for a non-transient non-community
12 public water system through the Imperial County Public Health Department (ICPHD).
13 Permittee under CUP #21-0021 may provide potable water under one of the following
14 options:

- 15 (a) If necessary, the Hell's Kitchen Power Plant would expand its water system, located
16 within the footprint of this property, to provide water for both facilities;
- 17 (b) Hell's Kitchen PowerCo 1 and LithiumCo 1 facilities would form a separate corporate
18 entity to provide potable water to both plants. Under this option, the water treatment
19 system would be expanded to provide potable water to both facilities,
- 20 (c) Hell's Kitchen PowerCo 1 and LithiumCo 1 would form a special district, which then
21 can provide potable water to anyone within that district. Formation of the "special
22 district" would require approval from the Imperial County Local Agency Formation
23 Commission (LAFCO)
- 24 (d) Hells Kitchen LithiumCo 1 would build a water treatment facility for the facility on the
25 Permittee property.

22 **S-15 ODOR CONTROL:**

23 The Permittee shall control hydrogen sulfide and other non-condensable emissions to
24 insure that quantities released do not exceed the mandatory standards. The Permittee
25 shall control all harmful or noxious emissions and the odors shall be controlled to insure
26 that quantities or air contaminants released as a result of the permitted facilities do not
27 exceed State or Federal standards.

27 **S-16 OPERATIONS:**

28 Permittee shall have a responsible agent on-site whose name, title, e-mail address and
telephone number (office & cell #'s) shall be provided to the CUPA (Imperial County
Hazardous Materials/Waste Unit), Department of Toxic Substances Control, County

1 Department of Public Works, County Fire/OES Department, County Environmental Health
2 Services/Health Department, Sheriff's Department and the County Planning & Development
3 Services Department.

4 **S-17 PERMITS:**

5 Except as specifically authorized in this permit, separate permits shall be required for any
6 supplemental activities required to operate the mineral extraction facilities.

7 **S-18 PROJECT DESIGN:**

8 The following shall be the Project design:

9 (a) Construction and maintenance activities relating to the brine pipelines to and
10 from the geothermal resource shall be coordinated.

11 (b) All facility access on public rights-of-way and visitor parking areas within the
12 plant site shall be constructed to standards approved by the ICPDSD and/or DPW.

13 (c) Shrubs, trees and ground cover shall be planted and maintained to compliment
14 the appearance of permitted facilities, in accordance with any landscaping plan approved by
15 the County Planning and Development Services Department. The exterior finish of building
16 materials shall be painted an earth tone color to blend into the background. Exterior finishes
17 shall be limited to non-reflective materials such as concrete, masonry, or stucco, though
18 metal or synthetic wall panels with similar appearance to the aforementioned materials may
19 also be acceptable as determined by the Planning and Development Services Department.

20 (d) All equipment, pipes, tanks and lines used at the mineral production facilities
21 to handle, transfer or pump geothermal fluids and on-site hazardous materials shall be
22 maintained in a manner that prevents leaking and spilling, e.g. effective performance,
23 adequate funding, operator staffing and training, and adequate laboratory and process
24 controls, including appropriate quality assurance procedures, with the operation of back-up
25 or auxiliary facilities when necessary to achieve compliance with the permit conditions.

26 (e) The facility shall be designed not interfere with the irrigation and drainage
27 pattern, and shall comply with the requirements and regulations of the Imperial Irrigation
28 District.

(f) All permanent sumps, brine ponds, waste holding ponds, and any other pond,
shall be designed and constructed to meet sound engineering standards and the regulations
and requirements of the RWQCB under the supervision of a California-licensed Civil
Engineer.

(g) Prior to site restoration and abandonment, it shall be the Permittee's
responsibility to comply with all regulations of the County and state, including the purging of
on-site brine ponds when the project ceases, salts removed from the dikes and bottoms and
the berms then leveled to the satisfaction of the landowners and the County Planning and
Development Services Department.

1 (h) Permittee shall utilize and comply with applicable California Building Code
2 requirements for the mineral extraction plant and related power distribution lines.

3 **S-19 RETURN OF SPENT BRINE:**

4 Any processed brine that is not used by Hell's Kitchen LithiumCo 1 shall be sent back to the
5 Hells' Kitchen PowerCo 1 Geothermal Plant.

6 **S-20 SPILLS AND RUNOFF:**

7 The Permittee shall design and construct the permitted facilities to prevent spills from
8 endangering adjacent properties and waterways, and to prevent runoff from any source
9 being channeled or directed in an unnatural way so as to cause erosion, siltation, or other
10 detriments. The plant site shall be graded and constructed so that all spills shall drain into
11 the on-site ponding areas.

12 **S-21 SYSTEM CLOSURE AND SITE RESTORATION:**

13 The Permittee shall comply with all closure requirements and site restoration, when
14 operation of the permitted facilities herein authorized has ceased. All plant facilities shall be
15 dismantled, all brine pipelines and related facilities shall be demolished and the site restored
16 as required by the County and the land involved be made compatible with the surrounding
17 uses or as requested by the landowner and as agreed to by the County Planning Director.
18 In the event that some structures are still viable for a permitted use on-site, such as the
19 manufacturing facilities, office, warehouse, and maintenance shop or other potentially
20 usable structures, the structures may remain on-site if the Permittee and landowner so
21 request and Planning Director so approves.

22 **S-22 TRANSPORTATION AND CIRCULATION:**

23 A Commute Trip Reduction (CTR) program shall be implemented to discourage single-
24 occupancy vehicle trips and encourage alternative modes of transportation such as
25 carpooling, taking transit, walking, and biking. The CTR program could include features such
26 as carpooling encouragement, ride-matching assistance, preferential carpool parking, half-
27 time transportation coordinator, vanpool assistance, and bicycle end-trip facilities (parking,
28 showers, and lockers) and provide employees with assistance in using alternative modes of
travel.

29 **S-23 WATER CONSERVATION:**

30 The Permittee shall consult with the Imperial Irrigation District and comply with the approved
31 water contract. If the IID does not receive its annual 3.1 maf water apportionment according
32 to the QSA obligations of Colorado River water during the Project's 30-year lifespan, the
33 Applicant shall work with IID to ensure any reduction in water availability can be managed
34 by the Project.

35 **S-24 WATER FACILITIES:**

36 The Permittee shall obtain and comply with applicable General NPDES Permit for
37 Discharges of Water Associated with Construction and Waste Discharge Requirements for

1 permitted facilities as well as developing and implementing an applicable Storm Water
2 Pollution Prevention Plan for the facilities. The Permittee shall prepare and implement a
3 Drainage, Erosion and Sedimentation Control Plan relating to the permitted facilities.

4 **S-25 WASTE DISPOSAL:**

5 The Permittee shall insure that all wastes, liquid or solid, shall be disposed in compliance
6 with appropriate local, state, and federal regulations, in effect or subsequently duly and
7 legally enacted.

8 (a) Any discharge of wastes into surface water shall meet all requirements of the
9 Regional Water Quality Control Board, e.g. National Pollution Discharge Elimination System
10 permit restrictions to include a water quality monitoring program as approved by applicable
11 law.

12 (b) All solid wastes shall be disposed of in any approved solid waste disposal site
13 in accordance with County, State and Federal regulations. However, nothing herein is
14 intended to define any portion of the geothermal brine resource as a waste or to prohibit the
15 extraction of resources from spent geothermal brine or materials for useful purposes as
16 either allowed herein or later applied for and approved.

17 **S-26 SALES TAXES BENEFIT**

18 **SALES TAX ALLOCATION REQUIREMENT.**

19 To the extent permitted by applicable law, Developer will require that all qualifying
20 contractors and subcontractors exercise their option to obtain a California Department of
21 Tax and Fee Administration ("CDTFA") subpermit for the jobsite and allocate all eligible sales
22 and use tax payments to County and the Local Transit Authority ("LTA"). Prior to
23 commencement of any construction activity on-site, Developer shall require that the
24 contractor or subcontractor provide County with a copy of their CDTFA account number and
25 sub-permit. Developer shall either cause its construction contractor to treat the Project in
26 accordance with California Sales and Use Tax Regulation 1521(b)(2)(B), California Sales
27 and Use Tax Regulation 1521(c)(13)(B), and California Sales and Use Tax Regulation
28 1826(b) for sales and use tax purposes, or form a "Buying Company" as defined in the
California Sales and Use Tax Regulation 1699(h). Developer may adopt an alternate
methodology to accomplish this goal if such methodology is approved by the County's
Executive Officer prior to issuance of any building permit. No later than forty-five (45) days after
the due date for filing sales and use tax returns for each calendar quarter, occurring after
the commencement of any construction activity on-site through including the first
anniversary of commercial operating date ("COD"), developer shall report, or cause its
general contractor to report to County, the total amount of sales and use taxes related to the
Project that are allocated to the County, and reported on Developer's, general contractor's
and subcontractors' applicable California sales and use tax returns.

Should Developer become of aware of a change in circumstances that would materially
affect the sales/use tax allocation requirement, then Developer shall, within forty-five (45)
days of learning of such change in circumstances, inform the County in writing of the change
in circumstances. If the County determines that such change in circumstances warrants an
adjustment to the sales/use tax allocation requirement, then County shall negotiate in good

1 faith with Developer in revising the sales/use tax allocation requirement. If the Parties are
2 unable to agree upon a revised allocation, then the dispute shall be referred to an
3 independent accountant mutually acceptable to both Parties. The costs for such nonbinding
4 mediation shall be borne by Developer. Failure of the Developer to inform the County of the
change in circumstances shall constitute a waiver of Developer's ability to seek any
adjustment to the sales/use tax allocation based on such change in circumstances

5 The complete sales / use tax allocation amount due to County and LTA for the Project must
6 be received within one (1) year after COD for this Project, or such later date as any
7 applicable sales / use tax is due or is transmitted from the CDTFA, unless it is delayed due
8 to causes beyond Developer's control or for which Developer is not responsible. If, within
9 one (1) year after issuance of the final certificate of occupancy, or such later date as any
applicable sales / use tax is due or is transmitted from the CDTFA, the sales / use taxes
received by the County are less than the sales / use tax allocation amounts mandated under
paragraph B, then Developer shall pay the difference to the County.

10 Payments to County and LTA as a result of a shortfall shall be due within forty-five (45)
11 calendar days of Developer's receipt of written notice of shortfall from the County.

12 Failure to make such payment within the forty-five (45) day timeframe shall be considered a
13 default pursuant to section VI paragraph Q. of this Agreement, and may lead to termination
14 of this Agreement. Developer hereby agrees to pay interest at the rate of six percent (6%)
15 per annum of the payment due for any payment received by County beyond the forty-five
16 (45) day due date. The obligation to pay interest shall survive the termination of this
17 Agreement. The obligation to pay interest shall be stayed for up to thirty (30) calendar days
18 when such amounts are disputed in good faith, so long as Developer submits the payments
19 "under written protest" with a complete explanation of the reasons for the protest. Upon
resolution of the protested payment, such late charges may be assessed if it is determined
by County that the dispute was not made in good faith.

20 Repeated protests of the same point rejected in a prior protest shall be considered a protest
21 in bad faith. Any such payments later found not to be due by Developer shall be refunded
22 by County promptly, and in all events within thirty (30) calendar days after the determination
23 of the amounts owing is made.

24 In the event that Developer repowers or replaces the equipment onsite, to the extent
25 permitted under then applicable law, each site shall be designated as the "point of sale" so
26 as to create an additional local tax-funding source for the County of Imperial.

27 1. Hell's Kitchen LithiumCo 1, LLC shall be the master developer and shall be
28 responsible as for all improvements, septic, water plant, roads and other
improvements, Conditional Use Permit Application and Conditions, EIR, and
MM&RP.

1. If Hell's Kitchen LithiumCo 1, LLC sells all or part of this project, an approved
agreement shall be in place for new owner to build and maintain as agreed to by the
previous conditions. The Planning and Development Services Director shall approve
of any agreement between permittee and a new master developer.

1 **S-27 DURATION OF THIS PERMIT:**

2 The time limit under condition G-10 shall allow for the plant to be constructed and the
3 30 years shall commence upon issuance of the Certificate of Occupancy and/or the official
4 starting date of commercial operations, whichever is later.

5 **S-28 JOINT USE FACILITIES:**

6 Permittee may construct and/or operate certain facilities within the project area of both the
7 Hell's Kitchen PowerCo 1 LLC and Hell's Kitchen LithiumCo 1 LLC projects that are of a
8 common use, including but not limited to the storm-water retention basin, the wastewater
9 treatment system, and/or the potable water treatment system. Additionally, Permittee may
10 construct connection, interconnection and/or return lines, including communication, power
11 and control systems, between the projects, which may be necessary and incidental to the
12 operation of the facilities.

13 **S-29 EXTRACTION OF MINERALS**

14 Nothing in this CUP shall be construed as limiting or prohibiting the extraction of
15 commercially viable minerals from geothermal resource brine either before or after having
16 been processed for generation of steam.

17 In order to minimize potential impacts to paleontological resources, the following mitigation
18 measures shall be implemented:

19 **PALEO-1:** The Applicant shall retain the services of a Qualified Paleontologist and require
20 that all initial ground- disturbing work be monitored by someone trained in fossil identification
21 in monitoring contexts. The Qualified Paleontologist shall prepare a Paleontological
22 Resource Mitigation Plan to be implemented during ground- disturbing activity for the
23 proposed Project. This program should outline the procedures for paleontological
24 monitoring, including extent and duration; protocols for salvage and preparation of fossils;
25 and the requirements for a final mitigation and monitoring report. The Qualified
26 Paleontologist and a paleontological monitor shall be present at the Project construction-
27 phase kickoff meeting.

28 **PALEO-2:** Prior to commencing construction activities and, thus, prior to any ground
disturbance in the Proposed Project site, the Qualified Paleontologist and paleontological
monitor shall conduct initial Worker Environmental Awareness Program (WEAP) training to
all construction personnel, including supervisors, present at the start of the Project
construction work phase, for which the Applicant, or their designated Contractor, and all
subcontractors shall make their personnel available. This WEAP training will educate
construction personnel on how to work with the monitor(s) to identify and minimize impacts
to paleontological resources and maintain environmental compliance, and it shall be
performed periodically for new personnel coming on to the Project as needed.

PALEO-3: The Applicant, or their designated Contractor, shall provide the Qualified
Paleontologist with a schedule of initial potential ground-disturbing activities. A minimum of
48 hours will be provided to the consultant prior to the commencement of any initial ground-
disturbing activities, such as vegetation grubbing or clearing, grading, trenching, or mass

1 excavation. As detailed in the schedule provided, a paleontological monitor shall be present
2 on-site at the commencement of ground-disturbing activities related to the Project. The
3 monitor, in consultation with the Qualified Paleontologist, shall observe initial ground-
4 disturbing activities and, as they proceed, make adjustments to the number of monitors as
5 needed to provide adequate observation and oversight. All monitors will have stop- work
6 authority to allow for recordation and evaluation of finds during construction. The monitor
7 will maintain a daily record of observations as an ongoing reference resource and to provide
8 a resource for final reporting upon completion of the Project.

9 The Qualified Paleontologist, paleontological monitor, and the Applicant, or their designated
10 Contractor, and subcontractors shall maintain a line of communication regarding schedule
11 and activity such that the monitor is aware of all ground-disturbing activities in advance to
12 provide appropriate oversight.

13 **PALEO-4:** If paleontological resources are discovered, construction shall be halted within
14 50 feet of any paleontological finds and shall not resume until the Qualified Paleontologist
15 can determine the significance of the find and/or the find has been fully investigated,
16 documented, and cleared.

17 **PALEO-5:** At the completion of all ground-disturbing activities, the Qualified Paleontologist
18 shall prepare a Paleontological Resources Monitoring Report summarizing all monitoring
19 efforts and observations, as performed, and any and all paleontological finds and shall
20 provide follow-up reports of any finds to the preferred paleontological repository, as required.

21 (The remainder of this page is intentionally left blank)

22

23

24

25

26

27

28

1 **NOW THEREFORE**, County hereby issues the Conditional Use Permit CUP #21-0021 and
2 Permittee hereby accepts permit upon the terms and conditions set forth herein.

3 **IN WITNESS THEREOF**, the parties hereto have executed this Agreement the day and year
4 first written.

5
6
7
8
9
10
11
12
13
14
15
16
17
18
19
20
21
22
23
24
25
26
27
28

PERMITTEE

_____ Date _____
Jim Turner, President

COUNTY OF IMPERIAL, a political subdivision of the STATE OF CALIFORNIA

_____ Date _____
James A Minnick, Director
Planning & Development Services

1 **PERMITTEE NOTARIZATION**

2 A notary public or other officer completing this certificate verifies only the identity of the individual who signed the document to
3 which this certificate is attached, and not the truthfulness, accuracy, or validity of that document.

4 STATE OF CALIFORNIA

5 COUNTY OF _____ } S.S.

6
7 On _____ before me, _____ a
8 Notary Public in and for said County and State, personally appeared
9 _____, who proved to on the basis of
10 satisfactory evidence to be the person(s) whose name(s) is/are subscribed to the within
11 instrument and acknowledged to me that he/she/they executed the same in his/her/their
12 authorized capacity(ies), and that by his/her/their signature(s) on the instrument the
13 person(s), or the entity upon behalf of which the person(s) acted, executed the instrument.

14 I certify under PENALTY OF PERJURY under the laws of the State of California that the
15 foregoing paragraph is true and correct.

16 WITNESS my hand and official seal

17 Signature _____

18 ATTENTION NOTARY: Although the information requested below is OPTIONAL, it could
19 prevent fraudulent attachment of this certificate to unauthorized document.

20 Title or Type of Document _____

21 Number of Pages _____ Date of Document _____

22 Signer(s) Other Than Named Above _____

23 Dated _____

1 **COUNTY NOTARIZATION**

2 A notary public or other officer completing this certificate verifies only the identity of the individual who signed the document to
3 which this certificate is attached, and not the truthfulness, accuracy, or validity of that document.

4 STATE OF CALIFORNIA

5 COUNTY OF IMPERIAL} S.S.

6 On _____ before me, _____
7 a Notary Public in and for said County and State, personally appeared
8 _____, who proved to me on the
9 basis of satisfactory evidence to be the person(s) whose name(s) is/are subscribed to the
10 within instrument and acknowledged to me that he/she/they executed the same in
11 his/her/their authorized capacity(ies), and that by his/her/their signature(s) on the instrument
12 the person(s), or the entity upon behalf of which the person(s) acted, executed the
13 instrument.

11 I certify under PENALTY OF PERJURY under the laws of the State of California that the
12 foregoing paragraph is true and correct.

13 WITNESS my hand and official seal

14 Signature _____

15
16 ATTENTION NOTARY: Although the information requested below is OPTIONAL, it could
17 prevent fraudulent attachment of this certificate to unauthorized document.

18 Title or Type of Document _____
19 Number of Pages _____ Date of Document _____
20 Signer(s) Other Than Named Above _____

Attachment I
Variance #21-0004 - Resolution

RESOLUTION NO.

A RESOLUTION OF THE BOARD OF SUPERVISORS OF THE COUNTY OF IMPERIAL, CALIFORNIA, FOR THE DENIAL OF APPEAL #23-0004 AND APPROVAL OF VARIANCE #21-0004 FOR THE HELL'S KITCHEN POWERCO 1 PROJECT

WHEREAS, Variance #21-0004 for the Hell's Kitchen PowerCo 1 project has been prepared in accordance with the requirements of the State Planning and Zoning Law, California Environmental Quality Act, the State CEQA Guidelines, the County's Rules and Regulations to Implement CEQA, and the County's Land Use Ordinance, Title 9 as amended; and,

WHEREAS, the Board of Supervisors of the County of Imperial has been delegated with the responsibility for consideration of approval or denial of Appeal #23-0004 for Variance #21-0004; and,

WHEREAS, public notice of said application has been given, and the Board of Supervisors has considered evidence presented by the Planning & Development Services Department and other interested parties at a public hearing held with respect to this item on January 23, 2024; and,

NOW THEREFORE, the Board of Supervisors of the County of Imperial **DOES HEREBY RESOLVE** as follows:

SECTION 1. The Board of Supervisors has considered the proposed Variance #21-0004 prior to denial of Appeal #23-0004 for the proposed Variance. The Planning Commission finds and determines that the Variance is adequate and prepared in accordance with the requirements of the State Planning and Zoning Law, the County's Land Use Ordinance, Title 9 as amended, and the California Environmental Quality Act (CEQA) which analyzes environmental effects, based upon the following findings and determinations.

SECTION 2. That in accordance with State Planning and Zoning law; the County's Land Use Ordinance, Title 9 as amended; and the County of Imperial regulations, the following findings for the approval and certification of the Variance #21-0004 and Findings has been made as follows:

- 1. That there are special circumstances applicable to the property described in the application filed for such variance, or to its intended use, that do not apply generally to the property or class of use in the same zone or vicinity. (Imperial County Code§ 90202.08 A. (1))**

The 110 feet height of structures and associated facilities are a small, but necessary increase for several reasons considering the uniqueness and special circumstances of the site. The applicant Hell's Kitchen PowerCo 1, LLC submitted a Variance application to address these structures that may exceed the S-1 height

limitations. This Variance #21-0004 would permit a maximum height of 110 feet for the required structures. In addition, the Project site is large that allows for Geothermal throughout the project site. In sum, the particular location of the Project site, and the uniqueness of use on industrial zoned land presents special circumstances necessitating a height variance for the industrial structures.

2. **That the granting of such variance will not be materially detrimental to the public welfare or injurious to the property or improvements in such zone or vicinity in which the property is located. County Code § 90202.08 A (2)**

The Initial Study and EIR were completed with mitigation measures that reduced all significant impacts in the project area to a less than significant level of impact. The Project's Specific Plan zoning of S-1 G is required to follow all applicable local, state and federal laws many of which are designed to protect public welfare, safety or impacts to other lands. Moreover, the 110 feet structures are not materially detrimental to the public welfare or injurious to the property or improvements in the vicinity because the Project would share use of the variance height throughout the development.

3. **That because of special circumstances applicable to subject property, including size, shape, topography, location or surroundings, the strict application of the zoning laws is found to deprive subject property of privileges enjoyed by other properties in the vicinity and under identical zone classifications. County Code § 90202.08 A (3)**

The first is size and safety. The Project site is large and generates a number of associated Geothermal type businesses that will benefit the County. The second is location and County regulations. The County has designated the surrounding areas geothermal to encourage geothermal development.

4. **That the granting of such variance will not adversely affect the comprehensive General Plan.**

The Imperial County General Plan and Land Use Ordinance Division 2: Land Use Permits (Variance) is defined in § 90202.01 as an approval granted upon a legal parcel of land to construct a structure not otherwise directly allowed by the exact interpretation of Title 9, Division 1 through 8. A variance runs with the land and allows for minimal deviation from the standards. Variance #21-0004 will allow for a minimal deviation of height up to 110 feet above ground level. This extension above current S-1 height limits is a minimal and necessary deviation. Additionally, the variance will not adversely affect the comprehensive General Plan because it facilitates the development of a project that is consistent with the General Plan for the reasons identified in the Hell's Kitchen CEQA document and the General Plan Consistency finding which are incorporated herein by reference.

NOW, THEREFORE, based on the above findings, the Imperial County Board of Supervisors **DOES HEREBY DENY APPEAL #23-0004** and **APPROVE VARIANCE #21-0004** for the Hell's Kitchen PowerCo 1 Project.

PASSED, ADOPTED AND APPROVED by the Board of Supervisors of the County of Imperial on this 23rd day of January 2024.

AYES:

NOES:

ABSENT:

ABSTAIN:

Luis A. Plancarte, Chairman
Imperial County Board of Supervisors

ATTEST: _____
BLANCA ACOSTA, Clerk of the
Board of Supervisors, County of
Imperial, State of California

Attachment J
Variance #21-0005 - Resolution

RESOLUTION NO.

A RESOLUTION OF THE BOARD OF SUPERVISORS OF THE COUNTY OF IMPERIAL, CALIFORNIA, FOR THE DENIAL OF APPEAL #23-0004 AND APPROVAL OF VARIANCE #21-0005 FOR THE HELL'S KITCHEN LITHIUMCO 1 PROJECT

WHEREAS, Variance #21-0005 for the Hell's Kitchen LithiumCo 1 project has been prepared in accordance with the requirements of the State Planning and Zoning Law, California Environmental Quality Act, the State CEQA Guidelines, the County's Rules and Regulations to Implement CEQA, and the County's Land Use Ordinance, Title 9 as amended; and,

WHEREAS, the Board of Supervisors of the County of Imperial has been delegated with the responsibility for consideration of denial of Appeal #23-0004 and approval for Variance #21-0005; and,

WHEREAS, public notice of said application has been given, and the Board of Supervisors has considered evidence presented by the Planning & Development Services Department and other interested parties at a public hearing held with respect to this item on January 23, 2024; and,

NOW THEREFORE, the Board of Supervisors of the County of Imperial **DOES HEREBY RESOLVE** as follows:

SECTION 1. The Board of Supervisors has considered the proposed Variance #21-0005 prior to denial of Appeal #23-0004 for the proposed Variance. The Planning Commission finds and determines that the Variance is adequate and prepared in accordance with the requirements of the State Planning and Zoning Law, the County's Land Use Ordinance, Title 9 as amended, and the California Environmental Quality Act (CEQA) which analyzes environmental effects, based upon the following findings and determinations.

SECTION 2. That in accordance with State Planning and Zoning law; the County's Land Use Ordinance, Title 9 as amended; and the County of Imperial regulations, the following findings for the approval and certification of the Variance #21-0005 and Findings has been made as follows:

- 1. That there are special circumstances applicable to the property described in the application filed for such variance, or to its intended use, that do not apply generally to the property or class of use in the same zone or vicinity. (Imperial County Code§ 90202.08 A. (1))**

The applicant Hell's Kitchen LithiumCo 1, LLC submitted a Variance application to address these structures that may exceed the S-1 height limitation. This Variance #21-0005 would permit a maximum height of 110 feet for the required structures.

In addition, the Project site is large that allows for Geothermal throughout the project site. In sum, the particular location of the Project site, and the uniqueness of use on industrial zoned land presents special circumstances necessitating a height variance for the industrial structures.

2. **That the granting of such variance will not be materially detrimental to the public welfare or injurious to the property or improvements in such zone or vicinity in which the property is located. County Code§ 90202.08 A (2)**

The Initial Study and EIR were completed with mitigation measures that reduced all significant impacts in the project area to a less than significant level of impact. The Project's Specific Plan zoning of S-1-G is required to follow all applicable local, state and federal laws many of which are designed to protect public welfare, safety or impacts to other lands. Moreover, the 110 feet structures are not materially detrimental to the public welfare or injurious to the property or improvements in the vicinity because the Project would share use of the variance height throughout the development.

3. **That because of special circumstances applicable to subject property, including size, shape, topography, location or surroundings, the strict application of the zoning laws is found to deprive subject property of privileges enjoyed by other properties in the vicinity and under identical zone classifications. County Code§ 90202.08 A (3)**

The first is size and safety. The Project site is large and generates a number of associated Geothermal type businesses that will benefit the County. The second is location and County regulations. The County has designated the surrounding areas geothermal to encourage geothermal development.

4. **That the granting of such variance will not adversely affect the comprehensive General Plan.**

The Imperial County General Plan and Land Use Ordinance Division 2: Land Use Permits (Variance) is defined in § 90202.01 as an approval granted upon a legal parcel of land to construct a structure not otherwise directly allowed by the exact interpretation of Title 9, Division 1 through 8. A variance runs with the land and allows for minimal deviation from the standards. Variance #21-0005 will allow for a height up to 110 feet above ground level. This extension above current S-1 height limit is a necessary deviation. Additionally, the variance will not adversely affect the comprehensive General Plan because it facilitates the development of a project that is consistent with the General Plan for the reasons identified in the Hell's Kitchen CEQA document and the General Plan Consistency finding which are incorporated herein by reference.

NOW, THEREFORE, based on the above findings, the Imperial County Board of Supervisors **DOES HEREBY DENY APPEAL #23-0004** and **APPROVE VARIANCE #21-0005** for the Hell's Kitchen LithiumCo 1 Project.

PASSED, ADOPTED AND APPROVED by the Board of Supervisors of the County of Imperial on this 23rd day of January 2024.

AYES:
NOES:
ABSENT:
ABSTAIN:

Luis A. Plancarte, Chairman
Imperial County Board of Supervisors

ATTEST: _____
BLANCA ACOSTA, Clerk of the
Board of Supervisors, County of
Imperial, State of California

Attachment K
PC & EEC Original Package CD

PROJECT REPORT

TO: PLANNING COMMISSION

AGENDA DATE: December 13, 2023

FROM: PLANNING & DEVELOPMENT SERVICES DEPT. AGENDA TIME 9:00 AM/No.8

PROJECT TYPE: Hell Kitchen PowerCo & Lithium projects SUPERVISOR DIST # 4
(WSA, FEIR, MMRP, CUP's 21-0020, 21-0021, Variances 21-0004 21-0005)

LOCATION: approx. 3.8 miles southwest Niland
APN: 020-010-012 et al PARCEL SIZE: 560, 80 & 2.5 + transmission lines Acres

GENERAL PLAN (existing) Open Space/ Agriculture GENERAL PLAN (proposed)

ZONE (existing) S-1 (proposed)

GENERAL PLAN FINDINGS CONSISTENT INCONSISTENT MAY BE/FINDINGS

PLANNING COMMISSION DECISION: HEARING DATE: 12/13/2023

APPROVED DENIED OTHER

PLANNING DIRECTORS DECISION: HEARING DATE: _____

APPROVED DENIED OTHER

ENVIROMENTAL EVALUATION COMMITTEE DECISION: HEARING DATE: _____

INITIAL STUDY: EIR

NEGATIVE DECLARATION MITIGATED NEG. DECLARATION EIR

DEPARTMENTAL REPORTS / APPROVALS:

PUBLIC WORKS	<input type="checkbox"/>	NONE	<input checked="" type="checkbox"/>	ATTACHED
AG / APCD	<input type="checkbox"/>	NONE	<input checked="" type="checkbox"/>	ATTACHED
E.H.S.	<input type="checkbox"/>	NONE	<input checked="" type="checkbox"/>	ATTACHED
FIRE / OES	<input type="checkbox"/>	NONE	<input checked="" type="checkbox"/>	ATTACHED
OTHER	<u>(See Attached)</u>			

REQUESTED ACTION:

It is recommended that Planning Commission conduct a public hearing, that you hear all the opponents and proponents of the proposed project. Staff would then recommend the following actions:

1. Approve the Resolution, with Findings for the Water Supply Assessment (WSA) for the Hell's Kitchen Power and Lithium projects.
2. Approve the Resolution with Findings for the Final EIR on the Hell's Kitchen Power and Lithium Projects.
3. Approve the Resolution with Findings for the MMRP for the Hell's Kitchen Power and Lithium projects.
4. Approve the Resolution with Findings for CUP #21-0020 with Finding and Conditions of Approval.
5. Approve the Resolution with Findings for CUP #21-0021 with Conditions of Approval.
6. Approve the Resolution with Findings for Variance V #21-0004.
7. Approve the Resolution with Findings for Variance V #21-0005.

Planning & Development Services Department

801 MAIN STREET, EL CENTRO, CA, 92243 760-482-4236

(Jim Minnick, Director, Planning & Development Services)

S:\AllUsers\APN\020\010\012\HELLS KITCHEN POWER & LITHIUM\PC FOLDER\PROJREPTPC.doc

PC ORIGINAL PKG

**STAFF REPORT
PLANNING COMMISSION
DECEMBER 13, 2023**

Subject:

- 1. Water Supply Assessment (WSA)**
- 2. Final Environmental Impact Report (FEIR) SCH #2022030704**
- 3. Mitigation Monitoring and Reporting Program (MM&RP)**
- 4. Conditional Use Permit (CUP #21-0020) Geothermal production**
- 5. Conditional Use Permit (CUP #21-0021) mineral extraction**
- 6. Variance #21-0004**
- 7. Variance #21-0005**

Applicant: Hell's Kitchen PowerCo 1 LLC and Hell's Kitchen Lithium Co 1 LLC

Project Location:

The project's plant and facilities will be located on undeveloped land owned by Imperial Irrigation District (IID), which is approximately 3.6 miles southwest of the community of Niland on sixteen parcels: APNs 020-010-012, -013, 020-070-060, 020-010-031, -032, 034, 035, -042, -044, 020-060-001, -002, -039, -040, 020-070-025, -026, -029, -055, 020-100-044. The purpose of the project is for the construction of geothermal power plant facility. Pursuant to Title 9, Division 5, Sections 90518.02, 90519.02, and 90516.02, Major facilities relating to the generation and transmission of electrical energy is a use that is permitted in the S-1-G (Open Space, Geothermal Overlay), S-2-G (Open Space/Recreation, Geothermal Overlay), and M-2-G (Medium Industrial, Geothermal Overlay) Zone subject to approval of a CUP from the County. Therefore, the proposed use is consistent with the purpose of the zone or sub-zone within which the uses will be located. (Supervisory District #4)

Project Summary:

Controlled Thermal Resources (US) Inc. via its subsidiary Hell's Kitchen Geothermal, LLC is proposing the Hell's Kitchen PowerCo 1 (HKP1), and Hell's Kitchen LithiumCo 1 LLC is proposing the Hell's Kitchen LithiumCo 1 (HKL1) in Imperial County, California. HKP1 involves the development of a geothermal power plant that will produce up to 49.9 megawatts (MW) net of geothermal green energy. HKL1 involves development of mineral extraction and processing facilities capable of producing lithium hydroxide, silica and polymetallic products, and possibly boron compounds, for commercial sale. HKP1 and HKL1 (together referred to as the Proposed Project) will be constructed by Hell's Kitchen PowerCo 1 LLC and Hell's Kitchen LithiumCo 1 LLC respectively, both subsidiaries of Controlled Thermal Resources (US) Inc. (CTR) and will have shared facilities. Hell's Kitchen Operating Services LLC, also a subsidiary of Controlled Thermal Resources (US) Inc. will operate and maintain these facilities. The project proposes to produce over 20,000 Mt's of Lithium.

The Project is located on vacant land that is generally undeveloped. Additionally, on June 14, 2017, the County authorized Geothermal CUP #16-0001, which allowed construction of up to four well pads as well as drilling and maintenance of up to six separate geothermal exploratory wells

on the Project site. A well pad, Well Pad 1, north of Alcott Road and west of Davis Road, and two geothermal wells were constructed on the site in 2021. Rough grading for Well Pad 3, south of Noffsinger Road and east of Davis Road began in November 2021. The remaining Project site is undeveloped..

Land Use Analysis:

The Hell's Kitchen Power and Lithium EIR analyzed potential impacts associated with the following: Aesthetics; Air Quality; Biological Resources; Cultural Resources; Energy; Geology and Soils; Greenhouse Gas Emissions; Hazards and Hazardous Materials; Hydrology and Water Quality; Noise; Transportation; Tribal Cultural Resources; Utilities and Service Systems; and Wildfire. No overriding considerations were purposed.

Surrounding Land Use Ordinance:

DIRECTION	CURRENT LAND USE	ZONING	GENERAL PLAN
Project Site	Vacant	S-1 G	Salton Sea\ Agriculture
North	vacant	S-1 G	Agriculture
South	Vacant	S-1 G	Agriculture
East	Vacant	S-1 G	Agriculture
West	Vacant (Salton Sea)	Salton Sea	Salton Sea

Environmental Review:

The proposed project has been environmentally reviewed and assessed with an Environmental Impact Report (EIR) SCH # 2022030704. Mitigation measures have been included to reduce impacts to biological resources, geology and soils, transportation and utilities and service systems, to less than significant based on each set of significance criteria. No significant and unavoidable impacts to any environmental resources would occur. The project Draft EIR, was publically circulated from August 30, 2023 thru October 23, 2023.

Staff Recommendation:

It is recommended that the Planning Commission conduct a public hearing, that you hear all the opponents and proponents of the proposed project. Staff would then recommend that Planning Commission take the following actions:

1. Approve the attached Resolution, with Findings for the Water Supply Assessment on the Hell's Kitchen PowerCo 1 and Hell's Kitchen LithiumCo 1 Projects.
2. Approve the attached Resolution, with CEQA Findings for the Final EIR Hell's Kitchen PowerCo 1 and Hell's Kitchen LithiumCo 1 Projects .
3. Approve the attached Resolution, with Findings for the Mitigation Monitoring and Reporting Program on the Hell's Kitchen PowerCo 1 and Hell's Kitchen LithiumCo 1 Projects
4. Approve the attached Resolution, with Findings for Conditional Use Permit CUP #21-0020, with conditions on the Hell's Kitchen PowerCo 1 Project.
5. Approve the attached Resolution with Findings for Conditional Use Permit CUP #21-0021 with conditions of approval on Hell's Kitchen LithiumCo 1 project.
6. Approve the attached Resolution with Findings for the Variance 21-0004.
7. Approve the Attached Resolution with Findings for the Variance 21-0005

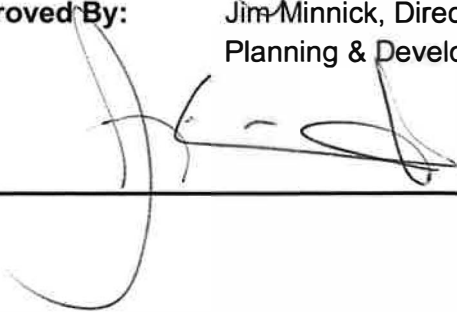
Prepared By: David Black, Planner Project Planner
Planning & Development Services



Reviewed By: Michael Abraham, AICP, Assistant Director
Planning & Development Services



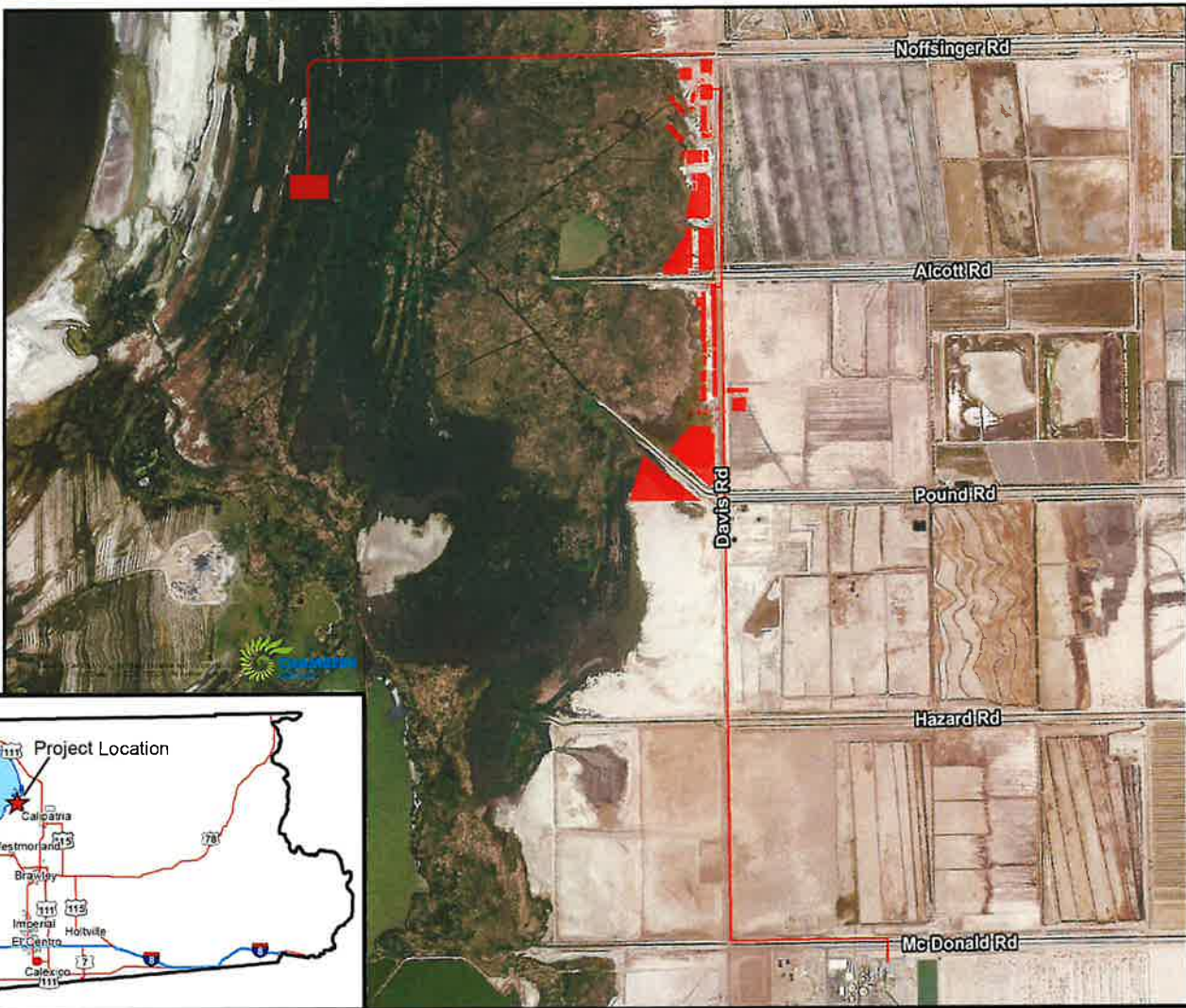
Approved By: Jim Minnick, Director
Planning & Development Services



- Attachments:
- A. Location Map/SITE PLAN
 - B. Water Supply Assessment (WSA)
 - C. EIR (FEIR & DEIR) ERRATA
 - D. MMRP
 - E. CUP 21-0020
 - F. CUP 21-0021
 - G. Variance 21-0004
 - H. Variance 21-0005

Attachment A:
Location Map/SITE PLAN

PROJECT LOCATION MAP



**HELL'S KITCHEN
POWER AND LITHIUM PROJECT**
CUP #20-0020 & CUP #20-0021 & V #21-0004
& #21-0005 APN 020-010-012, -013,
020-070-060, 020-010-031, -032, -035, -042,
020-060-001, -002, -039, -040,
020-070-025, -026, -029, -055

PC ORIGINAL PKG

	Project Location
	Centerline
	Parcels



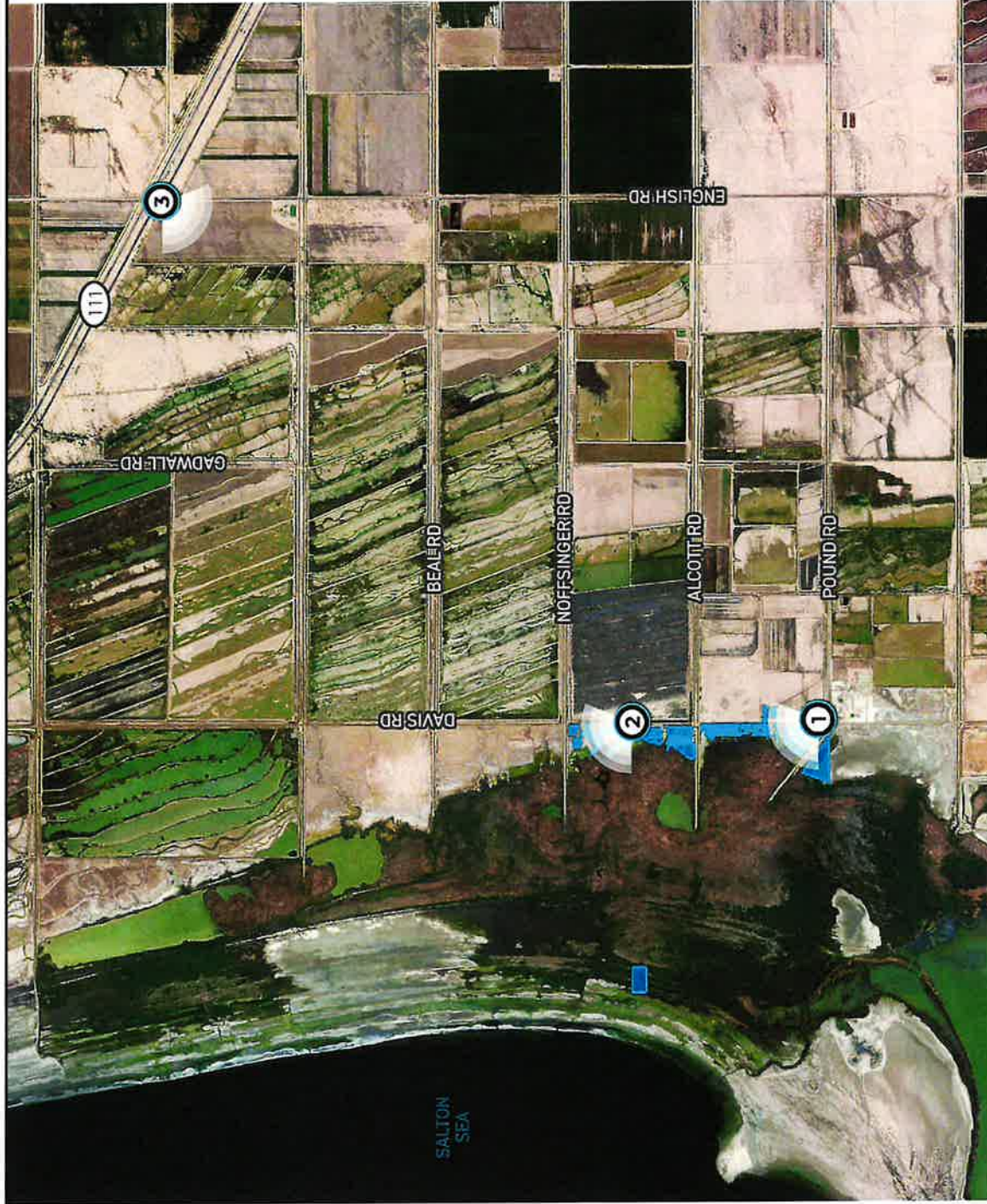


Figure 4.1-1
Hell's Kitchen Power
Visual Simulations Viewpoint



PHOTO SIMULATIONS ARE FOR INFORMATION PURPOSES ONLY. FINAL DESIGN IS SUBJECT TO CHANCE FENCING PUBLIC UTILITY/A

Figure 4.1-3
Hell's Kitchen Power
Viewpoint 2 Existing and Proposed



**Attachment B:
RESOLUTION WSA**

PC ORIGINAL PKG

RESOLUTION NO.

**A RESOLUTION OF THE PLANNING COMMISSION OF
THE COUNTY OF IMPERIAL, CALIFORNIA, FOR M
APPROVAL OF THE WATER SUPPLY ASSESSMENT
(WSA) FOR THE HELL'S KITCHEN POWER & LITHIUM
PROJECT TO THE BOARD OF SUPERVISORS.**

WHEREAS, the Hell's Kitchen Power Co. 1 LLC (Applicant) Project qualifies as a "project" under the Water Code triggering the need to prepare a Water Supply Assessment because it proposed to a demand of water equivalent to, or greater than, the amount of water required by a 500 dwelling unit project; and/or because it is a proposed industrial use occupying more than 40 acres of land. The Water Supply Assessment (WSA) has been prepared in accordance with Water Code 10912(c) (4).

WHEREAS, the Imperial County Planning Commission has the authority and responsibility for approving the WSA.

WHEREAS, the duty to prepare a Water Supply Assessment ("WSA") falls to the County of Imperial ("County") because Imperial Irrigation District ("IID") is not a public water system within the meaning of the Water Code 10912(c);

WHEREAS, the County, in consultation with an expert engineering firm and IID prepared the WSA, which includes any and all WSA addendums;

WHEREAS, the County has independently reviewed and considered the WSA and the entire administrative record, and;

WHEREAS, public notice of said application has been given, and the Planning Commission has considered evidence presented by the Imperial County Planning & Development Services Department and other interested parties at a public hearing held with respect to this item on December 13, 2023.

NOW THEREFORE, the Planning Commission of the County of Imperial **DOES HEREBY APPROVE OF THE WSA** as follows:

SECTION 1. The Planning Commission has considered the Hell's Kitchen Power Co. 1 LLC Project's WSA prior to making a decision to recommend approval of the proposed WSA. The Planning Commission finds and determines that the WSA is adequate and prepared in accordance with the requirements of Water Code, Section 10912(c)(4). The analysis of the WSA demonstrates, that the total projected water supplies, determined to be available by the County for the Project during normal, single dry, and multiple dry water years, will meet the projected water demand associated with the proposed project and based upon the following findings and determinations:

SECTION 2. That in accordance with State Planning and Zoning law, the County Planning Commission makes the following findings for the approval of the Hell's Kitchen Power Co. 1 LLC project:

1. This Water Supply Assessment has determined that IID has adequate polices, programs and projects in place to provide water to agricultural, commercial, industrial and municipal users in the Imperial Unit. Adequate supply is currently available as well as during normal water years. Conservation plans and measures are available to reduce the probability of Supply Demand Imbalance ("SDI") from occurring. Adequate agreements, plans and policies are in place that enable the Imperial Unit water supply to be considered reliable for 20 years.
2. IID serves as the regional water supplier, importing raw Colorado River water and delivering it, untreated, to agricultural, municipal, and industrial water users within its Service Area.
3. IID is a raw water retailer and a domestic raw water wholesaler, and does not supply potable drinking water.
4. This WSA has shown that IID water supply is adequate for this Project. IID's IWSP for Non-Agricultural Projects dedicates 25,000 AFY of IID's annual water supply to serve new projects.
5. As urban growth continues in Imperial County, agricultural water use may decline due to the transfer of water consumption to other land uses.
6. In the case of a SDI, IID's EDP gives water delivery priority to municipal and industrial users over agricultural users.
7. The IWSP sets aside 25,000 acre-feet per year (AFY) of IID's Colorado River water supply to serve new non-agricultural projects. To date, a balance of 19,620 AFY remains available under the IWSP ensuring reasonably sufficient supplies for such projects. The proposed Project water estimated demand is 6,500 AF per year of the project. Thus, the proposed Project's demand would not appear to affect IID's ability to provide water to other users in IID's water supply area (Imperial Unit).

NOW, THEREFORE, based on the above findings, the Planning Commission of the County of Imperial **DOES HEREBY** approve the Water Supply Assessment (WSA) for the Project.

Rudy Schaffner, Chairman
Imperial County Planning Commission

I hereby certify that the preceding resolution was taken by the Planning Commission at a meeting conducted on December 13, 2023 by the following vote:

AYES:

NOES:

ABSENT:

ABSTAIN:

ATTEST:

James A. Minnick, Secretary of the
Planning Commission/Director of Planning

S:\APN\020\010\012\Hells kitchen Power and Lithium\PC FOLDER\WSA\Resolution Water Supply Assessment.docx

SB 610 – Draft Water Supply Assessment
For
Hell’s Kitchen PowerCo 1 and LithiumCo 1 Project

Prepared For:

Imperial County Planning and Development Services

**801 Main Street
El Centro, California 92243**

Prepared by:

Chambers Group, Inc.

**3151 Airway Avenue, Suite F208
Costa Mesa, California 92626**

November 2023

(This page Intentionally left blank)

Hell’s Kitchen PowerCo 1 and LithiumCo 1 Project

Contents

PURPOSE OF WATER SUPPLY ASSESSMENT.....	7
Project Determination According to SB 610 - Water Supply Assessment.....	8
EXECUTIVE SUMMARY.....	9
PROJECT DESCRIPTION.....	11
HKP1 Facilities.....	12
HKL1 Facilities.....	15
HKP1 and HKL1 Shared Facilities and Design.....	16
Project Operations.....	18
Water Requirements.....	23
Description of IID Service Area.....	29
Climate Factors.....	29
Imperial Valley Historic and Future Land and Water Uses.....	32
Imperial Integrated Regional Water Management Plan (October 2012).....	33
IID Interim Water Supply Policy for Non-Agricultural Projects (September 2009).....	36
IID Temporary Land Conversion Following Policy (May 2012).....	37
IMPERIAL IRRIGATION DISTRICT’S WATER RIGHTS.....	38
California Law.....	38
Law of the River.....	38
IMPERIAL IRRIGATION DISTRICT WATER SUPPLY AND DEMAND.....	48
WATER AVAILABILITY – NORMAL YEAR.....	48
EXPECTED WATER AVAILABILITY – SINGLE DRY AND MULTIPLE DRY YEARS.....	51
Water Management under a Suspended Inadvertent Overrun Payback Policy (IOPP).....	51
Equitable Distribution Plan (EDP) History.....	54
Projected Water Supplies.....	55
PROJECT WATER AVAILABILITY FOR A 20-YEAR PERIOD TO MEET PROJECTED DEMANDS.....	56
EXPECTED WATER DEMANDS FOR THE PROPOSED PROJECT.....	59
IID’S ABILITY TO MEET DEMANDS WITH WATER SUPPLY.....	61
Expanding Water Supply Portfolio.....	64
IID Near Term Water Supply Projections.....	66
IMPERIAL COUNTY PLANNING AND DEVELOPMENT SERVICES (LEAD AGENCY) FINDINGS.....	68
ASSESSMENT CONCLUSION.....	70
RESOURCES AND REFERENCES.....	72
ATTACHMENTS.....	73

Figures

Figure 1. Project Site Regional Location 25

Figure 2. Aerial Map of Project Vicinity 26

Figure 3. Project Layout/Site Plan 28

Figure 4. IID Imperial Unit Boundary and Canal Network..... 30

Figure 5. Major Colorado River Reservoir Storage Facilities and Basin Location Map..... 44

Figure 6. Lake Mead Water Elevation Levels January 2022 47

Figure 7. Lake Mead Schematic (June 15, 2022)..... 53

Tables

Table 1. Climate Characteristics, Imperial, CA 100-Year Record, 1923-2022..... 31

Table 2. IID Areawide Annual Precipitation (In), (1990-2022) 31

Table 3. Monthly Mean Temperature (°F) – Imperial, CA 10-Year, 30-Year & 100-Year (2013-2022, 1993-2022, 1923-2022) 31

Table 4. Monthly Mean Rainfall (In) – Imperial, CA 10-Year, 30-Year & 100-Year (2013-2022, 1993-2022, 1923-2022) 32

Table 5. Non-Agricultural Water Demand within IID Water Service Area, 2015-2055 (KAFY)..... 34

Table 6. Historic and forecasted Agricultural Water Consumptive Use and Delivery Demand within IID Water Service Area, 2015-2055 (KAFY) 35

Table 7. IID System Operations Consumptive Use within IID Water Service Area and from AAC at Mesa Lateral 5 to Imperial Dam, (KAF), 2020 36

Table 8. Interim Water Supply Policy 2023 Annual Non-Agricultural Water Supply Development Fee Schedule..... 36

Table 9. CRWDA Annual 4.4 MAF Apportionment (Priorities 1 to 4) for California Agencies (AFY)..... 42

Table 10. Unregulated Inflow to Lake Powell, Percent of Historic Average, 2000-2022 45

Table 11. IID Historic and Forecast Net Consumptive Use for Normal Year, Single-Dry Year and Multiple-Dry Year Water Supply, 2003-2037, et seq. (CRWDA Exhibit B) 50

Table 12. IID Annual Rainfall (In), Net Consumptive Use and Underrun/Overrun Amounts (AF), 1988-2022..... 52

Table 13. IID Inadvertent Overrun Payback to the Colorado River under the IOPP, 2012-2022 53

Table 14. Project Operational Water Uses (AFY) 59

Table 15. Ten-Year Historic Delivery (AFY), 2013-2022 59

Table 16. IID System Operations Consumptive Use within IID Water Service Area and from AAC at Mesa Lateral 5 to Imperial Dam, (KAF), 2022 61

Table 17. IID Historic and Forecasted Consumptive Use vs CRWDA Exhibit B IID Net Available Consumptive Use, volumes at Imperial Dam (KAFY), 2015-2055 62

Table 18. 2020 Approved Water Order, Actual CU (Decree Accounting Report) and IID Underrun, KAF at Imperial Dam 62

Table 19. IID Capital Project Alternatives and Cost (May 2009 price levels \$)..... 66

Attachments

Attachment A: IID Interim Water Supply Policy for Non-Agricultural Projects

Acronyms

AF	Acre-Foot or Acre-Feet
AFY	Acre-Feet per Year
AOP	Annual Operations Plan
CAP	Central Arizona Project
CDCR	California Department of Corrections and Rehabilitation
CDPH	California Department of Public Health
CDWR	California Department of Water Resources
CEQA	California Environmental Quality Act
CRWDA	Colorado River Water Delivery Agreement
CUP	Conditional Use Permit
CVWD	Coachella Valley Water District
EDP	IID Equitable Distribution Plan
EIS	Environmental Impact Statement
ICPDS	Imperial County Planning and Development Services
ICS	Intentionally Created Surplus
IID	Imperial Irrigation District
IOPP	Inadvertent Overrun Payback Policy
ISG	Interim Surplus Guidelines
IRWMP	Integrated Regional Water Management Plan
IWSP	Interim Water Supply Policy
KAF	Thousand Acre Feet
LAFCO	Local Agency Formation Commission
LCR	Lower Colorado Region
MCI	Municipal, commercial, industrial
MGD	Million Gallons per Day
MW	Megawatt
MWD	Metropolitan Water District of Southern California
NAF	Naval Air Facility
PVID	Palo Verde Irrigation District
QSA/ Transfer Agreements	Quantification Settlement Agreement and Related Agreements
SB	Senate Bill
SDCWA	San Diego County Water Authority
SNWA	Southern Nevada Water Authority
TLCFP	Temporary Land Conversion Following Policy
USBR	United States Bureau of Reclamation
USEPA	United States Environmental Protection Agency
WSA	Water Supply Assessment

PURPOSE OF WATER SUPPLY ASSESSMENT

This Water Supply Assessment (WSA) was prepared for the Imperial County Planning and Development Services (Lead Agency) by Chambers Group, Inc. (Chambers Group), regarding Controlled Thermal Resources (US), Inc. (CTR) (the "Applicant") Hell's Kitchen PowerCo 1 and LithiumCo 1 Project (the "Project"; HKP1 and HKL1, respectively). This study is a requirement of California law, specifically Senate Bill 610 (referred to as SB 610). SB 610 is an act that amended Section 21151.9 of the Public Resources Code, and Sections 10631, 10656, 10910, 10911, 10912, and 10915 of the Water Code. SB 221 is an act that amended Section 11010 of the Business and Professions Code, while amending Section 65867.5 and adding Sections 66455.3 and 66473.7 to the Government Code. SB 610 was approved by the Governor and filed with the Secretary of State on October 9, 2001, and became effective January 1, 2002.¹ SB 610 requires a lead agency, to determine that a project (as defined in CWC Section 10912) subject to California Environmental Quality Act (CEQA), to identify any public water system that may supply water for the project and to request the applicants to prepare a specified water supply assessment.

This study has been prepared pursuant to the requirements of CWC Section 10910, as amended by SB 610 (Costa, Chapter 643, Stats. 2001). The purpose of SB 610 is to advance water supply planning efforts in the State of California; therefore, SB 610 requires the Lead Agency, to identify any public water system or water purveyor that may supply water for the project and to prepare the WSA after a consultation. Once the water supply system is identified and water usage is established for construction and operations for the life of the project, the lead agency is then able to coordinate with the local water supplier and make informed land use decisions to help provide California's cities, farms, and rural communities with adequate water supplies.

Under SB 610, water supply assessments must be furnished to local governments for inclusion in any environmental documentation for certain projects (as defined in California Water Code (CWC) Section 10912 [a]) that are subject to the California Environmental Quality Act (CEQA). Due to increased water demands statewide, this water bill seeks to improve the link between information on water availability and certain land use decisions made by cities and counties. This bill takes a significant step toward managing the demand placed on California's water supply. It provides further regulations and incentives to preserve and protect future water needs. Ultimately, this bill will coordinate local water supply and land use decisions to help provide California's cities, farms, rural communities, and industrial developments with adequate long-term water supplies. The WSA will allow the lead agency to determine whether water supplies will be sufficient to satisfy the demands of the project, in addition to existing and planned future uses.

¹SB 610 amended Section 21151.9 of the California Public Resources Code, and amended Sections 10631, 10656, 10910, 10911, 10912, and 10915, repealed Section 10913, and added and amended Section 10657 of the Water Code. SB 610 was approved by California Governor Gray Davis and filed with the Secretary of State on October 9, 2001.

Project Determination According to SB 610 - Water Supply Assessment

With the introduction of SB 610, any project under the California Environmental Quality Act (CEQA) shall provide a Water Supply Assessment if the project meets the definition of CWC § 10912. Water Code section 10911(c) requires for that the lead agency “determine, based on the entire record, whether projected water supplies will be sufficient to satisfy the demands of the project, in addition to existing and planned future uses.” Specifically, Water Code section 10910(c)(3) states that “If the projected water demand associated with the proposed project was not accounted for in the most recently adopted urban water management plan, or the public water system has no urban water management plan, the water supply assessment for the project shall include a discussion with regard to whether the total projected water supplies, determined to be available by the city or county for the project during normal, single dry, and multiple dry water years during a 20 year projection, will meet the projected water demand associated with the proposed project, in addition to the public water system’s existing and planned future uses, including agricultural and manufacturing uses.”

After review of CWC § 10912a, and Section 10912 (a)(5)(B), it was determined that Hell's Kitchen PowerCo 1 and LithiumCo 1 Project is deemed a project as it is considered an industrial use that will occupy more than 40 acres of land and will have more than 650,000 square feet of floor area.

EXECUTIVE SUMMARY

The Imperial County Planning and Development Services in coordination with Imperial Irrigation District has requested a WSA as part of the environmental review for the proposed Hell's Kitchen PowerCo 1 and LithiumCo 1 Project ("Project"). This study is intended for use by Imperial County Planning and Development Services and Imperial Irrigation District in its evaluation of water supplies for existing and future land uses. The evaluation examines the following water elements:

Water availability during a normal year

Water availability during a single dry year, and multiple dry water years

Water availability during a 20-year projection to meet existing demands

Expected 20-year water demands of the Project

Reasonably foreseeable planned future water demands to be served by the Imperial Irrigation District under Equitable Distribution Plan apportionment

The proposed Project site is located within undeveloped land predominantly owned by IID, land partially owned by Hell's Kitchen Geothermal LLC, and a right-of-way (ROW) corridor for the gen-tie and power line to the IID's interconnect station at Hudson Ranch (HR1). The Project would be located within Sections 11 and 12, Township 11 North, Range 13 East in Imperial County near the eastern shore of the Salton Sea. The Project is approximately 3.6 miles west of the town of Niland. The majority of the proposed HKP1 and HKL1 facilities are located immediately west of Davis Road, with administrative buildings and warehouses located east of Davis Road. The 230-kilovolt (kV) gen-tie line for HKP1 will run from Noffsinger Road approximately 2 miles south to McDonald Road and then will run approximately 0.3 miles east to Hudson Ranch. The gen-tie line would be located east of Davis Road and north of McDonald Road, within the IID's transmission ROW and within new ROW. The power line to supply power to the HKL1 facilities would be collocated on the HKP1 transmission structures/poles. The proposed Project is within IID's Imperial Unit and district boundary and as such is eligible to receive water service.

IID adopted an Interim Water Supply Policy (IWSP) in 2009 for new Non-Agricultural Projects, under which water supplies may be contracted to serve new developments within IID's water service area. For applications processed under the IWSP, applicants shall be required to pay a processing fee and, after IID board approval of the corresponding water supply agreement, will be required to pay a reservation fee(s) and annual water supply development fees. The water supply development fees are collected for the development of water supply projects, such as water conservation projects, water storage projects and/or water augmentation projects.

Under the IWSP, IID may set aside up to 25,000 acre-feet annually (AFY) of IID's Colorado River water supply to serve new non-agricultural projects with water created from IID efficiency conservation projects and programs. As of January 2023, a balance of 19,620 AFY remain available under the IWSP for new non-agricultural projects, providing a mechanism for the development of reasonably sufficient water supplies for such projects. The proposed Project water demand of approximately 6,500 AFY represents 33.13 % of the annual unallocated supply that may be created and set aside for new non-agricultural projects.

Imperial County Planning and Development Services anticipates non-agricultural project water supply demand within their jurisdiction, as the land use authority, is unlikely to exhaust the 19,620 AFY available under the IWSP within the foreseeable 20-year planning period. Thus, the proposed Project's estimated water demand, combined with other development anticipated in the area is unlikely to adversely affect IID's ability to provide water to other users in IID's water service area.

In efforts to address any potential water supply/demand imbalances, on June of 2022, IID adopted a revised Equitable Distribution Plan for the apportionment of water to all water user categories including for commercial/industrial water uses such as the proposed Project. Implementation of the EDP initiates every January 1st and continues throughout the year unless the IID Board of Director takes specific action. Under the EDP, water supplies may be restricted to Hell's Kitchen PowerCo 1 and LithiumCo 1 Project as described under the IID Water Supply & Demand Section, Equitable Distribution Plan sub-section of this WSA.

IID's EDP implementation efforts in 2022 coincide with efforts communicated by the U.S. Bureau of Reclamation to all Colorado River Basin contractors during the same time period. In June 2022, Commissioner Camille Touton testified before a congressional committee and called for the Basin states to develop a plan before the end of the year to reduce demands by 2-4 million acre-feet per year, through 2026, or the Secretary of the Interior would take regulatory action to force these reductions in order to protect the Colorado River system in light of the prolonged drought conditions and climate change impacts.

California reductions, or the potential for regulatory reductions, by the Secretary of the Interior remain undefined as of the date of this WSA. IID is working diligently with federal agencies and Colorado River contractors to minimize impacts to the local community while simultaneously ramping up water conservation programs in an effort to augment local water supplies, to some degree, should Basin-wide cuts be unavoidable. In the interim, IID has gone on record that its share of the California proposal under a voluntary plan would not exceed 250,000 AFY (through 2026) as long as there are no obligatory reductions imposed.

PROJECT DESCRIPTION

CTR is proposing to build, operate, and maintain a geothermal power plant (HKP1) and mineral extraction and processing facilities (HKL1) on approximately 65.0 acres of predominantly public lands in the Imperial Valley in Imperial County. More specifically, the project is located within undeveloped land owned by IID and a right-of-way (ROW) corridor for the gen-tie and power line to the IID's interconnect station at Hudson Ranch (HR1). The Project would be located within Sections 11 and 12, Township 11 North, Range 13 East in Imperial County near the eastern shore of the Salton Sea. Section 11 is being leased with a purchase negotiation underway. The 2.5 acres on Section 12 is owned Hell's Kitchen LLC. The Project is approximately 3.6 miles west of the town of Niland. The majority of the proposed HKP1 and HKL1 facilities are located immediately west of Davis Road, with administrative buildings and warehouses located east of Davis Road. The 230-kV gen-tie line for HKP1 will run from Noffsinger Road approximately 2 miles south to McDonald Road and then will run approximately 0.3 miles east to Hudson Ranch. The gen-tie line would be located east of Davis Road and north of McDonald Road, within the IID's transmission ROW and within new ROW. The power line to supply power to the HKL1 facilities would be collocated on the HKP1 transmission structures/poles. A majority of the development area is zoned S-1-G (open space/geothermal overlay zone) with a portion zoned S-2-G (open space/preservation/geothermal overlay) and is entirely within the renewable energy/geothermal map overlay zone in the 2015 Renewable Energy and Transmission Element update to the County General Plan. The gen-tie and power line ROW is zoned S-1-G and M-2-G-PE (medium industrial/geothermal overlay). The General Plan Land Use designation for the entire Project is Agriculture. Individual Assessor Parcel Numbers (APNs) and associated zoning designations are as follows: Zoning Designation S-1-G and S-2-G, 020-010-012; Zoning Designation S-1-G, 020-010-013, 020-070-060, 020-010-042, 020-060-001, 020-060-002, 020-060-039, 020-060-040, 020-070-026, 020-070-025, 020-070-029, 020-070-055, 020-010-031, 020-010-032; Zoning Designation M-2-G-PE, 020-010-035, 020-010-044. Please refer to Figure 1 for the Project's Regional Location (**Figure 1. Site Regional Location**), and Figure 2 for the Project Site and Vicinity (**Figure 2. Aerial View of Project Site and Vicinity**).

In general, the project can be described as follows:

HKP1 will include construction of the following structures: three production wells, four injection wells and associated well pads; geothermal fluid production and injection pipelines; a brine processing facility; a brine pond; 49.9-MW net geothermal turbine generator facility; a cooling tower; material and equipment storage; a control building; administrative and warehouse buildings; a water storage pond and water storage tank; an on-site substation; and a 230-kV gen-tie line to the IID interconnect station at Hudson Ranch. HKL1 will include construction of the following structures: geothermal pipelines to transfer brine from HKP1; a cooling tower; truck entrance security; a cooling tower and flocculation facilities; brine crystallizers, clarifiers, thickeners, and filter presses; a lithium-recovery resin vessel and systems; raw water filtration, fire-water storage, and reverse osmosis (RO) facilities; electrical buildings to house electric power switchgear and electrical metering; a substation; reagent storage and preparation buildings; two motor-control centers and a control room building; lithium product handling and packaging buildings (that will house the filtration and drying equipment for the lithium products and bagging and palletizing of finished

products); polymetallic product handling facilities; bulk sulfide product handling facilities; silica product manufacturing facilities; bulk boron product handling facilities; two lime silos; hydrochloric acid (HCl) offloading and storage tanks; and an RO water treatment facility. Construction of HKP1 facilities will occur over a period of about 22 months. The engineering and construction of HKL1 facilities lags that of HKP1 by about 13 months. Construction of HKL1 facilities will occur over a period of about 19 months. The amount of water required for HKP1 and HKL1 construction during these periods is expected to be x acre-feet and y acre-feet, respectively.

HKP1 Facilities

Production and Injection Wells

The Project will use Well Pad 1 and a well pad adjacent and south of the Q Drain for geothermal fluid production and injection. The Project may also use Well Pad 4 for geothermal fluid production or injection. Well Pad 1 was previously approved for geothermal exploration drilling and was constructed in 2021. The geothermal production wells will be drilled at Well Pad 1, and one or two injection wells will also be drilled at Well Pad 1. The existing footprint of Well Pad 1 will be expanded during construction of the commercial facility by approximately 160 feet to the north to accommodate the wells required for commercial operation of the Project. Well Pad 4 was previously approved by the County for geothermal exploration drilling but was not constructed. The Project will include a total of seven wells, three production and four injection, including one well for injection of aerated fluids. The two previously drilled geothermal exploration wells will be used as commercial production wells for the Project. All production and injection wells will be operated in accordance with California Geologic Energy Management Division (CalGEM) regulations.

Well-Site Production and Injection Equipment

Production and injection wellhead dimensions are not expected to exceed a height of 15 feet above the ground surface or 4 feet in diameter. The wellhead will consist of control valves, warmup bypass valves, and isolation valves. The wellheads will be insulated, and the insulation cladding will be supplied with an appropriate color to blend with the area and minimize visibility. The injection wells will be located to avoid geothermal fluid interference with the production wells. Each injection well will be remotely monitored for pressure, temperature, and flow rate. Injection pumps located at the power plant site will pump the geothermal injection fluid through the injection pipeline system, providing sufficient pressure to inject the geothermal brine back into the geothermal reservoir. Limited electrical equipment is required at the injection well sites. A flow meter will be integrated into the injection pipeline equipment at the injection well pad and remotely operated from the control room. Overhead lighting will be constructed on the injection well pads. The injection well pad will be fenced. The geothermal production and injection wells will be drilled from the production and injection well pads using steel, titanium or titanium alloy, nickel alloy, duplex stainless steel, or equivalent as appropriate to the final well completion depth.

Geothermal Pipeline Systems

Above-ground pipelines will be constructed to interconnect the production and injection wells with the power plant site facilities. The pipelines will be constructed at ground level on pipeline supports on drilled foundations approximately every 20 to 40 feet along the pipeline routes. The pipelines will use a cattleguard type crossing at the Q and R Drains to avoid impacts on the irrigation drains, and the crossing will be constructed in collaboration with IID. Pipeline construction will be conducted concurrently with construction of the power plant. The production wellheads will be located on Well Pad 1, south of the power plant site. An above-ground pipeline will be constructed from the production wells to the brine and steam-handling facilities on the power plant site. The production pipelines will be constructed from alloy or alloy-lined pipe designed, constructed, tested, and inspected pursuant to current industry standards for high temperature, high-pressure piping. Above-ground geothermal fluid pipelines, approximately 30-inches in diameter, will be covered with approximately 2 inches of insulation and a protective metal sheath appropriately colored to blend with the area. The brine injection pipeline will be either cement-lined carbon steel, alloy, or a combination of both. The brine injection pipeline will be approximately 24 inches in diameter and will be insulated then covered with a protective metal sheath appropriately colored to blend with the area.

Brine Processing Facility

The brine processing facility will prepare the geothermal fluid produced from the production wells for steam extraction. The geothermal fluid will be delivered through aboveground pipelines to the brine-processing facility. The spent brine will be injected back into the geothermal reservoir through injection wells (discussed below). A pH-modification system will be installed should silica management be necessary to prevent scaling in either surface equipment or injection wellbores. The pH modification system will involve injection of dilute HCl into the brine stream exiting the high-pressure separator at a rate to establish a known bulk fluid pH value. The pH modification system consists of a concentrated acid storage tank, acid transfer pumps, a diluted acid storage tank, diluted acid injection pumps, and an injection nozzle to distribute the diluted acid into the brine injection pipeline. Concentrated HCl (approximately 32% by weight) will be delivered to the Project site by truck for storage. The concentrated acid will be mixed with service water to create a diluted acid solution (approximately 4% by weight). This diluted acid solution, should it be necessary for silica management, would then be injected into the brine pipeline between the high-pressure separator and the brine-injection pumps.

Brine Pond

The brine pond will be cement-lined, with an underliner-leak detection system, and will allow for storage of brine during upset conditions and collection of brine during flow testing and plant start-up. The brine pond will be sized to accommodate two times the volume of the largest vessel and up to six hours of normal-brine-flow equivalent during system upset conditions plus two feet of freeboard. The brine pond will be constructed as a waste management unit (WMU) to meet Colorado River Regional Water Quality Control Board (CRRWQCB) surface-discharge requirements. Groundwater-monitoring wells will be constructed adjacent to the brine pond in conformance with CRRWQCB requirements.

Turbine Generator Facility

The Project will use flash-based power plant technology utilized in the Salton Sea geothermal field since 1982 to convert geothermal-based renewable steam energy into electricity. Steam from the high temperature geothermal fluid in the brine-handling facilities will be delivered to the turbine generator facility. The turbine generator facility will include a 49.9-MW (net) condensing turbine/generator set, a gas removal and emission abatement system, and a heat rejection system (i.e., condenser and cooling tower). The steam will be purified using a scrubber and demister before being admitted into the condensing steam turbine. The turbine will be directly coupled to a totally enclosed water and air-cooled (TEWAC) synchronous-type generator. The turbine-generator unit will be fully equipped with all the necessary auxiliary systems for turbine control and speed protection, lubricating oil, gland sealing, generator excitation, and cooling. Facilities associated with the turbine generator facility include a control building, a service water storage tank, lube oil skid, and other ancillary facilities. One 3-MW diesel generator will be installed to provide black start capability and emergency site power when the steam turbine generator is shut down. An 800-kW emergency generator will also be installed to provide backup for critical instrument and equipment control power. The diesel engines will meet California Air Resources Board (CARB) air pollutant emission limits. The generators are expected to operate fewer than 600 hours per year.

Heat Rejection and Non-Condensable Gas Removal Systems

The heat rejection system will be comprised of a shell-and-tube type condenser, a counterflow cooling tower, and a noncondensable gas (NCG) removal system. The cooling tower, NCG removal system, and condenser design will be similar to those employed at other geothermal power plants at the Salton Sea. The cooling tower will be up to 40 feet tall. Steam from the turbine will be condensed in the condenser. The geothermal steam condensate from the condenser will be collected in an aeration tank and used as a source of makeup water for the cooling tower. Gases that accumulate in the condenser will be evacuated by the NCG removal system. NCG will be pressurized and vented to a hydrogen sulfide (H₂S) abatement system during normal plant operation. During plant start-up or load rejection (i.e., plant trip offline), steam to the turbine will be diverted to a rock muffler for safe venting as is currently the procedure at the existing geothermal power plants in the Salton Sea KGRA. During this time, H₂S and other NCG will be released to the atmosphere. A combination of best available control technology, management practices, and process-monitoring equipment will be used to minimize air emissions from the power plant facilities. Permits to construct and operate the facility will be obtained from the Imperial County Air Pollution Control District (ICAPCD).

Hydrogen Sulfide Abatement System

H₂S gas is a naturally occurring compound found in Salton Sea geothermal brines. To minimize H₂S from being released to the atmosphere and to meet permitted requirements during routine operations, the project will employ proven abatement systems. The H₂S abatement system effectively oxidizes the gas to a sulfate (SO₄²⁻) that is highly soluble and then returns the sulfate product to injectate streams via the cooling tower blowdown process. Non-condensable gases, including H₂S, are removed from the main condenser through a series of steam-powered air ejectors, vacuum pumps, and compressors. Once the gas

stream is pressurized, it is sent to a sparging system located in the cooling tower basin, where the H₂S reacts with H₂S abatement chemicals to oxidize the sulfide to sulfate. The sulfate product is injected into the reservoir with cooling tower blowdown. Additionally, condensate flowing from the main condenser is routed to a tank where oxygen (sparged air) is introduced along with oxidizing chemicals. This process oxidizes any remaining H₂S gas to soluble sulfate. The treated condensate is then introduced to the cooling tower basin as a source of makeup water. As stated above, the sulfate product is subsequently injected into the reservoir as cooling tower blowdown.

Substation and Electrical Power Transmission

The electricity from the geothermal power plant will be converted to 230-kV in the onsite substation. The output of the turbine generator facility is connected through a generator breaker to a (13.8-kV to 230-kV) main step-up transformer in the facility substation. The transformer will be set on a concrete pad within an oil containment system. The transformer will include gas-insulated switchgear. The high voltage side of the main step-up transformer will be connected to a new gen-tie line located within IID's transmission ROW to the IID interconnect station at HR1. The gen-tie line will be constructed as part of the power plant construction but turned over to IID for ownership and operation. The transmission line will be installed on steel structures that will support up to two 230-kV three-phase electrical circuits, including optical ground and static wire. The steel structures will consist of direct-bury steel poles approximately 120 feet tall and will span an average length of 800 feet.

HKL1 Facilities

Pipe Rack and Process Pipelines

A pipe rack will be constructed from the HKL1 Project's process area to the HKP1 site. A geothermal brine delivery pipeline from HKP1 will feed brine to the HKL1 Project's process area. Steam/steam-condensate pipelines will also be constructed on the pipe rack. After minerals processing, the depleted brine will be delivered to the HKP1 injection system for reinjection into the geothermal reservoir. The geothermal brine delivery and return pipelines will be constructed with minimal usage of flanged connections to reduce the potential for pipeline leaks. Automatic valves will be integrated into the pipeline system that will close or divert the geothermal brine in the event of a pipeline issue to minimize the size of any potential spill. An Emergency Response Plan will be prepared and implemented should a fluid spill event occur.

Product Extraction Facilities

The lithium extraction areas will be constructed on concrete pads with a containment curb. The lithium extraction processing areas will consist of a series of interconnected tanks, pipelines, and control valves.

Security Fence and Landscaping

A security fence will be constructed around the Project site. The fence will be constructed to meet Imperial County standards for obscured fencing around processing areas.

Power Facilities

A power line will be installed for HKL1 on the transmission structures that are being constructed for HKP1. An electrical substation will be constructed on the site to obtain power from IID. Six electrical-control buildings will be located on the site, and each will house pad-mounted transformers and switchgear. An emergency standby diesel generator will provide emergency power supply in case of electrical outage.

HKP1 and HKL1 Shared Facilities and Design

Foundations

Buildings and equipment will be constructed on foundations consistent with the overall site plan. Deep foundations for all major equipment are expected to require subsurface improvements in the form of steel and or concrete pilings. Shallow foundations for buildings are not expecting to require piling supports.

Potable Water

During construction of the HKP1 and HKL1 facilities, potable water will be procured as needed from a local potable water vendor (e.g., El Oasis Water Company, Imperial). Facilities construction will include installation of an on-site potable water treatment system provided by a qualified supplier (e.g., Water Treatment Services Inc, El Centro) and conforming to the permit requirements of the Imperial County Public Health Department.

Water Storage

A high-density polyethylene (HDPE)-lined freshwater pond will be constructed at the southern end of the Project site and just north of the Q Drain. The pond will store and provide fresh water for Project operations. The pond will be sized to provide sufficient storage capacity to meet Project demand during foreseeable periodic interruptions in IID canal water availability. A 100,000-gallon water storage tank will be located on site water storage and 5-acre water storage pond for the facility to use would also be on site.

Stormwater Retention

Stormwater retention infrastructure will be constructed along the western boundary of the site. A berm/levee will run along the western boundary of the site to contain any stormwater runoff and prevent stormwater run on. Water accumulated in the stormwater retention basin will be allowed to evaporate or possibly used as a substitute for normal fresh water. The retention basin will be designed to meet State Water Resources Control Board requirements and will include an appropriate mosquito abatement per Imperial County guidelines. The developed Project facility pad generally will be flat but will be designed to effectively drain to the stormwater retention basin. The stormwater drainage system will be sized to accommodate 3 inches of precipitation in a 24-hour period (100-year storm event), and to the comply with applicable local codes and standards. Buildings and equipment will be constructed to provide protection from a 100-year storm event. Spill containment areas and sumps subject to spills of miscible chemicals will drain to an enclosed oil/water separator and will be collected in a waste oil tank for off-site recycling. The

site will be graded and constructed so that any geothermal fluid spills will be collected in sumps that drain to the brine pond rather than the stormwater retention basin.

Generation Tie Line and Power Facilities

The 230-kV gen-tie structures constructed for the HKP1 project will be used to support the new power line for the HKL1 Project. The gen-tie line will run from Noffsinger Road approximately 2 miles south to McDonald Road and then will run approximately 0.3 miles east to Hudson Ranch. The gen-tie line will be located east of Davis Road and north of McDonald Road within IID's transmission right-of-way and within new right-of-way.

Parking and Site Access

Parking will be available in the administration and control building area. The Project will be accessed from Davis Road via new ingress/egress driveways. Davis Road will be upgraded with aggregate base during construction of the HKP1 Project. Project traffic will access the site from Highway 111 via McDonald Road and Davis Road. A bridge will be constructed across the R Drain to connect the northern and southern portions of the Project site. County road ingress/egress points will be constructed in conformance with Imperial County Public Works Department and Fire Department requirements. Road access will be restricted during construction, and appropriate traffic controls will be in place during construction of the Project. Davis Road will be paved from McDonald Road to Noffsinger Road at the completion of HKL1 Project construction. All structures within IID right-of-way (ROW), including the bridge over the R Drain, will require IID ROW and approval.

Please refer to Figure 3 for the conceptual project layout and tentative site plan. (**Figure 3.** Project Layout/Site Plan).

The geothermal power plant (HKP1) and mineral extraction and processing facilities (HKL1) will require regional, State, and federal permits as follows, Lead Agency required permits: CUP, Zoning Variance, Development Agreement (if needed), Building and Grading Permit, and Encroachment Permit; Reviewing Federal Agency required permits: USFWS Incidental Take Permit (ITP, if needed) and USACE Individual Permit under Section 404 of the Clean Water Act; Reviewing State Agency required permits: California Department of Transportation (Caltrans) Encroachment Permit, CDFW Lake or Streambed Alteration Agreement and ITP (if needed), California Department of Toxic Substances/Certified Unified Program Agency (CUPA) Hazardous Materials/Environmental Protection Agency Approvals and Permits, and CalGEM Permit(s) to drill; Reviewing Regional Agency required permits: CRRWQCB Waste Discharge Requirement and 401 Water Quality Certification, IID Encroachment Permit, Imperial County Air Pollution Control District Permit to Construct and Permit to Operate; Use of Generators (if needed), Imperial County Public Health Department Nontransient-Noncommunity Water System Permit, Imperial County Building Department Building and Grading Permits, Imperial County Public Works Department Encroachment Permit(s), and any requirements set forth by Imperial County Fire Department and Office of Emergency Services. These permits and agreements will allow for the Project operations and outputs described below.

Project Operations

Routine operations and maintenance of the facility will include preventative maintenance and repairs of any damaged or otherwise inoperable equipment on an as-needed basis. The operation and maintenance staff will monitor the facility operations over the project life to ensure the power plant is operating to meet design standards. The HKP1 facility will utilize geothermal brine to create geothermal energy which will be sold to IID through the gen-tie line. The HKL1 facility will utilize geothermal brine produced from the geothermal fluid management activities on the neighboring HKP1 power plant site for the commercial production of lithium hydroxide, silica, bulk sulfide, and polymetallic products. The production processing steps may be altered over time as production methods and efficiencies evolve and new or revised product lines are developed at the facility. The process includes the following steps: brine cooling; silica, bulk sulfide, and polymetallic product production; lithium and metals extraction; concentration of lithium extractant; processing of lithium extractant to lithium hydroxide; drying and packaging of lithium and polymetallic products; offsite product shipping.

Each of the general processing steps is discussed further below. After processing of the geothermal brine, the depleted brine will be returned to HKP1 for injection at the wells, developed for HKP1, south of the Q Drain.

Metal Recovery

Geothermal brine from the HKP1 will feed two parallel vacuum-flash brine cooling trains sized for the full operating flow of approximately 5 million pounds per hour (lbs./hr.) The cooled brine will be fed to the mineral extraction process. Silica, bulk sulfide, and polymetallic products will be extracted from the brine using proprietary technology. Silica, bulk sulfide, and polymetallic products will be filtered and shipped offsite in roll-off bins. A lithium chloride (LiCl) product stream will also be produced using a proprietary extraction process. The LiCl will be processed in the subsequent lithium process steps.

Lithium Production

The LiCl product stream will be concentrated and purified. The purified, concentrated LiCl will be transported via pipeline from the lithium purification/concentration operation to the lithium product production buildings. Proprietary technology will be used to convert the LiCl into a LiOH•H₂O product.

The LiOH•H₂O product stream will be crystallized and transported to a lithium product handling, production, and warehouse building, where the crystals will be separated from the lithium-rich process fluid in a filtration system. LiOH•H₂O crystals will be dried and packaged in bulk bags. Packaging is expected to be into 20-kilogram (kg) bags or into 1,000-kg super sacks.

Product Shipping to Offsite Markets

The HKL1 plant will produce multiple products for offsite shipment to market by truck. The average annual amount of product shipped out of the plant operating at 5,000,000 lbs./hr. brine flow capacity is estimated at approximately 5,100 lbs./hr. dry lithium product (LiOH•H₂O), 3,100 lbs./hr. silica, 9,800 lbs./hr. bulk

sulfide and 60,000 lbs./hr. polymetallic products. All products will be transported by freight truck on existing roadways to shipping distribution point(s).

Operational Workforce, Schedule, and Traffic

The HKP1 facility will require up to 22 full-time onsite employees during operation. Operational staff will include operators, management and supervisors, maintenance technicians, and lab technicians. On a typical day, the operators will assume a two-shift, 24-hour workday, and all other personnel will assume a standard 8-hour workday. Approximately 22 worker trips, 3 vendor trips, and 1 haul-truck trip will take place during daily operations.

The HKL1 facility is expected to require 90 full-time onsite employees during operation. Facility operations will continue 24 hours per day, 7-days per week. It is projected that up to 44 employees will be on site at any given time, with 28 day-staff employees and two rotating shifts of 16 additional employees overlapping the day staff and covering nights, weekends, and holidays. Approximately 48 trucks per day will travel in and out of the Project site during normal operations. Daily truck traffic includes up to 40 trucks for product shipping. All trucks used for product shipping will be electric. Truck traffic will also include approximately eight truck deliveries of reagent chemicals, cooling tower treatment chemicals, consumptive media, product-packaging materials, and fuel. Outgoing general waste generated on the site will be removed by truck as needed and is expected to require less than one truck per day.

Operational Water Supply and Requirements

The HKP1 will require up to approximately 200 AFY of fresh water for normal operation, including supplemental cooling tower makeup and other plant uses when operating at full plant load. Average annual demand requirements will vary, depending on the capacity factor of the overall facility. It is anticipated that steam condensate will be utilized to offset freshwater requirements.

The primary source of fresh water for the facility is anticipated to be irrigation water made available under a supply contract and purchased through IID. Water will be obtained from the "Q" and "R" laterals adjacent to the Project site. Water will be transferred to a water storage pond, with a capacity of approximately 18 AF, located adjacent to the Q Drain. The water would then be transferred to 100,000-gallon aboveground water storage tank via an aboveground fresh-water pipeline. Additional pipelines will be constructed to transport the water from the water storage tank to the power plant facility. The water will be used for steam wash water, purged water for pump seals, and the RO potable water system, process wash water, and, at times, cooling water makeup. The project is designed to minimize reliance on external sources of water supply for process needs as well by using condensed steam from the geothermal steam condensate to the greatest extent practical.

A filtration-based or RO potable water system will be used to process IID fresh water for the non-drinking potable water needs at the site. A Nontransient-Noncommunity Water System Permit will be obtained from the Imperial County Public Health Department (ICPHD) for the onsite potable water system. Bottled drinking water will be purchased for consumption.

The HKL1 facility will require approximately 6,500 AFY of water to be purchased from the IID for project cooling water makeup and additional process water. Approximately 3 AFY of the purchased water will be treated and used for potable water purposes, including potable washbasin water, eyewash equipment water, water for showers and toilets in the administration and control buildings, and sink water in the sample laboratory.

Operational Energy Requirements

HKP1 would generate 49.9 MW of renewable energy which would be sold to IID. HKL1 would require approximately 35 MW of power and have a peak power demand of 40 MW, which would be obtained from IID. Overall, the power demand would be less than what is produced by HKP1. Additionally, HKP1 will require the use of generators for up to 600 hours per year for startups during black start situations. HKL1 generators will only be used in emergency situations and will be operated less than 50 hours per year.

Fire Protection and Safety

The fire protection system will consist of an underground fire main and surface distribution equipment, such as yard hydrants and hose houses, monitors around the perimeter of the cooling tower, automatic sprinklers for the turbine generator and auxiliary equipment, and a complete detection and alarm system. HKP1 will have a fire water storage tank with a capacity of 250,000 gallons, and HKL1 will have three 250,000 gallon tanks for a total capacity of 750,000 gallons. The firewater pumping system will include a total of eight pumps capable of a total pumping capacity of 8,000 gallons per minute. The fire protection systems will be routinely tested, with the pump discharge recycled to the fire water storage tanks. The systems will be designed in accordance with federal, State, and local fire codes, occupational health and safety regulations and other jurisdictional codes, requirements, and standard practices.

Spent Fluid and Wastewater

Under normal operation, the spent brine will be pumped via the main injection system. Spent geothermal brine will be injected into the subsurface geothermal reservoir via the primary injection wells. Geothermal brine will be discharged into the bring pond during upset conditions or maintenance activities (start up and shut down). The fluids from the brine pond also will be injected into the subsurface geothermal reservoir via the dedicated aerated brine injection well. All subsurface fluid injection will conform with CalGEM requirements.

Wastewater including non-process wash water and sanitary waste, will be generated during operations. Sanitary drains will collect all sanitary waste and non-process wash water and discharge to an appropriately sized and County-approved septic system. The septic system will be engineered and operated to meet County Environmental Health requirements.

Hazardous Materials and Waste

Hazardous Material Management

The Project will develop and implement a Hazardous Materials Business Plan (HMBP), in compliance with California Health and Safety Code, Division 20, Chapter 6.95, Sections 25500-25519 and California Code of Regulations, Title 19, Division 2, Chapter 4. The HMBP will be provided to the California Office of Emergency Services, the Imperial County Fire Department, and the Certified Unified Program Agency for Imperial County (the local California Department of Toxic Substances Control office), for review and approval before plant operation. The HMBP will include, at a minimum, procedures for: hazardous materials handling, use and storage; emergency response; spill control and prevention; employee training, and reporting and record keeping.

Portable bins or other storage containers will be on site for storage of maintenance lube oils, chemicals, paints, and other construction materials, as needed. Secondary containment will be provided in all petroleum hydrocarbon and hazardous material storage areas, and all brine processing areas. Safety showers and eyewash stations will be provided in or adjacent to chemical storage and use areas. Safety equipment will be provided for staff use if required during chemical containment and cleanup activities. All staff working with chemicals will be trained in proper handling and emergency response to chemical spills or accidental releases. Water hose connections will be provided near the chemical storage and feed areas, to flush spills and leaks, and absorbent materials will be stored on site for spill cleanup.

The HKP1 facility may include transformer oil for transformer operation, lube oil for the turbine generator operation, diesel for generator fueling, and HCl (32% by weight). The transformer oil will be contained within the transformers; the lube oil will be stored on a skid. Diesel will be stored in a diesel storage tank with a capacity of approximately 3,000 gallons. Two polymer or fiber-reinforced plastic HCl tanks, with capacities of approximately 20,000 and 75,000 gallons, will store the HCl for the acid modification process. The HCl tanks will be fitted with scrubbers. All chemicals will be stored outdoors on impervious surfaces in above-ground storage tanks with secondary containment. The secondary containment areas for the bulk storage tanks will not have drains. Any chemical spill occurring in these areas will be removed with portable equipment and re-used or disposed properly. Other chemicals will be stored and used in their delivery containers.

Hazardous materials that are expected to be used during construction of HKP1 will include: unleaded gasoline, diesel fuel, oil, hydraulic fluids, lubricants, solvents, adhesives, and paint materials. Hazardous materials that are expected to be used during operation of HKL1 will include: unleaded gasoline, diesel fuel, transformer oil, hydraulic fluid, HCl (32% by weight), calcium oxide, sodium sulfide, sodium hydroxide, and manganese.

No feasible alternatives exist to avoid use of these materials for construction or operation of construction vehicles and equipment, or for painting and caulking buildings and equipment. HCl, calcium oxide, sodium hydroxide, and sodium sulfide will be required for the mineral extraction process. Manganese will be produced for commercial sale. Manganese will be stored in indestructible containers for shipping.

Hazardous Materials Transportation

Hazardous material carriers and hazardous waste transporters are required by law to adhere to applicable local, State, and federal regulations regarding proper truck signage, indicating the materials being transported, carrying a shipping/waste manifest of the types and concentrations of materials being transported, and other appropriate measures. Hazardous material carriers also are responsible for their loads, reporting spills, and initiating appropriate emergency response to releases of any transported hazardous materials, from the point of origin up to the destination of the hazardous material delivery.

HKL1 will communicate with the locally responsible emergency response agencies before shipment of any bulk hazardous materials to or from the Project site. Continuing coordination and communications with these agencies relevant to hazardous material shipments will be undertaken as required by the agencies. HKL1 will also develop an Emergency Action Plan for responding to spills or releases of hazardous substances by hazardous material carriers in the Project area. This plan will conform to all applicable federal, State, and local requirements for notifications, reporting, and emergency response of hazardous substance release incidents. The plan also will describe cleanup of spilled substances and site reclamation, if required. In the unlikely event of a hazardous materials spill during transportation of materials to or from the plant site, HKL1 will cooperate with the responsible agencies and provide all available information and knowledge about the materials to facilitate the spill response cleanup and spill site remediation.

Solid Waste

Construction and operation of the facility will generate both nonhazardous and hazardous wastes described below.

Nonhazardous Wastes

Solid waste from construction activities may include lumber, excess concrete, metal, glass scrap, empty nonhazardous containers, and waste generated by workers. Management of these wastes will be the responsibility of the construction contractor(s). Typical management practices required for nonhazardous waste management will include recycling, when possible, proper storage of waste and debris to prevent wind dispersion, and weekly pickup and disposal of wastes to local Class III landfills.

The primary source of solid waste during operation will be office waste and other waste generated by workers. Non-hazardous waste will be collected in appropriate on-site storage receptacles, designated for waste and recycling. Recyclable materials will be brought to a recycling center, and non-recyclable waste will be removed and taken to a Class III landfill.

Hazardous Wastes

Hazardous wastes may be generated over the course of construction from spills of hazardous materials used during construction, empty hazardous material containers, or spill cleanup wastes. Hazardous materials that are expected to be used during construction include paints, oil and lubricants, solvents, and welding materials. Used oil will be recycled, and oil or heavy metal contaminated materials (e.g., filters)

requiring disposal will be transported to an off-site waste disposal facility that is authorized to accept such wastes. Scale from pipe and equipment cleaning operations will be disposed in a similar manner.

All hazardous wastes generated during construction and operation will be handled and disposed in accordance with applicable laws, ordinances, regulations, and standards. Any hazardous wastes generated during construction will be collected in hazardous waste accumulation containers near the point of generation and moved daily to the contractor's 90-day hazardous waste storage area on site. The accumulated wastes subsequently will be delivered to an authorized waste management facility, which may be as far as Yuma, Arizona. Hazardous wastes will be managed and disposed properly in a licensed Class I waste disposal facility that is authorized to accept the waste.

The Geothermal Power Plant and mineral extraction and processing facility involves a CUP, Zoning Variance, Development Agreement (if needed), Building and Grading Permit, and Encroachment Permit that will allow for HKP1 will be permitted for 49.9MW. Other products include: 5,100 lbs./hr. dry lithium product (LiOH•H₂O), 3,100 lbs./hr. silica, 9,800 lbs./hr. bulk sulfide, and 60,000 lbs./hr. polymetallic products.

Water Requirements

The Project will require domestic water and there is not a domestic water delivery system currently available on the Project site. Therefore, an on-site water treatment system procured from a qualified provider will be installed to process water for the non-drinking potable water needs at the site. A Nontransient-Noncommunity Water System Permit will be obtained from ICPHD for the onsite potable water system. Bottled drinking water will be purchased for consumption.

The proposed Project owner will need to contract with IID to deliver up to 6,500 AFY of untreated water, via the "Q" and "R" laterals adjacent to the project site, specifically gates Q-28 and R-24. The proposed Project is anticipated to use approximately 6,500 AFY of water for steam wash water, brine dilution, purge water for pump seals, process wash water, cooling water makeup, lithium processing and additional water processes. This includes about 170 AFY for earthworks and dust control while in construction. Approximately 3 AFY of the purchased water will be treated and used for potable water purposes, including potable washbasin water, eyewash equipment water, water for showers and toilets in the administration and control buildings, and sink water in the sample laboratory.

Water Use Efficiency Best Management Practices

The Project incorporates an integrated, comprehensive water system designed to extensively measure, recycle and maximize the efficiency of water usage. The primary initial use of raw water is for cooling tower makeup. Cooling tower water is cycled 12-16 times, depending on seasonal conditions, with about 75% of water lost to evaporation. All remaining cooling tower blowdown is recycled to other uses in the brine conditioning and lithium refining process. Geothermal steam is used for electric power generation and evaporation of lithium-rich solutions. All steam condensate produced from these processes is recycled to the lithium extraction process for formulation of chemical reagents, filtration, and final production of

lithium hydroxide. Effective water recycling consumes about 95% of the raw water supply, leaving only 5% residual. This residual water is then injected into the geothermal reservoir to provide pressure support for maximizing resource productivity.

Additional Project Measures Under Potential Curtailment

Should reductions to IID's water supply be ordered or directed from a governmental authority having appropriate jurisdiction, the Hell's Kitchen PowerCo 1 and LithiumCo 1 Project may be required to reduce its water supply demand by a proportionate reduction of the total volume of water available to IID. Additional operational changes may be implemented by the Project under these unpredictable conditions may include:

- Produce groundwater at property;
- Temporary use of recycled drain water; and/or
- Reduce production rates in line with water supply reductions

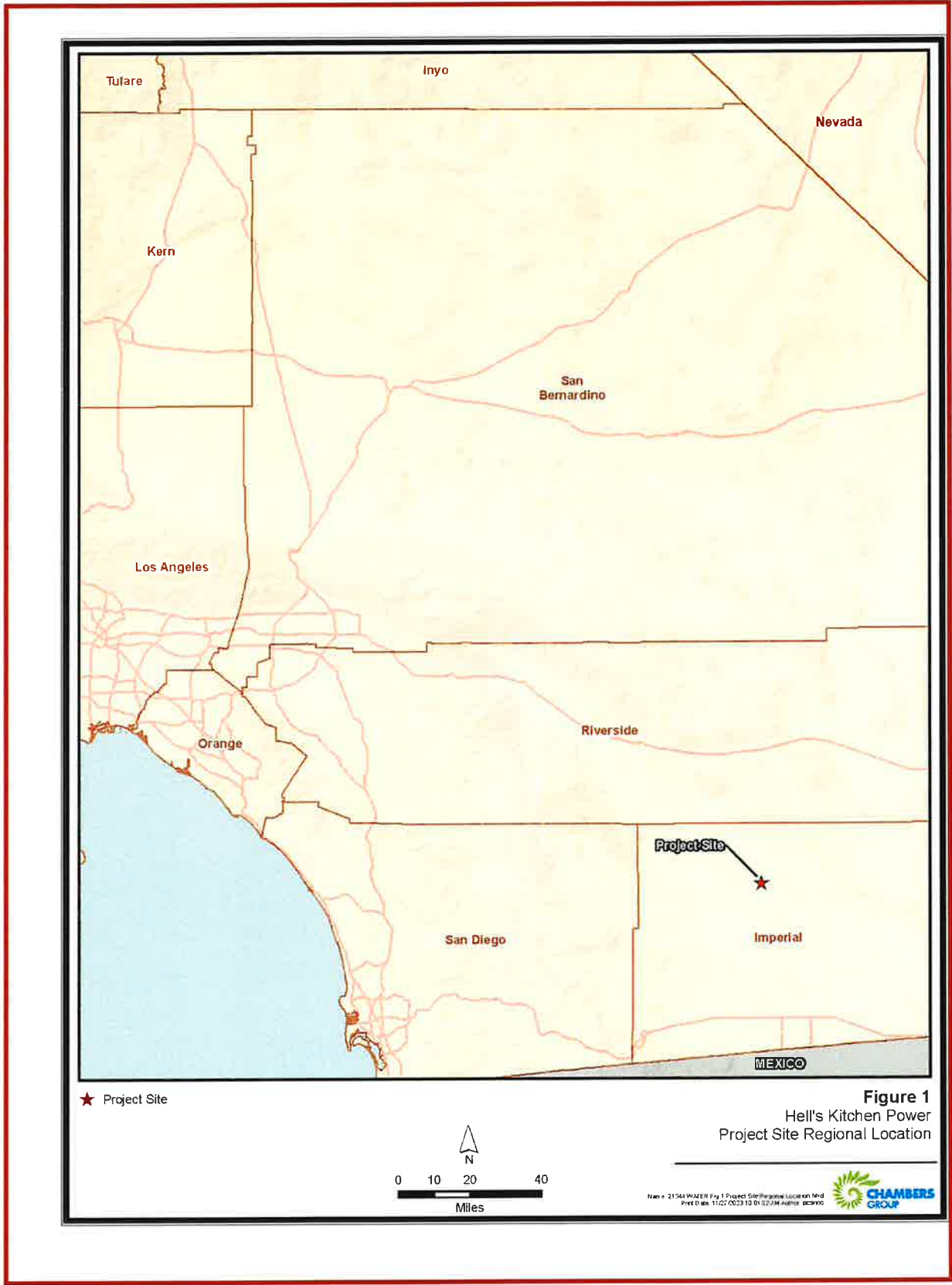


Figure 1. Project Site Regional Location

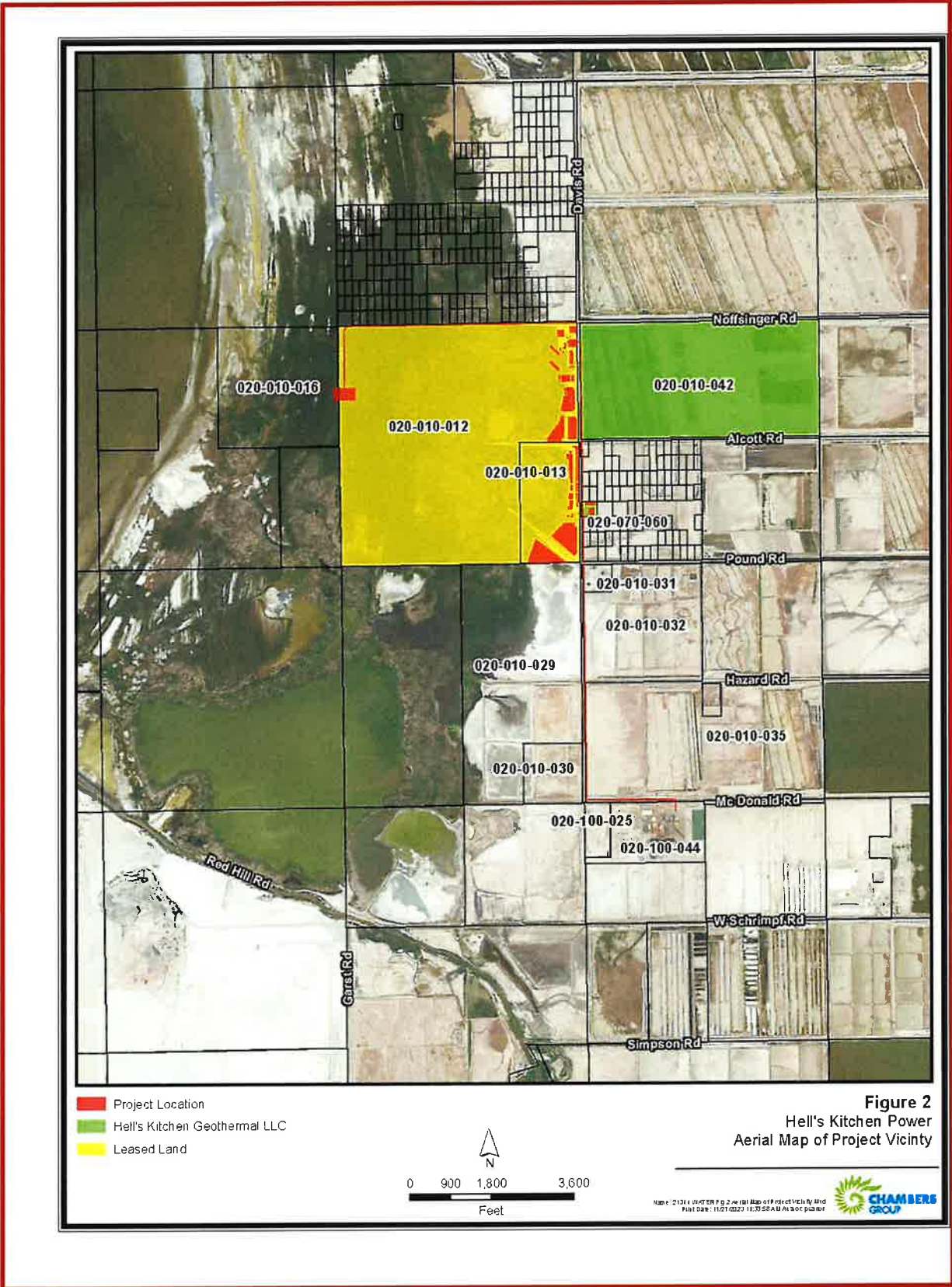


Figure 2. Aerial Map of Project Vicinity

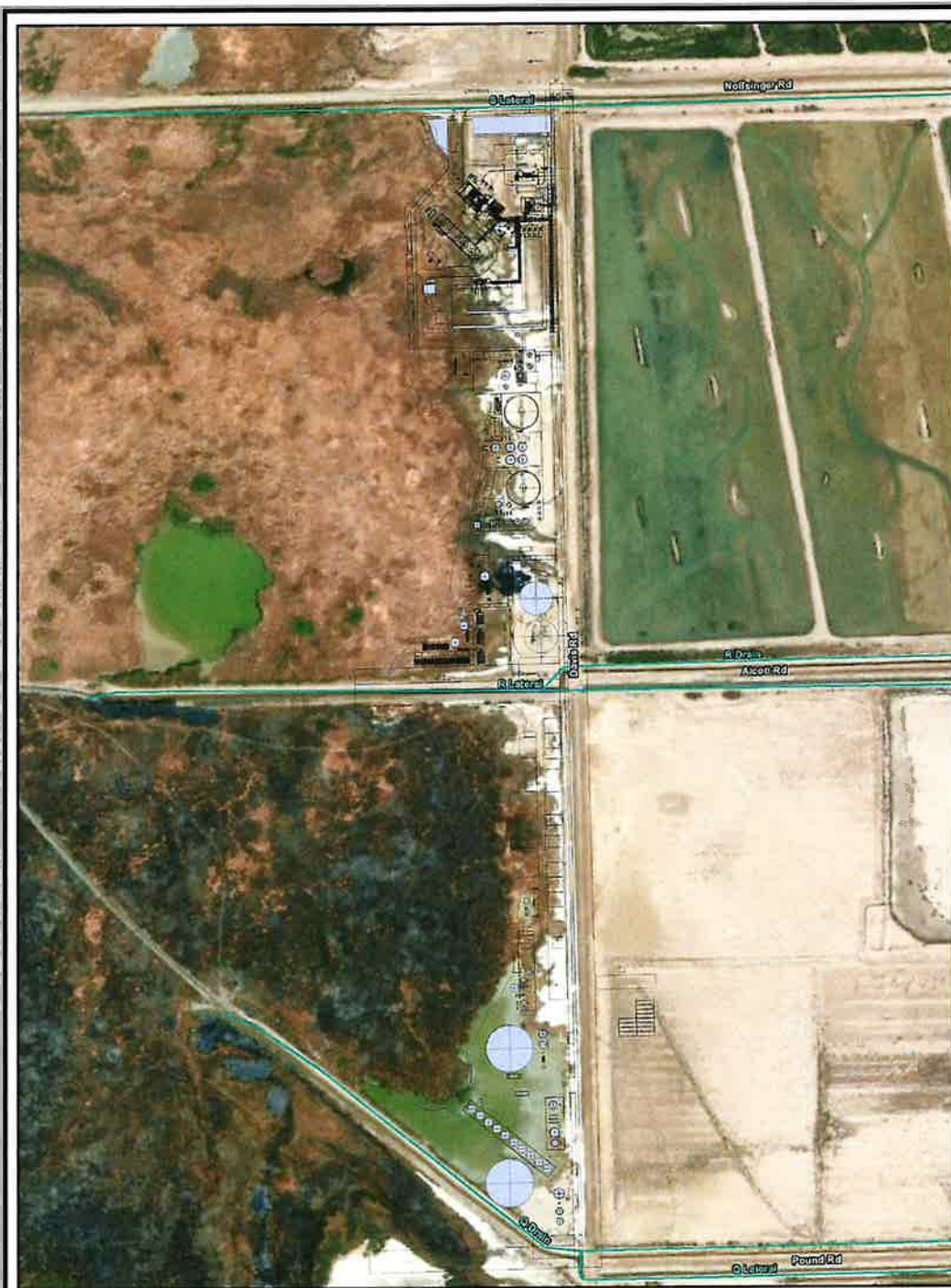


Figure 3
Hell's Kitchen Power
Project Layout



File: 2104 WATER 1 of 3 Plans-Lay1.dwg
Print Date: 1/27/2023 10:07:11 PM Author: jgarr

Figure 3. Project Layout/Site Plan

Description of IID Service Area

The proposed Project site is located in Imperial County in the southeastern corner of California. The County is comprised of approximately 4,597 square miles or 2,942,080 acres.² Imperial County is bordered by San Diego County to the west, Riverside County to the north, the Colorado River/Arizona boundary to the east, and 84 miles of International Boundary with the Republic of Mexico to the south. Approximately fifty percent of Imperial County is undeveloped land under federal ownership and jurisdiction. The Salton Sea accounts for approximately 11 percent of Imperial County's surface area. In 2022, approximately sixteen percent (16%) of the area was in irrigated agriculture (468,226 acres), including 14,676 acres of the Yuma Project, some 35 sections or 6,405 acres served by Palo Verde Irrigation District (PVID), and 447,147 acres served by IID.³

The area primarily served by IID is located in the Imperial Valley, which is generally contiguous with IID's Imperial Unit, lies south of the Salton Sea, north of the U.S./Mexico International Border, and generally in the 699,132 acre area between IID's Westside Main and East Highline Canals.⁴ In 2022, IID delivered untreated water to 495,844 net irrigated acres, predominantly in the Imperial Valley, along with small areas of East and West Mesa land, including non-agricultural uses.

The developed area consists of seven incorporated cities (Brawley, Calexico, Calipatria, El Centro, Holtville, Imperial, and Westmorland), three unincorporated communities (Heber, Niland and Seeley), and three institutions (Naval Air Facility [NAF] El Centro, Calipatria CDCR, and Centinela CDCR) and supporting facilities. **Figure 4** provides a map of the IID canal network, as well as cities, communities, and main canals.

Climate Factors

Imperial Valley, located in the Northern Sonoran Desert, which has a subtropical desert climate is characterized by hot, dry summers and mild winters. Clear and sunny conditions typically prevail, and frost is rare. The region receives 85 to 90 percent of possible sunshine each year, the highest in the United States. Winter temperatures are mild rarely dropping below 32°F, but summer temperatures are very hot, with more than 100 days over 100°F each year. The remainder of the year has a relatively mild climate with temperatures averaging in the mid-70s.

The 100-year average climate characteristics are provided in **Table 1**. Rainfall contributes around 50,000 AF of effective agricultural water per inch of rain. Most rainfall occurs from November through March; however, summer storms can be significant in some years. Annual areawide rainfall is shown in **Table 2**. The thirty-year, 1993-2022, average annual air temperature was 73.95°F, and average annual rainfall was

² *Imperial County General Plan, Land Use Element 2008 Update*

³ *USBR website: [Yuma Project](#). PVID contact for acreage September 30, 2021.*

⁴ *IID Annual Inventory of Areas Receiving Water Years 2022, 2021, 2020*

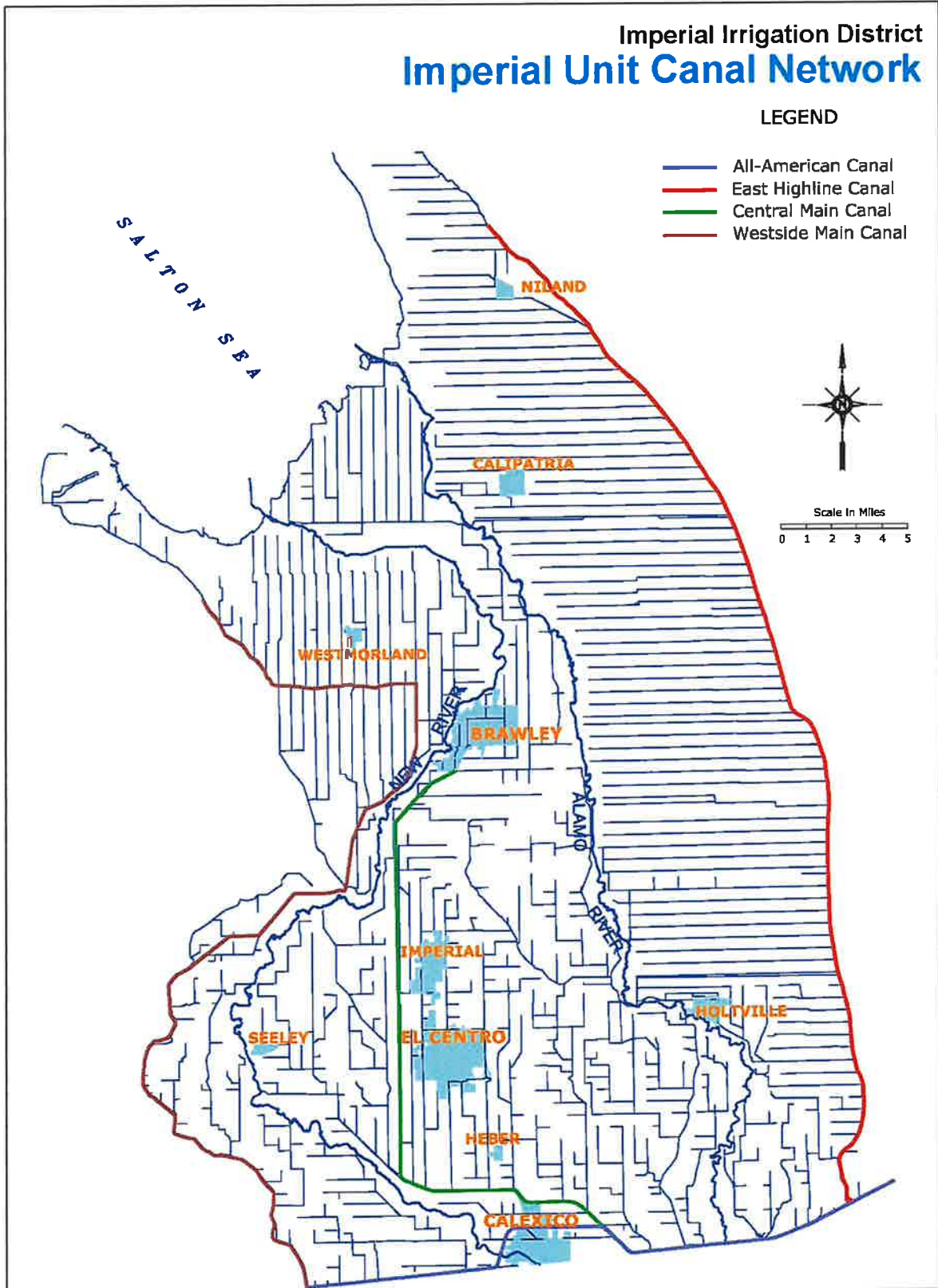


Figure 4. IID Imperial Unit Boundary and Canal Network

2.51 inches, see **Table 3** and **Table 4**. This record shows that while average annual rainfall has fluctuated, the 10-year average temperatures have slightly increased over the 30-year averages.

Table 1. Climate Characteristics, Imperial, CA 100-Year Record, 1923-2022

Climate Characteristic	Annual Value
Average Precipitation (100-year record, 1923-2022)	2.75 inches (In)
Minimum Temperature, Jan 1937	16 °F
Maximum Temperature, July 1995	121 °F
Average Minimum Temperature, 1923-2022	48.4 °F
Average Maximum Temperature, 1923-2022	98.4 °F
Average Temperature, 1923-2022	73.1 °F

Source: IID Imperial Weather Station Record

Table 2. IID Areawide Annual Precipitation (In), (1990-2022)

1990	1991	1992	1993	1994	1995	1996
1.646	3.347	4.939	2.784	1.775	1.251	0.685
1997	1998	1999	2000	2001	2002	2003
1.328	2.604	1.399	0.612	0.516	0.266	2.402
2004	2005	2006	2007	2008	2009	2010
4.116	4.140	0.410	1.331	1.301	0.619	3.907
2011	2012	2013	2014	2015	2016	2017
2.261	2.752	2.772	1.103	2.000	1.867	2.183
2018	2019	2020	2021	2022		
1.305	3.017	2.685	1.688	1.265		

Source: Computation based on polygon average of CIMIS as station came online in the WIS.⁵

Notable from Table 2 (above) and Table 3 (below) is that while average annual rainfall measured at IID Headquarters in Imperial, California, has been decreasing, monthly average temperatures are remarkably consistent.

Table 3. Monthly Mean Temperature (°F) – Imperial, CA 10-Year, 30-Year & 100-Year (2013-2022, 1993-2022, 1923-2022)

	Jan			Feb			Mar			Apr		
	Max	Min	Avg	Max	Min	Avg	Max	Min	Avg	Max	Min	Avg
10-year	81	33	57	87	37	62	94	43	68	101	49	74
30-year	81	34	57	84	36	60	93	41	66	99	47	72
100-year	80	31	56	84	35	59	91	40	65	99	46	71
	May			Jun			Jul			Aug		
	Max	Min	Avg	Max	Min	Avg	Max	Min	Avg	Max	Min	Avg
10-year	105	55	77	116	62	89	115	72	94	114	72	93
30-year	106	54	78	113	60	87	115	69	92	114	70	92
100-year	105	53	78	113	59	86	114	68	92	113	68	91
	Sep			Oct			Nov			Dec		
	Max	Min	Avg	Max	Min	Avg	Max	Min	Avg	Max	Min	Avg
10-year	111	64	88	100	53	77	91	40	65	81	34	57
30-year	111	62	87	102	50	76	90	39	64	80	33	56
100-year	110	61	86	101	49	75	89	38	63	80	32	56

⁵ From 1/1/1990-3/23/2004, 3 CIMIS stations: Seeley, Calipatria/Mulberry, Meloland; 3/24/2004-7/5/2009, 4 CIMIS stations (added Westmorland N.); 7/6/2009-12/1/2009, 3 CIMIS stations: Westmorland N. offline; 12/2/2009-2/31/2009, 4 CIMIS stations, Westmorland N. back online; 1/1/2010-9/20/2010.

Source: IID Imperial Headquarters Station Record (Data provided by IID staff)

Table 4. Monthly Mean Rainfall (In) – Imperial, CA 10-Year, 30-Year & 100-Year (2013-2022, 1993-2022, 1923-2022)

	Jan	Feb	Mar	Apr	May	Jun	Jul	Aug	Sep	Oct	Nov	Dec	Annual
10-year	0.47	0.13	0.23	0.11	0.08	0.01	0.08	0.32	0.39	0.12	0.25	0.37	2.47
30-year	0.51	0.38	0.23	0.09	0.06	0.00	0.13	0.20	0.29	0.17	0.21	0.32	2.51
100-year	0.39	0.37	0.25	0.11	0.03	0.00	0.11	0.30	0.37	0.26	0.21	0.49	2.75

Source: IID WIS: CIMIS stations polygon calculation (Data provided by IID staff).

Imperial Valley depends on the Colorado River for its water, which IID transports, untreated, to delivery gates for agricultural, municipal, industrial (including geothermal and solar energy), environmental (managed marsh), recreational (lakes), and other non-agricultural uses. IID supplies the cities, communities, institutions, and Golden State Water (which includes all or portions Calipatria, Niland, and some land adjacent within Imperial County territory) with untreated water that they treat to meet state and federal drinking water guidelines before distribution to their customers. Industries outside the municipal areas treat the water to required standards of their industry. To comply with U.S. Environmental Protection Agency (USEPA) requirements and avoid termination of canal water service, residents in the IID water service area who do not receive treated water service must obtain alternative water service for drinking and cooking from a state-approved provider. To avoid penalties that could exceed \$25,000 a day, IID strictly enforces this rule. The IID Water Department tracks nearly 3,200 raw water service accounts required by the State Water Resources Control Board’s Department of Drinking Water to have alternate state approved drinking water service. IID maintains a small-acreage pipe and drinking water database and provides an annual compliance update to the Department of Drinking Water.

Imperial Valley Historic and Future Land and Water Uses

Agricultural development in the Imperial Valley began at the turn of the twentieth century. In 2021, gross agricultural production for Imperial County was valued at \$2,287,312,000, of which approximately \$2.1 billion was produced in the IID water service area.⁶ While the agriculture-based economy is expected to continue, land use is projected to change somewhat over the years as industrial and/or alternative energy development and urbanization occur in rural areas and in areas adjacent to existing urban centers, respectively.

- The Hell’s Kitchen PowerCo 1 and LithiumCo 1 Project would provide geothermal power to the Imperial Irrigation District and would produce renewable energy jobs to the area. The Stage 1 is forecasted to generated 220 jobs. Additionally, the Project would provide a sustainable domestic source of lithium, a designated critical material identified by the U.S. Department of Energy and would minimize the distance between the geothermal power plant and lithium extraction plant for production efficiency.

⁶ [2021 Imperial County Crop and Livestock Report](#)

Imperial Valley's economy is gradually diversifying. Agriculture will likely continue to be the primary industry within the valley; however, two principal factors anticipated to reduce crop acreage are renewable energy (geothermal and solar) and urban development. Over the next twenty years, urbanization is expected to slightly decrease agriculture land use to provide space for an increase in residential, commercial, and industrial uses. The transition from agricultural land use typically results in a net decrease in water demand for municipal, commercial, and solar energy development; and a net increase in water demand for geothermal energy development. Local energy resources include geothermal, wind, biomass and solar. The County General Plan provides for development of energy production centers or energy parks within Imperial County. Alternative energy facilities will help California meet its statutory and regulatory goals for increasing renewable power generation and use and decrease water demands in Imperial County.

The IID Board has adopted the following policies and programs to address how to accommodate water demands under the terms of the QSA/ Transfers Agreements and minimize potential negative impacts on agricultural water uses:

Imperial Integrated Regional Water Management Plan: adopted by the board on December 18, 2012, and by the County, the City of Imperial, to meet the basic requirement of California Department of Water Resources (CDWR) for an IRWM plan. In all, 14 local agencies adopted the 2012 Imperial IRWMP.

Interim Water Supply Policy for Non-Agricultural Projects: adopted by the board on September 29, 2009, to ensure sufficient water will be available for new development anticipated renewable energy projects until the board selects and implements capital development projects such as those considered in the Imperial IRWMP.

Temporary Land Conversion Following Policy: adopted by the board on May 8, 2012, and revised on March 29, 2016, to provide a framework for a temporary, long-term following program to work in concert with the IWSP and IID's coordinated land use/water supply strategy.

Equitable Distribution Plan: adopted by the board on June 21, 2022, to provide a mechanism for IID to administer apportionment of the district's quantified annual supply of Colorado River water.

In addition, water users within the IID service area are subject to the statewide requirement of reasonable and beneficial use of water under the California Constitution, Article X, section 2.

Imperial Integrated Regional Water Management Plan (October 2012)

The Imperial IRWMP serves as the governing document for regional water planning to meet present and future water resource needs and demands by addressing such issues as additional water supply options, demand management and determination and prioritization of uses and classes of service provided. In November 2012, the Imperial County Board of Supervisors approved the Imperial IRWMP, and the City of

Imperial City Council and the IID Board of Directors approved it in December 2012. Approval by these three (3) stakeholders met the basic requirement of California Department of Water Resources (CDWR) for an IRWMP. At that time, IID presented to the region stakeholders options in the event long-term water supply augmentation is needed, such as water storage and banking, recycling of municipal wastewater, and desalination of brackish water.⁷ As discussed herein, long term water supply augmentation is not anticipated to be necessary to meet proposed Project demands.

Chapter 5 of the 2012 Imperial IRWMP addresses water supplies (Colorado River and groundwater), demand, baseline and forecasted through 2050; and IID water budget. Chapter 12 addresses projects, programs and policies, and funding alternatives. Chapter 12 of the IRMWP lists, and Appendix N details, a set of capital projects that IID might pursue, including the amount of water that might result (AFY) and cost (\$/AF) if necessary. These also highlight potential capital improvement projects that could be implemented in the future.

Imperial Valley historic 2015 and 2020 and the forecasted future for 2025 to 2055 non-agricultural water demand, are provided in **Table 5** in five-year increments. Total water demand for non-agricultural uses is projected to be 201.4 KAF in the year 2055. This is a forecasted increase in the use of non-agricultural water of 94 KAF from 107.4 KAF for the period of 2015 to 2055. These values were modified from Chapter 5 of the Imperial IRWMP to reflect updated conditions from the IID Provisional Water Balance for calendar year 2015 and 2020. Due to the recession in 2009, state policies affecting municipal water use in relation to the drought and other factors, non-agricultural growth projections have lessened since the 2012 Imperial IRWMP. Projections in **Table 5** have been adjusted (reduced by 3% for Municipal and Industrial uses and applied a flat 0.5 AF increase for Recreation use) to reflect IID 2015 and 2020 delivery data adjustments. Even with these adjustments, the Table 5 projections for non-agricultural water demand within the IID water service area continue to reflect an unlikely aggressive growth.

Table 5. Non-Agricultural Water Demand within IID Water Service Area, 2015-2055 (KAFY)

	2015	2020	2025	2030	2035	2040	2045	2050	2055
Municipal	30.0	30.9	36.8	39.8	41.5	46.3	51.7	57.8	61.9
Industrial	26.4	28.7	39.8	46.5	53.2	59.9	66.6	73.3	80.0
Other	5.5	5.5	5.5	5.5	5.5	5.5	5.5	5.5	5.5
Feedlots/Dairies	17.8	19.0	20.0	20.0	20.0	20.0	20.0	20.0	20.0
Envr. Resources	8.3	9.5	12.0	12.0	12.0	12.0	12.0	12.0	12.0
Recreation	7.4	9.5	10.0	10.0	10.0	10.0	10.0	10.0	10.0
Service Pipes	12.0	12.0	12.0	12.0	12.0	12.0	12.0	12.0	12.0
Total NonAg	107.4	115.1	136.1	145.8	154.2	165.7	177.8	190.6	201.4

Notes: 2015 non-agricultural water demands are from IID 2015 Provisional Water Balance rerun 01/25/2021 2020-2055 demands are modified from 2012 Imperial IRWMP Chapter 5, Table 5-22 p 5-50 based on IID 2015 Provisional Water Balance. 2020 non-agricultural water demands are from IID 2020 Provisional Water Balance rerun on 01/31/2022. 2025-2055 demands are modified from 2012 Imperial IRWMP Chapter 5, Table 5-22 p 5-50 based on IID 2020 Provisional Water Balance. Industrial Demand includes geothermal, but not solar, energy production.

⁷ October 2012 Imperial Integrated Regional Water Management Plan, Chapter 12.

Agricultural evapotranspiration (ET) demand of approximately 1,476.4 KAF in 2015, decreased in 2020 to approximately 1,442.2 KAF. The termination of fallowing programs provided 103.5 KAF of water for Salton Sea mitigation in 2017. Forecasted agricultural ET remains constant, as reductions in water use are to come from efficiency conservation not reduction in agricultural production. Market forces and other factors may impact forecasted future water demand.

Table 6 provides the 2015 and 2020 historic and 2025-2055 forecasted agricultural consumptive use and delivery demand within the IID water service area. When accounting for agriculture ET, tailwater and tilewater, total agricultural consumptive use (CU) demand ranges from 2,157.9 KAF in 2015 to 2,208.5 KAF in 2055. Forecasted total agricultural delivery demand is around 1 KAFY higher than the CU demand, ranging from 2,158.9 KAF in 2015 to 2,209.5 KAF in 2055.

Table 6. Historic and forecasted Agricultural Water Consumptive Use and Delivery Demand within IID Water Service Area, 2015-2055 (KAFY)

	2015	2020	2025	2030	2035	2040	2045	2050	2055
Ag ET from Delivered & Stored Soil Water	1,476.4	1,442.2	1,567.5	1,567.5	1,567.5	1,567.5	1,567.5	1,567.5	1,567.5
Ag Tailwater to Salton Sea	282.9	312.9	268.0	218.0	218.0	218.0	218.0	218.0	218.0
Ag Tilewater to Salton Sea	398.6	410.2	423.0	423.0	423.0	423.0	423.0	423.0	423.0
Total Ag CU Demand	2,157.9	2,165.4	2,258.5	2,208.5	2,208.5	2,208.5	2,208.5	2,208.5	2,208.5
Subsurface Flow to Salton Sea	1.0	1.0	1.0	1.0	1.0	1.0	1.0	1.0	1.0
Total Ag Delivery Demand	2,158.9	2,166.4	2,259.5	2,209.5	2,209.5	2,209.5	2,209.5	2,209.5	2,209.5

Notes: 2015 record from IID 2015 Provisional Water Balance rerun 06/28/2019; 2020 record from IID 2020 Provisional Water Balance rerun 01/25/2021; 2020-2055 forecasts from spreadsheet used to develop Figure 19, et seq. in Imperial IRWMP Chapter 5 (Data provided by IID staff).

In addition to agricultural and non-agricultural water demands, system operation demand must be included to account for operational discharge, main and lateral canal seepage, including seepage along the All-American Canal (AAC); and for AAC seepage, river evaporation and phreatophyte ET from Imperial Dam to IID’s measurement site at AAC Mesa Lateral 5. These system operation demands are shown in **Table 7** for 2021. IID measures system operational uses and at All-American Canal Station 2900 just upstream of Mesa Lateral 5 Heading. Total system operational use for 2020 was 167.8 KAF, including 10 KAF of LCWSP input, 39 KAF of seepage interception input, and 40 KAF of unaccounted canal water input.

Table 7. IID System Operations Consumptive Use within IID Water Service Area and from AAC at Mesa Lateral 5 to Imperial Dam, (KAF), 2020

Delivery System Evaporation	24.4
Canal Seepage	90.8
Main Canal Spill	10.1
Lateral Spill	121.5
QSA & IID Seepage Interception	-39.0
Unaccounted Canal Water	-40.0
Total System Operational Use, In valley	167.8
Imperial Dam to AAC @ Mesa Lat 5 (Dam-Mesa Lat 5) (2,552,674-2,546,152)	9.2
LCWSP	-10
Total System Operational Use in 2020	167.0

Source: 2020 IID Water Balance rerun 01/25/2021

IID Interim Water Supply Policy for Non-Agricultural Projects (September 2009)

The IID IWSP provides a mechanism to address water supply requests for new non-agricultural projects being developed within the IID service area. The IWSP designates up to 25,000 AFY of water to be conserved from IID’s annual Colorado River water supply, consumptive use cap, for new non-agricultural projects. The IWSP provides a mechanism and process to develop a water supply agreement for any appropriately permitted project, and establishes a framework and set of fees to ensure the supplies used to meet new demands do not adversely affect existing users by funding water conservation or augmentation projects as needed to offset the new demand.⁸

The environmental impacts of conserving up to the 25,000 acre-feet of IWSP water were analyzed in the *Imperial Irrigation District Interim Water Supply Policy for Non-Agricultural Projects Negative Declaration*, State Clearinghouse No. 2009061103 dated June 25, 2009. The IID Board adopted this Negative Declaration on September 29, 2009.

Depending on the nature, complexity and water demands of the proposed project, new projects may be charged a one-time Reservation Fee and annual Water Supply Development Fees for the contracted water volume used solely to assist in funding new water supply projects. The applicability of the fee to certain projects will be determined by IID on a case-by-case basis, depending on the proportion of types of land uses and water demand proposed for a project. The 2023 IWSP fee schedule is shown in Table 8.

Table 8. Interim Water Supply Policy 2023 Annual Non-Agricultural Water Supply Development Fee Schedule

Annual Demand (AF)	Reservation Fee (\$/AF)*	Development Fee (\$/AF)*
0-500	\$85.26	\$341.03
501-1000	\$120.04	\$480.17
1001-2500	\$150.74	\$602.94
2501-5000	\$186.20	\$744.81

Adjusted annually in accordance with the Consumer Price Index (CPI).

⁸ IID website: [Municipal, Industrial and Commercial Customers](#).

IID customers with new projects receiving water under the IWSP will be charged the appropriate water delivery rate based on measured deliveries, see [IID Water Rate Schedules](#). As of June 2023, IID has issued two water supply agreement under the IWSP for 5,380 AFY, leaving a balance of 19,620 AFY of potential water supply available for additional contracting under the IWSP.

IID Temporary Land Conversion Following Policy (May 2012)

Imperial County planning officials determined that renewable energy facilities were consistent with the county's agricultural zoning designation and began issuing CUPs for these projects with 30-year terms with a 10-year extension (40 years in total). These longer-term, but temporary, land use designations were not conducive to a coordinated land use/water supply policy as envisioned in the Imperial IRWMP, because temporary water supply assignments during a conditional use permit (CUP) term were not sufficient to meet the water supply verification requirements for new project approvals. Agricultural landowners also sought long-term assurances from IID that, at project termination, irrigation service would be available for them to resume their farming operations.

Based on these conditions, IID determined it had to develop a water supply policy that conformed to the local land use decision-making in order to facilitate new development and economic diversity in Imperial County which resulted in the IID Temporary Land Conversion Following Policy (TLCFP).⁹ IID concluded that certain lower water use projects could still provide benefits to local water users. The resulting benefits; however, may not be to the same categories of use (e.g., municipal, commercial, and industrial) but to the district as a whole.

At the general manager's direction, IID staff developed a framework for a fallowing program that could be used to supplement the IWSP and meet the multiple policy objectives envisioned for the coordinated land use/water supply strategy. Certain private projects that, if implemented, will temporarily remove land from agricultural production within the district's water service area include renewable solar energy and other non-agricultural projects. Such projects may need a short-term water supply for construction and decommissioning activities and longer-term water service for facility operation and maintenance or for treating to potable water standards. Conserved water will be credited to the extent that water use for the new project is less than the historic water use for the project site's footprint as determined by the ten-year water use history.¹⁰

Water demands for certain non-agricultural projects are typically less than that required for agricultural production; this reduced demand allows conserved water to be made available for other users under IID's annual consumptive use cap. This allows the district to avail itself of the ability during the term of the QSA/Transfer Agreements under [CWC Section 1013](#) to create conserved water through projects such

⁹ IID website: [Temporary Land Conversion Following Policy \(TLCFP\)](#), and [The TLCFP](#) are the sources of the text for this section.

¹⁰ For details of how water conservation yield attributable to land removed from agricultural production and temporarily fallowed is computed, see [TLCFP for Water Conservation Yield](#).

as temporary land following conservation measures. This conserved water can then be used to satisfy the district's conserved water transfer obligation and for environmental mitigation purposes.

Under the terms of the legislation adopted to facilitate the QSA/Transfer Agreements and enacted in CWC Section 1013, the TLCFP was adopted by the IID board on May 8, 2012 and revised on March 29, 2016 to update the fee schedule for 2016. This policy provides a framework for a temporary, long-term following program to work in concert with the IWSP. While conserved water generated from the TLCFP is limited by law for use for water transfer or environmental purposes, by satisfying multiple district objectives the TLCFP serves to reduce efficiency conservation and water use reduction demands on IID water users, thus providing district wide benefits.

IMPERIAL IRRIGATION DISTRICT'S WATER RIGHTS

The laws and regulations that influence IID's water supply are noted in this section. The Law of the River (as described below), along with the 2003 Quantification Settlement Agreement and Related Agreements serve as the laws, regulations and agreements that primarily influence the findings of this WSA. These agreements grant California the most senior water rights along the Colorado River and specify that IID has access to 3.1 MAF per year. These two components will influence future decisions in terms of water supply availability during periods of shortages.

California Law

IID has a longstanding right to divert Colorado River water, and IID holds legal titles to all of its water and water rights in trust for landowners within the district (CWC §20529 and §22437; *Bryant v. Yellen*, 447 U.S. 352, 371 (1980), fn.23.). Beginning in 1885, a number of individuals, as well as the California Development Company, made a series of appropriations of Colorado River water under California law for use in the Imperial Valley. The rights to these appropriations were among the properties acquired by IID from the California Development Company.

Law of the River

Colorado River water rights are governed by numerous compacts, state and federal laws, court decisions and decrees, contracts, and regulatory guidelines collectively known as the "Law of the River." Together, these documents form the basis for allocation of the water, regulation of land use, and management of the Colorado River water supply among the seven basin states and Mexico.

Of all regulatory literature that governs Colorado River water rights, the following are the specifics that impact IID:

Colorado River Compact (1922)
Boulder Canyon Project Act (1928)
California Seven-Party Agreement (1931)

Arizona v. California US Supreme Court Decision (1964, 1979)
Colorado River Basin Project Act (1968)
Quantification Settlement Agreement and Related Agreements (2003)
2003 Colorado River Water Delivery Agreement: Federal QSA for purposes of Section 5(b) Interim Surplus Guidelines (CRWDA)
1970 Criteria for Coordinated Long-Range Operation of Colorado River Reservoirs
Annual Operating Plan (AOP) for Colorado River Reservoirs
2007 Colorado River Interim Guidelines for Lower Basin Shortages and Coordinated Operations for Lakes Powell and Mead (2007 Interim Guidelines)

Colorado River Compact (1922)

With authorization of their legislatures and urging of the federal government, representatives from the seven Colorado River basin states began negotiations regarding distribution of water from the Colorado River in 1921. In November 1922, an interstate agreement called the “Colorado River Compact” was signed by the representatives giving the Lower Basin perpetual rights to annual apportionments of 7.5 million acre-feet (MAF) of Colorado River water (75 MAF over ten years). The Upper Basin was to receive the remainder, which based on the available hydrological record was also expected to be 7.5 MAF annually, with enough left over to provide 1.5 MAF annually to Mexico.

Boulder Canyon Project Act (1928)

Provisions in the 1928 Boulder Canyon Project Act made the compact effective and authorized construction of Hoover Dam and the All-American Canal, and served as the United States’ consent to accept the Compact. Through a Presidential Proclamation on June 25, 1929, this act resulted in ratification of the Compact by six of the basin states and required California to limit its annual consumptive use to 4.4 MAF of the lower basin’s apportionment plus not less than half of any excess or surplus water unapportioned by the Compact. A lawsuit was filed by the State of Arizona after its refusal to sign. Through the implementation of its 1929 Limitation Act, California abided by this federal mandate. The Boulder Canyon Act authorized the Secretary of the Interior (Secretary) to “contract for the storage of water... and for the delivery thereof... for irrigation and domestic uses,” and additionally defined the lower basin’s 7.5 MAF apportionment split, with an annual allocation 0.3 MAF to Nevada, 2.8 MAF to Arizona, and 4.4 MAF to California. Even though the three states never formally settled or agreed to these terms, a 1964 Supreme Court decision (*Arizona v. California*, 373 U.S. 546) declared the three states’ consent to be insignificant since the Boulder Canyon Project Act was authorized by the Secretary.

California Seven-Party-Agreement (1931)

Following implementation of the Boulder Canyon Project Act, the Secretary requested that California make recommendations regarding distribution of its apportionment of Colorado River water. In August 1931, under chairmanship of the State Engineer, the California Seven-Party Agreement was developed and authorized by the affected parties to prioritize California water rights. The Secretary accepted this agreement and established these priorities through General Regulations issued in September of 1931. The first four (4) priority allocations account for California's annual apportionment of 4.4 MAF, with

agricultural entities using 3.85 MAF of that total. Additional priorities are defined for years in which the Secretary declares that excess waters are available.

Arizona v. California U.S. Supreme Court Decision (1964, 1979)

The 1964 Supreme Court decision settled a 25-year disagreement between Arizona and California that stemmed from Arizona's desire to build the Central Arizona Project to enable use of its full apportionment. California's argument was that as Arizona used water from the Gila River, which is a Colorado River tributary, it was using a portion of its annual Colorado River apportionment. An additional argument from California was that it had developed a historical use of some of Arizona's apportionment, which, under the doctrine of prior appropriation, precluded Arizona from developing the project. California's arguments were rejected by the U.S. Supreme Court. Under direction of the Supreme Court, the Secretary was restricted from delivering water outside of the framework of apportionments defined by law. Preparation of annual reports documenting consumptive use of water in the three lower basin states was also mandated by the Supreme Court. In 1979, present perfected water rights (PPRs) referred to in the Colorado River Compact and in the Boulder Canyon Project Act were addressed by the Supreme Court in the form of a Supplemental Decree.

In March of 2006, a Consolidated Decree was issued by the Supreme Court to provide a single reference to the conditions of the original 1964 decrees and several additional decrees in 1966, 1979, 1984 and 2000 that stemmed from the original ruling. The Consolidated Decree also reflects the settlements of the federal reserved water rights claim for the Fort Yuma Indian Reservation.

Colorado River Basin Project Act (1968)

In 1968, various water development projects in both the upper and lower basins, including the Central Arizona Project (CAP) were authorized by Congress. Under the Colorado River Basin Project Act, priority was given to California's apportionment over (before) the CAP water supply in times of shortage. Also under the act, the Secretary was directed to prepare long-range criteria for the Colorado River reservoir system in consultation with the Colorado River Basin States.

Quantification Settlement Agreement and Related Agreements (2003)

With completion of a large portion of the CAP infrastructure in 1994, creation of the Arizona Water Banking Authority in 1995, and the growth of Las Vegas in the 1990s, California encountered increasing pressure to live within its rights under the Law of the River. After years of negotiating among Colorado River Compact States and affected California water delivery agencies, a Quantification Settlement Agreement and Related Agreements and documents were signed on October 10, 2003, by the Secretary of Interior, IID, Coachella Valley Water District (CVWD), Metropolitan Water District of Southern California (MWD), San Diego County Water Authority (SDCWA), and other affected parties.

The Quantification Settlement Agreement and Related Agreements (QSA/Transfer Agreements) are a set of interrelated contracts that resolve certain disputes among the United States, the State of California, IID, MWD, CVWD and SDCWA, for a period of 35 to 75 years, regarding the reasonable and beneficial use of

Colorado River water; the ability to conserve, transfer and acquire conserved Colorado River water; the quantification and priority of Priorities 3(a) and 6(a)¹¹ within California for use of Colorado River water; and the obligation to implement and fund environmental impact mitigation.

Conserved water transfer agreements between IID and SDCWA, IID and CVWD, and IID and MWD are all part of the QSA/Transfer Agreements. For IID, these contracts identify conserved water volumes and establish transfer schedules along with price and payment terms. As specified in the agreements, IID will transfer nearly 415,000 AF annually over a 35-year period (or longer), as follows:

to MWD 110,000 AF [modified to 105,000 AF in 2007],
to SDCWA 205,000 AF,
to CVWD and MWD combined 103,000 AF, and
to certain San Luis Rey Indian Tribes 11,500 AFY of water.

All the conserved water will ultimately come from IID system and on-farm efficiency conservation improvements. In the interim, IID has implemented a Following Program to generate water associated with Salton Sea mitigation related to the impacts of the IID/SDCWA water transfer, as required by the State Water Resources Control Board, which is to run from 2003 through 2017. In return for its QSA/Transfer Agreements programs and deliveries, IID will receive payments totaling billions of dollars to fund needed efficiency conservation measures and to pay growers for conserved on-farm water, so IID can transfer nearly 14.5 MAF of water without impacting local productivity. In addition, IID will transfer to SDCWA 67,700 AFY annually of water conserved from the lining of the AAC in exchange for payment of lining project costs and a grant to IID of certain rights to use the conserved water. In addition to the 105,000 acre-feet of water currently being conserved under the 1988 IID/MWD Conservation Program, these more recent agreements define an additional 303,000 AFY to be conserved by IID from on-farm and distribution system conservation projects for transferred to SDCWA, CVWD, and MWD.

Colorado River Water Delivery Agreement (2003)¹²

As part of QSA/Transfer Agreements among California and federal agencies, the Colorado River Water Delivery Agreement: Federal QSA for purposes of Section 5(b) Interim Surplus Guidelines (CRWDA) was entered into by the Secretary of the Interior, IID, CVWD, MWD and SDCWA. This agreement involves the federal government because of the change in place of diversion from Imperial Dam into the All-American Canal to Parker Dam into MWD's Colorado River Aqueduct.

The CRWDA assists California to meet its "4.4 Plan" goals by quantifying deliveries for a specific number of years for certain Colorado River entitlements so transfers may occur. In particular, for the term of the CRWDA, quantification of Priority 3(a) was effected through caps on water deliveries to IID (consumptive

¹¹ Priorities 1, 2, 3(b), 6(b), and 7 of current Section 5 Contracts for the delivery of Colorado River water in the State of California and Indian and miscellaneous Present Perfected Rights within the State of California and other existing surplus water contracts are not affected by the QSA Agreement.

¹² *CRWDA: Federal QSA* accessed 7 June 2017.

use of 3.1 MAF per year) and CVWD (consumptive use of 330 KAF per year). In addition, California’s Priority 3(a) apportionment between IID and CVWD, with provisions for transfer of supplies involving IID, CVWD, MWD and SDCWA are quantified in the CRWDA for a period of 35 years or 45 years (assumes SDCWA does not terminate in year 35) or 75 years (assumes SDCWA and IID mutually consent to renewal term of 30 years).

Allocations for consumptive use of Colorado River water by IID, CVWD and MWD that will enable California to stay within its basic annual apportionment (4.4 MAF plus not less than half of any declared surplus) are defined by the terms of the QSA/Transfer Agreements (Table 9). As specified in the QSA/Transfer Agreements, by 2026, IID annual use within (Imperial Valley) is to be reduced to just over 2.6 MAF of its 3.1 MAF quantified annual apportionment. The remaining nearly 500,000 AF (which includes the 67,000 AF from AAC lining) are to be transferred annually to urban water users outside of the Imperial Valley.

Table 9. CRWDA Annual 4.4 MAF Apportionment (Priorities 1 to 4) for California Agencies (AFY)

User	Apportionment (AFY)
Palo Verde Irrigation District and Yuma Project*	420,000
Imperial Irrigation District	3,100,000
Coachella Valley Water District	330,000
Metropolitan Water District of Southern California*	550,000
Total:	4,400,000

* PVID and Yuma Project did not agree to a cap; value represents a contractual obligation by MWD to assume responsibility for any overages or be credited with any volume below this value.

Notes: All values are consumptive use at point of Colorado River diversion: Palo Verde Diversion Dam (PVID), Imperial Dam (IID and CVWD), and Parker Dam (MWD). Source: IID Annual Water Report

Quantification of Priority 6(a) was effected through quantifying annual consumptive use amounts to be made available in order of priority to MWD (38 KAF), IID (63 KAF), and CVWD (119 KAF) with the provision that any additional water available to Priority 6(a) be delivered under IID’s and CVWD’s existing water delivery contract with the Secretary¹³. The CRWDA provides that the underlying water delivery contract with the Secretary remain in full force and effect. (*Colorado River Documents 2008*, Chapter 6, pages 6-12 and 6-13). The CRWDA also provides a source of water to effect a San Luis Rey Indian Water Rights settlement. Additionally, the CRWDA satisfies the requirement of the 2001 Interim Surplus Guidelines (ISG) that a QSA be adopted as a prerequisite to the interim surplus determination by the Secretary in the ISG.

Inadvertent Overrun Payback Policy (2003)

The CRWDA Inadvertent Overrun Payback Policy (IOPP), adopted by the Secretary contemporaneously with the execution of the CRWDA, provides additional flexibility to Colorado River management and applies to entitlement holders in the Lower Division States (Arizona, California and Nevada)¹⁴ The IOPP defines inadvertent overruns as “Colorado River water diverted, pumped, or received by an entitlement

¹³ When water levels in the Colorado River reservoirs are low, Priority 5, 6 and 7 apportionments are not available for diversion.

¹⁴ USBR, 2003 CRWDA ROD Implementation Agreement, IOPP and Related Federal Actions Final EIS. Section IX. Implementing the Decision A. Inadvertent Overrun and Payback Policy. Pages 16-19 of 34.

holder of the Lower Division States that is in excess of the water users' entitlement for the year." An entitlement holder is allowed a maximum overrun of 10 percent (10%) of its Colorado River water entitlement.

In the event of an overrun, the IOPP provides a mechanism to payback the overrun. When the Secretary has declared a normal year for Colorado River diversions, a contractor has from one to three years to pay back its obligation, with a minimum annual payback equal to 20 percent of the entitlement holder's maximum allowable cumulative overrun account or 33.3 percent of the total account balance, whichever is greater. However, when Lake Mead is below 1,125 feet on January 1, the terms of the IOPP require that the payment of the inadvertent overrun obligation be made in the calendar year after the overrun is reported in the USBR Lower Colorado Region Colorado River Accounting and Water Use Report [for] Arizona, California, and Nevada (Decree Accounting Report).¹⁵

1970 Criteria for Coordinated Long-Range Operation of Colorado River Reservoirs

The 1970 Operating Criteria control operation of the Colorado River reservoirs in compliance with requirements set forth in the Colorado River Compact of 1922, the United States-Mexico Water Treaty of 1944, the Colorado River Storage Project Act of 1956, the Boulder Canyon Projects Act (Lake Mead) and the Colorado River Basin Project Act (Upper Basin Reservoirs) of 1968, and other applicable federal laws. Under these Operating Criteria, the Secretary makes annual determinations published in the USBR Annual Operating Plan for Colorado River Reservoirs (discussed below) regarding the release of Colorado River water for deliveries to the lower basin states. A requirement to equalize active storage between Lake Powell and Lake Mead when there is sufficient storage in the Upper Basin is included in these operating criteria. **Figure 5** identifies the major storage facilities at the upper and lower basin boundaries.

¹⁵ 2003 CRWDA ROD, Section IX, A.6.c, page 18 of 34.

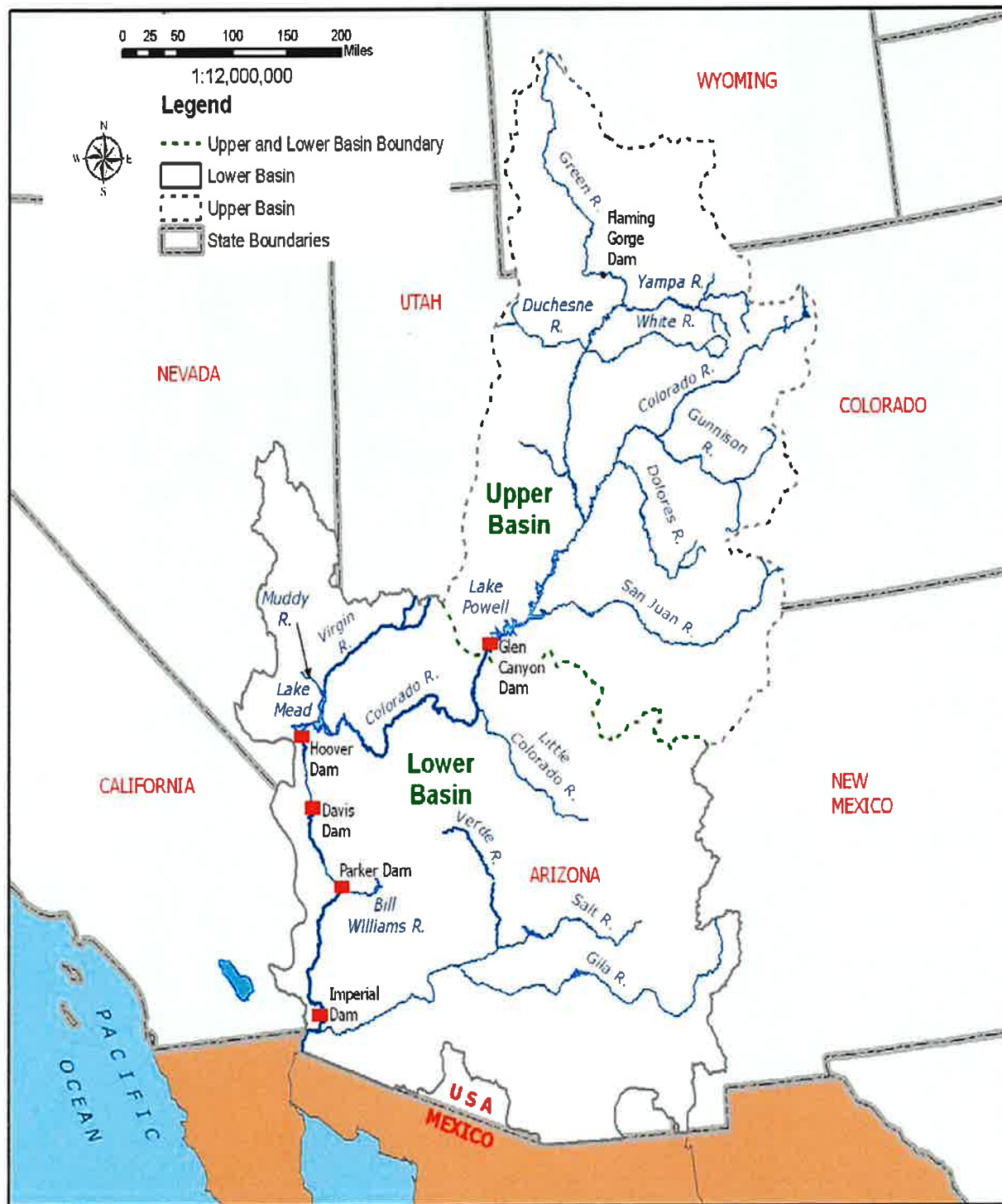


Figure 5. Major Colorado River Reservoir Storage Facilities and Basin Location Map

Source: Final EIS – Colorado River Interim Guidelines for Lower Basin Shortages and Coordinated Operations for Lake Powell and Lake Mead, Volume 1 Chapter 1 Purpose and Need, p I-10.

Annual Operating Plan for Colorado River Reservoirs (Applicable when Lake Mead Surplus/Shortage)

The AOP is developed in accordance with Section 602 of the Colorado River Basin Project Act (Public Law 90-537); the Criteria for Coordinated Long-Range Operations of Colorado River Reservoirs Pursuant to the Colorado River Basin Project Act of 1968, as amended, promulgated by the Secretary of the Interior; and Section 1804(c)(3) of the Grand Canyon Protection Act (Public Law 102-575). As part of the AOP process, the Secretary makes determinations regarding the availability of Colorado River water for deliveries to the lower basin states, including whether normal, surplus, and shortage conditions are in effect on the lower portion of the Colorado River.

2007 Colorado River Interim Guidelines for Lower Basin Shortages (2007 Interim Guidelines)

A multi-year drought in the Colorado River Upper Basin triggered the need for the 2007 Interim Shortage Guidelines. In the summer of 1999, Lake Powell was essentially full with reservoir storage at 97 percent of capacity. However, precipitation fell off starting in October 1999 and 2002 inflow was the lowest recorded since Lake Powell began filling in 1963.¹⁶ By August 2011, inflow was 279 percent (279%) of average; however, drought resumed in 2012 and continued through calendar year 2022. Using the record in **Table 10**, average unregulated inflow to Lake Powell for water years 2000-2022 is 70 percent (69.96%); or if 2011 is excluded, 67 percent (66.95%) of the historic average, see **Table 10**.

Table 10. Unregulated Inflow to Lake Powell, Percent of Historic Average, 2000-2022

2000	2001	2002	2003	2004	2005	2006	2007	2008	2009	2010
62%	59%	25%	51%	49%	105%	73%	68%	102%	88%	73%
2011	2012	2013	2014	2015	2016	2017	2018	2019	2020	2021
136%	35%	49%	90%	83%	80%	101%	36%	120%	54%	36%
2022										
34%										

Source: UCR Water Operations: Historic Data (2000-2022)

In the midst of the drought period, USBR developed 2007 Interim Guidelines with consensus from the seven basin states, which selected the Draft EIS Preferred Alternative as the basis for USBR’s final determination. The basin states found the Preferred Alternative best met all aspects of the purpose and need for the federal action.¹⁷

The 2007 Interim Guidelines Preferred Alternative highlights the following:

1. The need for the Interim Guidelines to remain in place for an extended period of time.
2. The desirability of the Preferred Alternative based on the facilitated consensus recommendation from the basin states.
3. The likely durability of the mechanisms adopted in the Preferred Alternative in light of the extraordinary efforts that the basin states and water users have undertaken to develop

¹⁶ Water Year: October 1 through September 30 of following year, so water year ending September 30, 1999

¹⁷ USBR *Colorado River Interim Guidelines for Lower Basin Shortages and Coordinated Operations for Lake Powell and Lake Mead* <<http://www.usbr.gov/lc/region/programs/strategies.html>>

implementing agreements that will facilitate the water management tools (shortage sharing, forbearance, and conservation efforts) identified in the Preferred Alternative

4. That the range of elements in the Preferred Alternative will enhance the Secretary's ability to manage the Colorado River reservoirs in a manner that recognizes the inherent tradeoffs between water delivery and water storage.

In June 2007, USBR announced that a preferred alternative for Colorado River Interim Guidelines for Lower Basin Shortages and Coordinated Operations of Lake Powell and Lake Mead (Final Preferred Alternative) had been determined. The Final Preferred Alternative, based on the basin states' consensus alternative and an alternative submitted by the environmental interests called "Conservation Before Shortage," is comprised of four key operational elements which are to guide operations of Lake Powell and Lake Mead through 2026 are:

1. Shortage strategy for Lake Mead and Lower Division states: The Preferred Alternative proposed discrete levels of shortage volumes associated with Lake Mead elevations to conserve reservoir storage and provide water users and managers in the Lower Basin with greater certainty to know when, and by how much, water deliveries will be reduced during low reservoir conditions.
2. Coordinated operations of Lake Powell and Lake Mead: The Preferred Alternative proposed a fully coordinated operation of the reservoirs to minimize shortages in the Lower Basin and to avoid risk of curtailments of water use in the Upper Basin.
3. Mechanism for storage and delivery of conserved water in Lake Mead: The Preferred Alternative proposed the Intentionally Created Surplus (ICS) mechanism to provide for the creation, accounting, and delivery of conserved system and non-system water thereby promoting water conservation in the Lower Basin. Credits for Colorado River or non-Colorado River water that has been conserved by users in the Lower Basin creating an ICS would be made available for release from Lake Mead at a later time. The total amount of credits would be 2.1 MAF, but this amount could be increased up to 4.2 MAF in future years.
4. Modifying and extending elements of the Interim Surplus Guidelines (ISG). The ISG determines conditions under which surplus water is made available for use within the Lower Division states. These modifications eliminate the most liberal surplus conditions thereby leaving more water in storage to reduce the severity of future shortages.

With respect to the various interests, positions, and views of the seven basin states, this provision adds an important element to the evolution of the legal framework for prudent management of the Colorado River. Furthermore, the coordinated operation element allows for adjustment of Lake Powell releases to respond to low reservoir storage conditions in either Lake Powell or Lake Mead. States found the Preferred Alternative best met all aspects of the purpose and need for the federal action.¹⁸ The 2007

¹⁸ USBR Colorado River Interim Guidelines for Lower Basin Shortages and Coordinated Operations for Lake Powell and Lake Mead.

Interim Guidelines are in place from 2008 through December 31, 2025 (through preparation of the 2026 Annual Operating Plan).

Lower Colorado Region Water Shortage Operations

The Colorado River Basin is experiencing a prolonged period of drought and record-low runoff conditions that have resulted in historically low reservoir levels in both Lake Powell (upper Basin) and Lake Mead (lower Basin). The period from 2000 through 2021 was the lowest 22-year inflow into Lake Powell in the historical record and has strained the Colorado River system. The drought in the Colorado River watershed has continued through 2022. Despite an increase in observed runoff in August 2011 when unregulated inflow to Lake Powell was 279 percent of the average. Since 2000, Lake Mead has been below the “average” level of lake elevations (see Figure 6). Such conditions have caused the activation of shortage plans for waters users in Arizona and Nevada, and in Mexico. By May of 2022 Lake Meads elevation had declined to 1,048 feet. These conditions resulted in the U.S. Secretary of the Interior declaring the first-ever Tier 2a Shortage on the Colorado River.

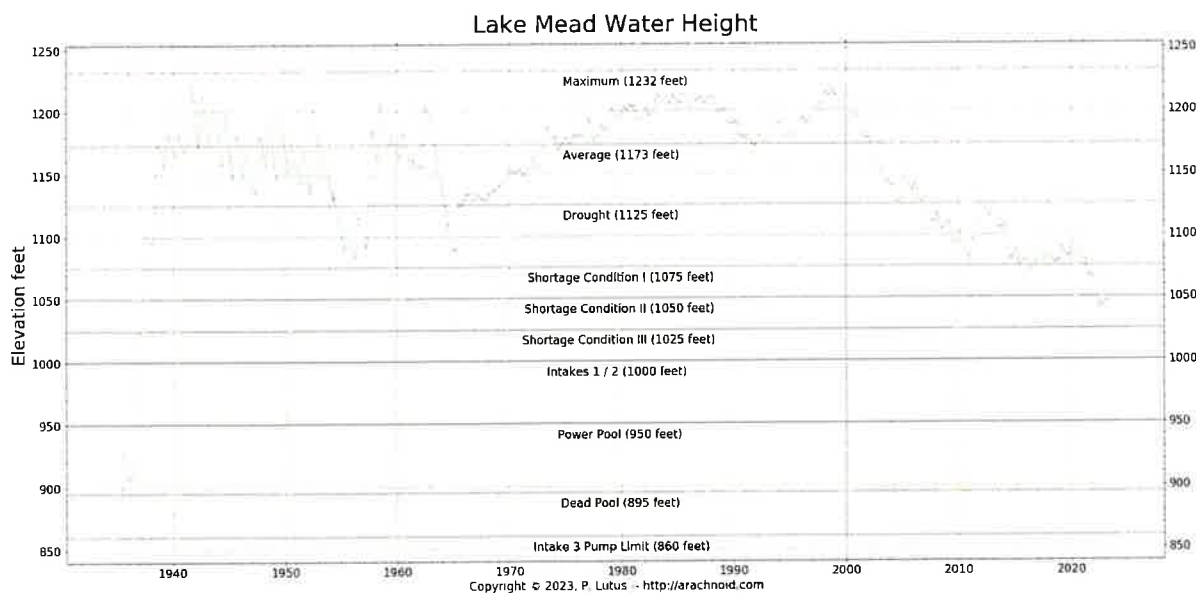


Figure 6. Lake Mead Water Elevation Levels November 2023

Source: <<http://www.arachnoid.com/NaturalResources/index.html>>

According to guidelines put in place in 2007, Arizona and Nevada begin to take shortages when the water elevation in Lake Mead falls below 1,075 feet. The volumes of shortages increase as water levels fall to 1,050 feet and again at 1,025 feet. In 2012, Mexico agreed to participate in a 5-year pilot agreement to share specific volumes of shortages at the same elevations. The 2007 interim shortage guidelines contain no reductions for California, which has senior water rights to the Central Arizona Project water supply, through 2025 when the guidelines expire. If Lake Mead's elevation drops to 1,025 feet, a re-consultation

process would be triggered among the basin states to address next steps. Consultation would start out within each state, then move to the three lower basin states, followed by all seven states and the USBR. Mexico will then be brought into the process unless they choose to participate earlier. In total, 721,000 acre-feet of reductions will be implemented in the Lower Basin and Mexico in 2023 consistent with various agreements that dictate the operation of the Colorado River.

California has no stipulated reduction to its water supplies under a Tier 2a Shortage declaration. While not directly affected by the shortage reductions announced by Reclamation, the Shortage condition does prevent IID from overrunning its approved water order and, as stated earlier, contributions to address Lake Mead water elevation are anticipated by IID. IID is considering voluntary water conservation for the benefit of Lake Mead, up to 250,000 AFY, as long as there are no obligatory reductions.

IMPERIAL IRRIGATION DISTRICT WATER SUPPLY AND DEMAND

SB 610 requires an analysis of a normal, single dry, and multiple dry water years to show that adequate water is available for the proposed Project in various climate scenarios. Water availability for this Project in a normal year is no different from water availability during a single-dry and multiple-dry year scenarios. This is due to the small effect rainfall has on water availability in IID's arid environment along with IID's strong entitlements to the Colorado River water supply. Local rainfall does have some impact on how much water is consumed (i.e., if rain falls on agricultural lands, those lands will not demand as much irrigation), but does not impact the definition of a normal year, a single-dry year, or a multiple-dry year scenario.

WATER AVAILABILITY – NORMAL YEAR

IID is entitled to annual net consumptive use of 3.1 MAF of Colorado River, less its QSA/Transfer Agreement obligations. Imperial Dam, located north of Yuma, Arizona, serves as a diversion structure for water deliveries throughout southeastern California, Arizona, and Mexico. Water is transported to the IID water service area through the AAC for use throughout the Imperial Valley. IID historic and forecast net consumptive use volumes at Imperial Dam from CRWDA Exhibit B are shown in **Error! Reference source not found.11**. Volumes 2003-2021 are adjusted for USBR Decree Accounting historic records. Volumes for 2022-2077 are from CRWDA Exhibit B modified to reflect 2014 Letter Agreement changes to the 1988 IID/MWD Water Conservation Agreement.¹⁹

Due to limits on annual consumptive use of Colorado River water under the QSA/Transfer Agreements, IID's water supply during a normal year is best represented by the CRWDA Exhibit B Net Available for

¹⁹ [2014 Imperial Irrigation District Letter Agreement](#) for Substitution and Conservation Modifications to the IID/MWD Water Conservation Agreement - December 17, 2014.

Consumptive Use (Error! Reference source not found., Column 11). The annual volume is IID Priority 3(a) Quantified Amount of 3.1 million acre-feet (MAF) (Error! Reference source not found., Column 2) less the IID transfer program reductions for each year (Error! Reference source not found., Columns 3-9). IID suggests **Table 10**, which assumes full use of IID's quantified water supply, be used in determining base normal year water availability.

Table 11. IID Historic and Forecast Net Consumptive Use for Normal Year, Single-Dry Year and Multiple-Dry Year Water Supply, 2003-2037, et seq. (CRWDA Exhibit B)

IID Quantification and Transfers, Volumes in KAF at Imperial Dam ¹										
Col 1	2	3	4	5	6	7	8	9	10	11
Year	IID 3(a) Quantified Amount	IID Reductions								IID Net [Available for] Consumptive Use (Col 2 - 10)
		1988 MWD Transfer ²	SDCWA Transfer	AAC Lining	Salton Sea Mitigation SDCWA Transfer ³	Intra-Priority 3 CVWD Transfer	MWD Transfer w\ Salton Sea Restoration ⁴	Misc. PPRs	IID Total Reduction (Σ Cols 3-9) ⁵	
2003	3,100	105.1	10.0	0.0	0.0	0.0	0.0	11.5	126.6	2978.2
2004	3,100	101.9	20.0	0.0	15.0	0.0	0.0	11.5	148.4	2743.9
2005	3,100	101.9	30.0	0.0	15.0	0.0	0.0	11.5	158.4	2756.8
2006	3,100	101.2	40.0	0.0	20.0	0.0	0.0	11.5	172.7	2909.7
2007	3,100	105.0	50.0	0.0	25.0	0.0	0.0	11.5	191.5	2872.8
2008	3,100	105.0	50.0	8.9	26.0	4.0	0.0	11.5	205.4	2825.1
2009	3,100	105.0	60.0	65.5	30.1	8.0	0.0	11.5	280.1	2566.7
2010	3,100	105.0	70.0	67.7	33.8	12.0	0.0	11.5	294.8	2540.5
2011	3,100	103.9	63.3	67.7	0.0	16.0	0.0	11.5	262.4	2915.8
2012	3,100	104.1	106.7	67.7	15.2	21.0	0.0	11.5	326.2	2,903.2
2013	3,100	105.0	100.0	67.7	71.4	26.0	0.0	11.5	381.6	2,554.9
2014	3,100	104.1	100.0	67.7	89.2	31.0	0.0	11.5	403.5	2,533.4
2015	3,100	107.82	100.0	67.7	153.3	36.0	0.0	11.5	476.3	2,480.9
2016	3,100	105.0	100.0	67.7	130.8	41.0	0.0	11.5	456.0	2,504.3
2017	3,100	105.0	100.0	67.7	105.3	45.0	0.0	9.9	432.9	2,667.1
2018	3,100	105	130	67.7	0.1	63	0.0	9.7	375.5	2,724.5
2019 ⁶	3,100	105	160	67.7	46.55	68	0.0	6.9	454.2	2,645.8
2020	3,100	105	192.5	67.7	0.0	73	0.0	9.1	448.0	2,652.0
2021	3,100	105	205	67.7	0.0	78	0.0	9.3	465.0	2,635.0
2022	3,100	105	202.5	67.7	0	83	0.0	9.8	468.0	2,632.0
2023	3,100	105	200	67.7	0	88	0.0	11.5	472.2	2,627.8
2024	3,100	105	200	67.7	0	93	0.0	11.5	477.2	2,622.8
2025	3,100	105	200	67.7	0	98	0.0	11.5	482.2	2,617.8
2026	3,100	105	200	67.7	0	103	0.0	11.5	487.2	2,612.8
2027	3,100	105	200	67.7	0	103	0.0	11.5	487.2	2,612.8
2028	3,100	105	200	67.7	0	103	0.0	11.5	487.2	2,612.8
2029-37	3,100	105	200	67.7	0	103	0.0	11.5	487.2	2,612.8
2038-47 ⁷	3,100	105	200	67.7	0	103	0.0	11.5	487.2	2,612.8
2048-77 ⁸	3,100	105	200	67.7	0	50	0.0	11.5	434.2	2,665.8

- 2003 through 2022, volumes are adjusted for actual USBR Decree Accounting values; IID Total Reduction and Net Available for Consumptive Use may not equal Col 2 minus Col 10, if IID conservation/use was not included in Exhibit B.
- 2014 Letter of Agreement provides that, effective January 2016 total amount of conserved water available is 105 KAFY
- Salton Sea Mitigation volumes may vary based on conservation volumes and method of conservation.
- This transfer is not likely given lack of progress on Salton Sea restoration as of 2018; shaded entries represent volumes that may vary.*
- Reductions include conservation for 1988 IID/MWD Transfer, IID/SDCWA Transfer, AAC Lining; SDCWA Transfer Mitigation, MWD Transfer w/Salton Sea Restoration (if any); Misc. PPRs. Amounts are independent of increases and reductions as allowed by the IOPP.
- In order to resolve the outstanding 2010 Salton Sea mitigation water pre-delivery issue, IID left 46,546 AF of extraordinary conservation in Lake Mead. See IID's December 19, 2019, revised 2019 water order and Reclamation's March 10, 2020, approval letter.
- Assumes SDCWA does not elect termination in year 35.
- Assumes SDCWA and IID mutually consent to renewal term of 30 years.
- Modified from 100 KAFY in CRWDA Exhibit B; stating in 2018 MWD will provide CVWD 50 KAFY of the 100 KAFY.

Source: CRWDA: Federal QSA Exhibit B, p 13; updated values from 2021 Annual Water & QSA Implementation Report

CRWDA Exhibit B Net Available for Consumptive Use volumes less system operation demand represents the amount of water available for delivery by IID Water Department to its customers each year. In a normal year, perhaps 50,000 to 100,000 AF of effective rainfall would fall in the IID water service area. However, rainfall is not evenly distributed throughout the IID water service area and is not taken into account by IID in the submittal of its Estimate of Diversion (annual water order) to the USBR.

EXPECTED WATER AVAILABILITY – SINGLE DRY AND MULTIPLE DRY YEARS

Historically, when drought conditions exist within the IID water service area, as has been the case for the past two decades, the water supply available to meet agricultural and non-agricultural water demands remains the same as normal year water supply because IID historically relied solely on its entitlement for Colorado River water. Due to the priority of IID water rights and other agreements, drought conditions affecting Colorado River water supplies cause shortages for Arizona, Nevada, and Mexico, before impacting California and IID. Accordingly, the Net Available for Consumptive Use volumes in **Error! Reference source not found.**, Column 11 represents the water supply at Imperial Dam available for diversion by IID in single-dry year and multiple-dry year scenarios, consistent with IID’s senior water rights. The runoff declines in the upper basin and prolonged drought conditions throughout the west have resulted, for the first time, in the Colorado River operating under a Tier 2a Shortage Condition in 2023, creating long-term water supply uncertainties throughout the Basin states.

Water Management under a Suspended Inadvertent Overrun Payback Policy (IOPP)

Under normal operating conditions, the CRWDA Inadvertent Overrun Payback Policy (IOPP), provided IID with some flexibility to manage its water use. When the water level in Lake Mead is above 1,125 feet, an overrun of its USBR approved annual water order was permissible, and IID had up to three years to pay water use above the annual water order. When Lake Mead’s water level is at or below 1,125 feet on January 1 in the calendar year after the overrun is reported in the USBR Lower Colorado Region Decree Accounting Report, the IOPP prohibits additional overruns and requires that outstanding overruns be paid back in the subsequent calendar year rather than in three years as allowed under normal conditions; that is, the payback is to be made in the calendar year following publication of the overrun in the USBR Decree Accounting Report. The IOPP is suspended during shortage conditions. For historic IID annual rainfall, net consumptive use, transfers and IID underrun/overrun amounts, see **Table 12**.

Table 12. IID Annual Rainfall (In), Net Consumptive Use and Underrun/Overrun Amounts (AF), 1988-2022

Year	IID Total Annual Rainfall	IID Water Users	IID/MWD Transfer	IID/ SDCWA Transfer	SDCWA Transfer Salton Sea Mitigation	IID Underrun / Overrun	IID/CVWD Transfer	AAC Lining
1988		2,947,581						
1989		3,009,451						
1990	91,104	3,054,188	6,110					
1991	192,671	2,898,963	26,700					
1992	375,955	2,575,659	33,929					
1993	288,081	2,772,148	54,830					
1994	137,226	3,048,076	72,870					
1995	159,189	3,070,582	74,570					
1996	78,507	3,159,609	90,880					
1997	64,407	3,158,486	97,740					
1998	100,092	3,101,548	107,160					
1999	67,854	3,088,980	108,500					
2000	29,642	3,112,770	109,460					
2001	12,850	3,089,911	106,880					
2002	12,850	3,152,984	104,940					
2003	116,232	2,978,223	105,130	10,000	0	6,555		
2004	199,358	2,743,909	101,900	20,000	15,000	-166,408		
2005	202,983	2,756,846	101,940	30,000	15,000	-159,881		
2006	19,893	2,909,680	101,160	40,000	20,000	12,414		
2007	64,580	2,872,754	105,000	50,000	25,021	6,358		
2008	63,124	2,825,116	105,000	50,000	26,085	-47,999	4,000	8,898
2009	30,0354	2,566,713	105,000	60,000	30,158	-237,767	8,000	65,577
2010	189,566	2,545,593	105,000	70,000	33,736	-207,925	12,000	67,700
2011	109,703	2,915,784	103,940	63,278	0	82,662	16,000	67,700
2012	133,526	2,903,216	104,140	106,722	15,182	134,076	21,000	67,700
2013	134,497	2,554,845	105,000	100,000	71,398	-64,981	26,000	67,700
2014	53,517	2,533,414	104,100	100,000	89,168	-797	31,000	67,700
2015	97,039	2,480,933	107,820	100,000	153,327	-90,025	36,000	67,700
2016	90,586	2,504,258	105,000	100,000	130,796	-62,497	41,000	67,700
2017	105,919	2,548,171	105,000	100,000	105,311	-30,591	45,000	67,700
2018	63,318	2,625,422	105,000	130,000	0	0	63,000	67,700
2019	146,384	2,558,136	105,000	160,000	46,555	-34,215	68,000	67,700
2020	130,275	2,493,623	105,000	192,500	0	-98,073	73,000	67,700
2021	81,901	2,552,674	105,000	205,000	0	-37,737	78,000	67,700
2022	61,377	2,577,164	105,000	202,500	0	--6,470	83,000	67,700

Notes: Volumes in acre-feet and except Total Annual Rainfall are USBR Decree Accounting Report record at Imperial Dam.

IID Total Annual Rainfall from IID Provisional Water Balance, first available calculations are for 1990.

Not all IID QSA programs are shown on this table.

Source: USBR Decree Accounting reports, except IID Total Rainfall and IID Overrun/Underrun is a separate calculation

Source: 2021 IID Annual Water & QSA Implementation Report and 2022 IID SWRCB Report; IID Total Rainfall and IID Overrun/Underrun is a separate calculation

On August 16, 2021, the water level in Lake Mead was 1,060 feet and for the first time since the IOPP came into effect, the Secretary of the Interior declared the first-ever, Tier 1 shortage condition for Colorado River operations, elevations reaching 1,045 as of mid-2022 (Figure 7). For IID, this meant that no overruns would be allowed to IID's approved water order.

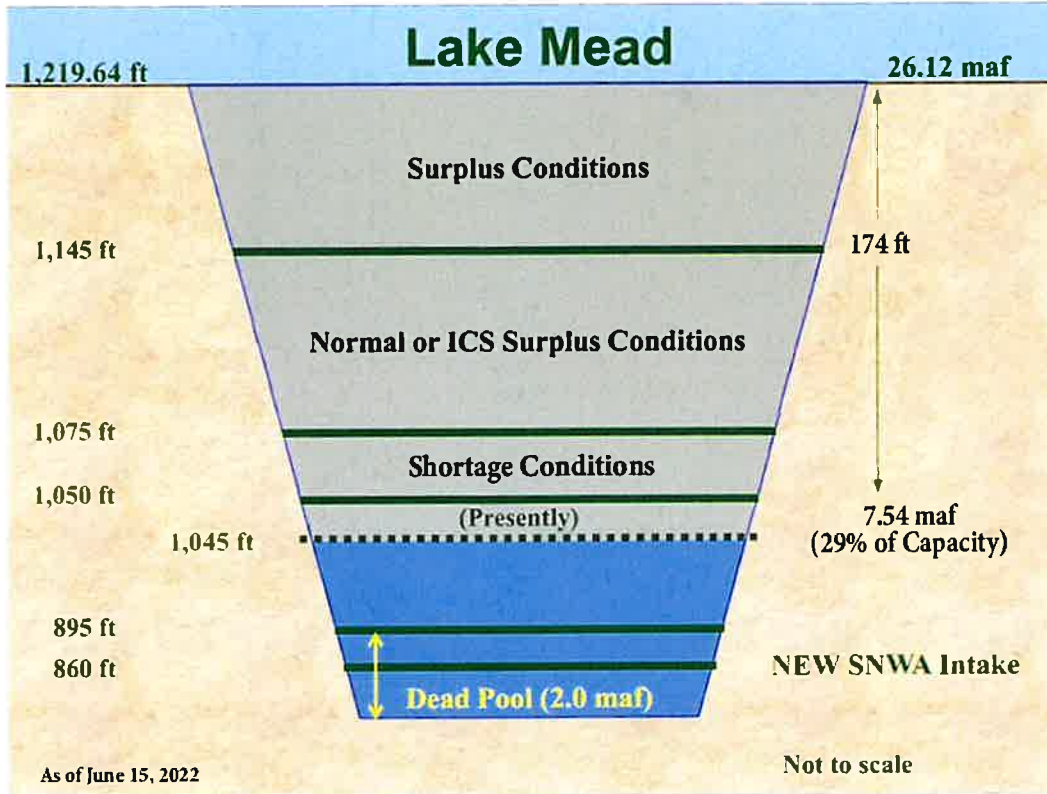


Figure 7. Lake Mead Schematic (June 15, 2022)

The flexibility that IID was allowed in 2013 and 2014 is no longer available to the district. Under the terms of the IOPP, no overruns are allowed in a year when payback is required. IID has not experienced any overrun pay back since 2014 as noted in Table 13. Under shortage conditions, IID would use any conserved water stored in a non-System reservoir, if available, to prevent any overrun.

Table 13. IID Inadvertent Overrun Payback to the Colorado River under the IOPP, 2012-2022

Calendar Year of Payback	2011 Overrun Payback (AF)	2012 Overrun Payback (AF)	Payback Total for Calendar Year (AF)
2013	55,710	-	55,710
2014	20,662	134,076	154,738
Total Payback	76,372	134,076	210,448

Notes: All values are consumptive use volumes at Imperial Dam (AF).

2013 Payback Total was 62 KAF, but in 2012 IID had 6,290 AF of early payback, reducing volume to 55,710 AF

The 2013 IOPP payback obligation, prohibition on overruns in payback years, and suspension of this flexibility during shortage conditions led the IID Board to implement an apportionment program pursuant to the 2007 EDP, which has been subsequently revised and modified over the years. The Revised 2022 EDP is a version approved and adopted by the IID Board on June 21, 2022 (see Attachment B). The Revised 2022 EDP also establishes a water exchange clearinghouse to facilitate the movement of water supply between all water users and water user categories. The established water user categories are 1) agricultural water users, 2) industrial/commercial water users and 3) potable water users. As designed, the clearinghouse will allow IID and its water customers to balance water demands with the water supplies that are available to all users.

Generally, the EDP Apportionment, as discussed in the proceeding section, is not expected to impact industrial/commercial uses. However, given the certainty of continuing drought on the Colorado River through 2026 and other stressors, provisions such as the 2012 IWSP Water Agreement sections 3.7 and 3.8 as well for dry and multiple dry year water assessment may come into effect. IID has agreed to work with Project proponents to ensure to the extent possible that the IWSP Water Supply Agreement terms will not adversely impact Project operation. For purposes of this WSA, years with a shortage condition that impacts non-agricultural projects such as an IOPP payback obligation constitute “dry” years for IID. For single-dry year and multiple-dry water year assessments, IID’s EDP shall govern.

Equitable Distribution Plan (EDP) History

A 2006 study by Hanemann and Brookes suggested that overrun conditions were likely to occur 40-50 percent of the years during the decade following the report. Under such conditions a supply/demand imbalance would occur resulting in a need to apportion water consistent with state law. Under California state law, water must be distributed equitably as determined by the IID Board of Directors.

On November 28, 2006, the IID Board of Directors adopted Resolution No 22-2006 approving development and implementation of an Equitable Distribution Plan to address times when customers’ demand would exceed IID’s Colorado River supply. The EDP, adopted in 2007 allowed the IID Board to institute an apportionment program. As part of this resolution, the IID Board directed the General Manager to prepare the rules and regulations necessary or appropriate to implement the plan within the district. The EDP Regulations were created to enable IID to implement a water management tool (apportionment) to address years in which water demand is expected to exceed supply.

It was expected that an annual EDP Apportionment would be established for each of the next several years, if not for the duration of the QSA. However, the implementation of the EDP apportionment was legally challenged in 2013 with litigation ensuing through 2017 when a statement of decision was issued by the trial court, followed by a writ of mandate and a declaratory judgment later that year. The writ of mandate directed IID to repeal the EDP. On February 6, 2018, the IID board approved a resolution repealing the EDP while the case was on appeal. On July 16, 2020, the appellate court reversed the writ of mandate and declaratory judgment on almost all grounds, including declaratory relief on the water rights issue and IID’s discretion to determine the method of apportionment except for a provision as to how water was prioritized

among water user categories. The court ruled that the district is required to distribute water equitably for all categories of users.

On June 21, 2022, IID adopted a revised EDP to address the single outstanding legal issue with respect to prioritization of apportionments among categories of water users. The revised EDP also updated certain operational provisions and most importantly, to the extent feasible, provides for a defined quantity of available, annual water supply apportioned to each water user to prevent cumulative demands from exceeding IID's available, authorized annual Colorado River supply (Appendix B-Equitable Distribution Plan). Implementation of the EDP will resume January 1, 2023, and continue annually thereafter consistent with the adopted EDP. For details regarding the EDP and its implementation, including related forms, please visit IID's website at [Equitable Distribution | Imperial Irrigation District \(iid.com\)](https://www.iid.com/Equitable-Distribution).

Projected Water Supplies

The projected and continued decline in runoff and prolonged drought conditions in the West are expected to contribute to even lower water elevation levels at Lakes Powell and Mead. The Department of the Interior made the decision in early 2022 to protect critical Lake Powell elevations above Glen Canyon Dam by adding 500,000 AF of water from Flaming Gorge reservoir and temporarily reducing the 2022 annual operational release to Lake Mead by 480,000 AF. These conditions resulted in a reduced water apportionment to most of the Lower Division States and Mexico for 2022, but did not affect IID's water supply for consumptive use.

Despite the Department's extraordinary actions, the hydrological forecasts and reservoir elevations have continued to decline. Basin states have been asked to develop a plan in 2022 to reduce demands by 2-4 million acre-feet per year through 2026 or the Secretary of the Interior would take regulatory action to force these reductions in order to protect the Colorado River system from the prolonged drought conditions and climate change impacts. California reductions, or the potential for regulatory reductions by the Secretary of the Interior remain undefined as of the date of this water supply assessment for the Hell's Kitchen PowerCo 1 and LithiumCo 1 Project.

IID is working diligently with federal agencies and Colorado River contractors to minimize impacts to the local community. In this vein, IID recognizes the need for significant response actions to protect the long-term water supply certainty for the Imperial Valley as the Colorado River operates under these unprecedented conditions. On October 5, 2022 the Colorado River Board of California, in partnership with representatives of the four primary California Section 5 contractors (IID, Palo Verde Irrigation District, Coachella Valley Water District and Metropolitan Water District of Southern California) submitted a letter to the Department of Interior proposing for California to conserve up to an additional 400,000 AF of water in Lake Mead each year, beginning in 2023 and extending through 2026, to assist with stabilizing Colorado River reservoir elevations. IID has gone on record that its share of the California proposal would not exceed 250,000 AFY. IID proposes to conserve its contribution to Lake Mead via system and on-farm efficiency conservation and temporary fallowing.

PROJECT WATER AVAILABILITY FOR A 20-YEAR PERIOD TO MEET PROJECTED DEMANDS

The primary source of fresh water for the facility is anticipated to be irrigation water made available under a supply contract and purchased through IID. Water will be obtained from the “Q” and “R” laterals adjacent to the Project site. Water will be transferred to a water storage pond, with a capacity of approximately 18 acre-feet (AF), located adjacent to the Q Drain. The water would then be transferred to 100,000-gallon aboveground water storage tank via an aboveground fresh-water pipeline. Additional pipelines will be constructed to transport the water from the water storage tank to HKP1 and HKL1 facilities. The water will be used for steam wash water, purged water for pump seals, and the RO potable water system, process wash water, and, at times, cooling water makeup. The project is designed to minimize reliance on external sources of water supply for process needs as well by using condensed steam from the geothermal steam condensate to the greatest extent practical. A filtration-based or RO potable water system will be used to process IID fresh water for the non-drinking potable water needs at the site. A Nontransient-Noncommunity Water System Permit will be obtained from ICPHD for the onsite potable water system. Bottled drinking water will be purchased for consumption.

Untreated Colorado River water will be supplied to the project via the adjacent “Q” and “R” laterals under a(n) Industrial Water Supply Agreement with IID. The Project is located on vacant land that is generally undeveloped. On June 14, 2017, the County authorized Geothermal CUP #16-0001, which allowed construction of up to four well pads as well as drilling and maintenance of up to six separate geothermal exploratory wells on the Project site. A well pad, Well Pad 1, north of Alcott Road and west of Davis Road, and two geothermal wells were constructed on the site in 2021. Rough grading for Well Pad 3, south of Noffsinger Road and east of Davis Road began in November 2021. The remaining Project site is undeveloped. Areas to the north and south of the Project site consist of undeveloped open space. Area to the west is open space followed by the Salton Sea. The State of California manages a wildlife management area, including waterfowl ponds to the east of the Project site. The Project is not currently receiving water from IID but will receive water from gates Q-28 and R-24 which are currently in working condition. As the Project site is largely undeveloped at this time, water use will increase with implementation of proposed project.

As noted previously, under the terms of California legislation adopted to facilitate the QSA/Transfer Agreements and enacted in CWC Section 1013, the IID board adopted the TLCFP to address how to deal with any such temporary reduction of water use by projects such as solar projects that are developed under a CUP. Additionally, this Project is not subject to the TLCFP.

While conserved water generated from the TLCFP is limited by law for use for water transfer or environmental purposes, by satisfying multiple district objectives the TLCFP serves to reduce the need for efficiency conservation and other water use reduction practices on the part of IID and its water users

providing the district with wide benefits. One of the considerations in developing the TLCFP was to provide agricultural landowners with long-term assurances from IID that, at Project termination, irrigation service would be available for them to resume farming operations.

IWSP Water

At the present time, IID is providing water delivery service for use by solar energy generation projects under Water Rate Schedule 7 General Industrial Use. If IID determines that the proposed Project should obtain water under IID's Interim Water Supply Policy (IWSP) for non-agricultural projects in addition to delivery rates under Schedule 7 General Industrial Use, the Applicant may need to initiate the process to secure a water supply agreement. IID will determine whether the Project should obtain water under IID's Interim Water Supply Policy (IWSP) for non-agricultural projects in addition to Schedule 7 General Industrial Water.

The IWSP, provided herein as Attachment A, designates up to 25,000 AFY of water for potential Non-Agricultural Projects within IID's water service area. As of January 2023, IID has up to 19,620 AF that it may make available under the IWSP for new projects such as the proposed project. The IWSP establishes a schedule for Processing Fees, Reservation Fees, and Connection Fees that change each year for all non-agricultural projects, and annual Water Supply Development fees for some non-agricultural projects. The proposed Project's water use will be subject to the annual Water Supply Development fee if IID determines that water for the Project is to be supplied under the IWSP.

Given the Colorado River conditions, the likelihood that IID will not receive its annual 3.1 MAF apportionment less QSA/Transfer Agreement obligations of Colorado River water is no longer low despite the high priority of the IID entitlement relative to other Colorado River contractors, see IID's Water Rights section on [page 22](#) and projected water supplies. Given the prolonged drought conditions and recent communication from the Department of the Interior, reductions to all basin contractors, including IID, are increasingly likely. If such obligatory reductions were to come into effect within the 20-year Project life, the Applicants are to work with IID to ensure any anticipated reduction can be managed.

The County of Imperial as the lead agency has a responsibility to determine if the current and projected demands and water supply conditions, including projected uncertainties of Colorado River hydrology are sufficient to enable the County to make the findings necessary to approve this WSA. IID, like any water provider, has jurisdiction to manage the water supply within its service area and impose conservation measures during a period of temporary water shortage, such as the one we are experiencing now.

Water for construction (primarily for dust control) would be obtained from IID canals or laterals in conformance with IID rules and regulations for MCI temporary water use.²⁰ Water would be picked up

²⁰ Complete the Application for Temporary Water Use and submit to Division office. Complete encroachment permit through Real Estate – non-refundable application fee of \$250, se. IID website: [Real Estate / Encroachments, Permissions, and Other Permitting](#). Fee for temporary

from a nearby lateral and delivered to the construction location by a water truck capable of carrying approximately 4,000 gallons per load. To obtain water delivery service, the Project proponent will complete an IID-410 Certificate of Ownership and Authorization (Water Card), which allows the Water Department to provide the district with information needed to manage the district apportioned water supply. Water cards are used for Agriculture, Municipal, Industrial and Service Pipe accounts. If water is to be provided under IWSP in addition to Schedule 7, General Industrial Use, the Applicant may also need to enter into a IWSP Water Supply Agreement.

service water: Schedule No. 7 General Industrial Use / Temporary Service Minimum charge for up to 5 AF, pay full flat fee for 5 AF at General Industrial Use rate (\$425); use more than 5 AF, pay fee for actual use at General Industrial Rate (\$85/AF).

EXPECTED WATER DEMANDS FOR THE PROPOSED PROJECT

Water for the proposed Project will be needed on-site for it will be used for steam wash water, purged water for pump seals, and the RO potable water system, process wash water, and cooling water makeup use. Untreated Colorado River water will be supplied to the project via the adjacent “Q” and “R” laterals under a(n) Industrial Water Supply Agreement with IID. The Project is located on vacant land that is generally undeveloped. On June 14, 2017, the County authorized Geothermal CUP #16-0001, which allowed construction of up to four well pads as well as drilling and maintenance of up to six separate geothermal exploratory wells on the Project site. A well pad, Well Pad 1, north of Alcott Road and west of Davis Road, and two geothermal wells were constructed on the site in 2021. Rough grading for Well Pad 3, south of Noffsinger Road and east of Davis Road began in November 2021. The remaining Project site is undeveloped. Areas to the north and south of the Project site consist of undeveloped open space. The area to the west is open space followed by the Salton Sea. The State of California manages a wildlife management area, including waterfowl ponds to the east of the Project site. The Project is not currently receiving water from IID but will receive water from gates Q-28 and R-24 which are currently in working condition. As the Project site is largely undeveloped at this time, water use will increase with implementation of proposed project.

Project raw water uses are summarized in **Table 14**.

Table 14. Project Operational Water Uses (AFY)

Use	Acre-Feet per Year
Raw Water for Construction (3 years @ 170 AFY)	170
Raw Water for HKP1 Operations (45 years @ 200 AFY)	200
Raw Water for HKL1 Operations (45 years @ 6,500 AFY)	6,500
Raw Water for Fire Suppression (water for system testing is recycled to storage tank)	0
Raw Water for Dust Suppression (3 years @ 0.75 AFY)	0.75
Raw Water for Decommissioning (2 years @ 14 AFY)	14
TOTAL RAW WATER USAGE OVER 50-YEAR LIFE OF PROJECT	293,040

IID delivers raw Colorado River water to the proposed Project site through the following gates and laterals. The 10-year record for 2013-2022 of water delivery accounting is shown in **Table 15**. The data documents a 10-year average of 131.3 AFY.

Table 15. Ten-Year Historic Delivery (AFY), 2013-2022

Canal/Gate	2013	2014	2015	2016	2017	2018	2019	2020	2021	2022
Q-28	193.2	83.1	119.3	111.9	95.2	102	148.4	120	122.3	94.3
R-24	14.3	0	0	0	0	0	0	0	8.2	100.5
TOTAL	207.5	83.1	119.3	111.9	95.2	102	148.4	120	130.5	194.8

Source: IID Staff, 2023 (Contact Justina Gamboa-Arce)

The proposed Project has an estimated total operational water demand (includes 3 years of construction, 45 years of operation and 2 years of decommissioning) of 293,040 AF or 6,500 AFY amortized over a 50-

year term (for all delivery gates for Project). Thus, the proposed Project demand is an increase of 5,730 AFY from the historical 10-year average or 4,464 percent (4,464 %) more than the historic 10-year average annual delivery for agricultural uses at the proposed Project site. The proposed Project's estimated operational water demand represents only 29.9 percent (29.9%) of the 19,620 AYF balance of water supply that may be available for contracting under the IWSP.

IID’S ABILITY TO MEET DEMANDS WITH WATER SUPPLY

Under normal operating conditions, non-agricultural water demands for the IID water service area are projected for 2025-2055 in **Table 5**, and IID agricultural demands including system operation are projected for 2025-2055 in **Table 6**, all volumes within the IID water service area. IID water supplies available for consumptive use after accounting for mandatory transfers are projected to 2077 in **Error! Reference source not found.** (Column 11), volumes at Imperial Dam.

To assess IID’s ability to meet future water demands, IID historic and forecasted demands are compared with CRWDA Exhibit B net availability under its water supply entitlement, volumes at Imperial Dam **Error! Reference source not found.** (Column 11). The analysis requires accounting for system operation consumptive use within the IID water service area, from AAC at Mesa Lateral 5 to Imperial Dam, and for water pumped for use by the USBR Lower Colorado Water Supply Project (LCRWSP), an IID consumptive use component in the USBR Decree Accounting Report. IID system operation consumptive use for 2021 is provided in **Table 16** to show the components to be included in the calculation of 2021 volumes in comparison to 2020.

Table 16. IID System Operations Consumptive Use within IID Water Service Area and from AAC at Mesa Lateral 5 to Imperial Dam, (KAF), 2022

	2020 Operational Consumptive Use (KAF)	2022 Operational Consumptive Use (KAF)
IID Delivery System Evaporation	24.4	24.8
IID Canal Seepage	90.8	89.4
IID Main Canal Spill	10.1	10.6
IID Lateral Canal Spill	121.5	122.4
IID Seepage Interception	-39.0	-33.8
IID Unaccounted Canal Water	-40.0	-161.4
Total IID System Operational Use, within water service area	167.8	52.0
“Losses” from AAC @ Mesa Lat 5 to Imperial Dam	9.2	44.2
LCWSP pumpage	-10	-10
Total System Operational Use in 2020 and 2022	167.0	80.3

Sources: 2022 IID Water Balance Rerun 03/28/2023

Notwithstanding and regulatory water supply cuts from the Secretary of Interior, IID’s ability to meet customer water demands through 2055 as shown in **Table 17** is based on the following:

- Non-agricultural use from **Table 5**.
- Agricultural and Salton Sea mitigation uses from **Table 6**.
- CRWDA Exhibit B net available for IID consumptive use from **Error! Reference source not found.**
- System operation consumptive use from **Table 16** for 2020.

Table 17. IID Historic and Forecasted Consumptive Use vs CRWDA Exhibit B IID Net Available Consumptive Use, volumes at Imperial Dam (KAFY), 2015-2055

	2015	2020	2025	2030	2035	2040	2045	2050	2055
Non-Ag Delivery	107.4	113.2	133.1	142.9	151.4	163.2	175.4	188.4	199.3
Ag Delivery	2,158.9	2,165.4	2,259.5	2,209.5	2,209.5	2,209.5	2,209.5	2,209.5	2,209.5
QSA SS Mitigation Delivery	153.3	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
System Op CU in IID & to Imperial Dam	61.3	167.0	230.5	225.4	225.4	225.4	225.4	225.4	225.4
IID CU at Imperial Dam	2,488.2	2,503.6	2,623.1	2,577.8	2,586.3	2,598.1	2,610.3	2,623.3	2,634.2
Conservation in Excess of Exhibit B	45.5	51.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Total IID CU	2,533.6	2,554.6	2,623.1	2,577.8	2,586.3	2,598.1	2,610.3	2,623.3	2,634.2
Exhibit B IID Net Available for CU at Imperial Dam	2,623.7	2,652.0	2,617.8	2,612.8	2,612.8	2,612.8	2,612.8	2,665.8	2,665.8
IID Underrun/Overrun at Imperial Dam	-90.02	-98.1	5.30	-35.00	-26.50	-14.70	-2.50	-42.50	-31.60

Notes: 2015 Provisional Water Balance and 2020 Provisional Water Balance run on 1/25/21

Non-Ag Delivery CI 15.0%, Ag Delivery CI 3.0%, QSA SS mitigation CI 15%

QSA Salton Sea Mitigation Delivery terminated on 12/31/2017.

Underrun /Overrun = IID CU at Imperial Dam minus CRWDA Exhibit B Net Available

Notes: Ag Delivery for 2020 to 2055 does not take into account land conversion for solar use nor reduction in agricultural land area due to urban expansion.

As shown above, IID forecasted demand has the potential to exceed CRWDA Exhibit B Net Consumptive Use volumes during several time intervals through the lifespan projection for the Project. However, due to temporary land conversion for solar use and urban land expansion that will reduce agricultural acres in the future, a water savings of approximately 217,000 AFY will likely be generated into the future and for the lifetime of the proposed Project.

In addition, USBR 2020 Decree Accounting Report states that IID Consumptive Use was 2,493.7 KAF (excludes 1,579 AF of ICS for storage in Lake Mead and an additional 49,444 AF of conserved water left on the Colorado River system) with an underrun of -98.1 KAF, as reported by IID in 2020 Annual SWRCB Report per WRO 2002-2013; that is, IID used less than the amount in its approved Water Order (2,615,300 AF). **Table 18.**

Table 18. 2020 Approved Water Order, Actual CU (Decree Accounting Report) and IID Underrun, KAF at Imperial Dam

IID Approved Water Order	2,625.3 less 10 supplied by LCWSP and less 26 of additional conserved water
IID Consumptive Use	2,493.7
IID Underrun /Overrun	-98.1
Sources: 2020 IID Revised Water Order, approved on March 10, 2020, <u>2020 Decree Accounting Report</u> , and <u>2020 Annual Report of IID Pursuant to SWRCB Revised Order WRO 2002-2013</u>	

As reported in the 2021 Annual Water & QSA Implementation Report and 2022 SWRCB Report and presented in **Table 12**, from 2013 to 2021 IID consumptive use (CU) resulted in underruns; i.e., annual CU was less than the district's QSA Entitlement of 3.1 MAFY minus QSA/Transfer Agreements obligations. This would indicate that even though **Table 17** shows IID Overrun/Underrun at Imperial Dam exceeding CRWDA Exhibit B Net Available for CU, for the 30-year life of the proposed Project, IID consumptive use may be less than forecasted.

Meanwhile, forecasted Ag Delivery reductions presented in **Table 6** are premised on implementation of on-farm practices that will result in efficiency conservation. These reductions do not take into account land conversion for solar projects nor reduction in agricultural land area due to urban expansion; that is to say, the forecasted Ag Delivery is for acreage in 2003 with reduction for projected on-farm conservation efficiency. Thus, Ag Delivery demand may well be less than forecasted in **Table 6**. In any case, the proposed Project will use less water than the historical agricultural demand of proposed Project site, so the proposed Project will ease rather than exacerbate overall IID water demands.

In the event that IID has issued water supply agreements that exhaust the 25 KAFY IWSP set aside, and it becomes apparent that IID delivery demands due to non-agriculture use are going to cause the district to exceed its quantified 3.1 MAFY entitlement less QSA/Transfer Agreements obligations, IID has identified options to meet these new non-agricultural demands. These options include (1) tracking water yield from temporary land conversion from agricultural to non-agricultural land uses (renewable solar energy); and (2) only if necessary, developing conservation projects to expand the size of the district's water supply portfolio.

These factors will be discussed in the next two sections, Tracking Water Savings from Growth of Non-Agricultural Land Uses and Expanding Water Supply Portfolio.

Tracking Water savings from Growth of Non-Agricultural Land Uses

The Imperial County Board of Supervisors has targeted up to 25,000 acres of agricultural lands, about 5 percent (5%) of the farmable acreage served by IID, for temporary conversion to solar farms; because the board found that this level of reduction would not adversely affect agricultural production. As reported for IID's Temporary Land Conversion Following Program, existing solar developments at the end of 2022 have converted 13,177 acres of farmland. These projects had a yield at-river of 69,898 AF of water in 2022. The balance of the 25,000-acre agriculture-to-solar policy is 11,823 acres. On average, each agricultural acre converted reduces agricultural demand by 5.1 AFY, which results in a total at-river yield (reduction in consumptive use) of 127,500 AFY.

However, due to the nature of the conditional use permits under which solar farms are developed, IID cannot rely on this supply being permanently available. In fact, should a solar project decommission early, that land may go immediately back to agricultural use (it remains zoned an agricultural land).

Nevertheless, during their operation, the solar farms do ameliorate pressure on IID to implement projects to meet demand from new non-agricultural projects.

Unlike the impact of solar projects, other non-agricultural uses are projected to grow, as reflected in the nearly 87.5 percent (87.5%) increase in non-agricultural water demand from 107.4 KAF in 2015 to 201.4 KAF in 2055 reflected herein in **Table 5**. This increase in demand of 94 KAFY is likely to be offset by reductions in agricultural lands; however, as the land remains zoned as agricultural land, that source is not reliable to be permanently available to IID.

The amount of land developed for residential, commercial, and industrial purposes is projected to grow by 55,733 acres from 2015 to 2050²¹ within the sphere of influence of the incorporated cities and specific plan areas in Imperial County. A conservative estimate is that such development will displace at least another 24,500 acres of farmland based on the Imperial Local Agency Formation Commission (LAFCO) sphere of influence maps and existing zoning and land use in Imperial County. At 5.13 AFY yield at-river, there would be a 125,000 AFY reduction IID net consumptive use. However, the total acreage from actual annexations that have resulted in reductions to agricultural acreage between 2015 and 2021 has been 2,224 acres, according to IID's annual inventory of total farmable land which is consistent with the acreage gain to non-agricultural land uses (2,224 acres) and based on annexation records obtained through the Imperial County Local Agency Formation Commission. This shift in acreage documents a growth rate of approximately 50 percent of the originally projected rate.

The total foreseeable solar project temporary yield at-river (91,800 AFY) and municipal development permanent yield at-river, conservatively adjusted (65,000 AFY) is to reduce forecasted IID net consumptive use at-river 156,800 AFY, which is more than enough to meet the forecast Demand minus Exhibit B Net Available volumes shown in **Table 17**. This Yield at-river is sufficient to meet the forecasted excess of non-agricultural use over Net Available supply within the IID service area for the next 20 years, as is required for SB 610 analysis (assuming there are no regulatory cuts to IID's full entitlement).

Farmland retirement associated with municipal development would reduce IID agricultural delivery requirements beyond the efficiency conservation projections shown in **Table 6** and **Table 17**. Therefore, in the event that Schedule 7 General Industrial Use water has exhausted its apportioned amount, the Applicants will rely on IID IWSP water to supply the Project, as discussed above in the Projected Water Availability section.

Expanding Water Supply Portfolio

While forecasted long-term annual yield-at-river from the reduction in agricultural acreage due to municipal development in the IID service area is sufficient to meet the forecasted excess of non-agricultural use over CRWDA Net Available supply (**Error! Reference source not found.**) without

²¹ IRWMP, Chapter 5, Table 5-14.

regulatory cuts and without expanding IID's Water Supply Portfolio, IID has also evaluated the feasibility of a number of capital projects to increase its water supply portfolio.

As reported in 2012 Imperial IRWMP Chapter 12, IID contracted with GEI Consultants, Inc. to identify a range of capital project alternatives that the district could implement. Qualitative and quantitative screening criteria and assumptions were developed in consultation with IID staff. Locations within the IID water service area with physical, geographical, and environmental characteristics most suited to implementing short- and long-term alternatives were identified. Technical project evaluation criteria included volumes of water that could be delivered and/or stored by each project, regulatory and permitting complexity, preliminary engineering components, land use requirements, and costs.

After preliminary evaluation, a total of 27 projects were configured:

- 17 groundwater or drain water desalination
- 2 groundwater blending
- 6 recycled water
- 1 groundwater banking
- 1 IID system conservation (concrete lining)

Projects were assessed at a reconnaissance level to allow for comparison of project costs. IID staff and the board identified key factors to categorize project alternatives and establish priorities. Lower priority projects were less feasible due to technical, political, or financial constraints. Preferential criteria were features that increased the relative benefits of a project and grant it a higher priority. Four criteria were used to prioritize the IID capital projects:

1. **Financial Feasibility.** Projects whose unit cost was more than \$600/AF were eliminated from further consideration.
2. **Annual Yield.** Project alternatives generating 5,000 AF or less of total annual yield were determined not to be cost-effective and lacking necessary economies of scale.
3. **Groundwater Banking.** Groundwater banking to capture and store underruns is recognized as a beneficial use of Colorado River water. Project alternatives without groundwater banking were given a lower priority.
4. **Partnering.** Project alternatives in which IID was dependent on others (private and/or public agencies) for implementation were considered to have a lower priority in the IID review; this criterion was reserved for the IRWMP process, where partnering is a desirable attribute.

Based on these criteria, the top ten included six desalination, two groundwater blending, one system conservation, and one groundwater storage capital projects. These capital projects are listed in **Table 19** which follows.

Table 19. IID Capital Project Alternatives and Cost (May 2009 price levels \$)

Name	Description	Capital Cost	O&M Cost	Equivalent Annual Cost	Unit Cost (\$/AF)	In-Valley Yield (AF)
GW 18	Groundwater Blending E. Mesa Well Field Pumping to AAC	\$39,501,517	\$198,000	\$2,482,000	\$99	25,000
GW 19	Groundwater Blending: E. Mesa Well Field Pumping to AAC w/Percolation Ponds	\$48,605,551	\$243,000	\$3,054,000	\$122	25,000
WB 1	Coachella Valley Groundwater Storage	\$92,200,000	\$7,544,000	\$5,736,746	\$266	50,000
DES 8	E. Brawley Desalination with Well Field and Groundwater Recharge	\$100,991,177	\$6,166,000	\$12,006,000	\$480	25,000
AWC 1	IID System Conservation Projects	\$56,225,000	N/A	\$4,068,000	\$504	8,000
DES 12	East Mesa Desalination with Well Field and Groundwater Recharge	\$112,318,224	\$6,336,000	\$12,831,000	\$513	25,000
DES 4	Keystone Desalination with IID Drainwater/ Alamo River	\$147,437,743	\$15,323,901	\$23,849,901	\$477	50,000
DES 14	So. Salton Sea Desalination with Alamo River Water and Industrial Distribution	\$158,619,378	\$15,491,901	\$24,664,901	\$493	50,000
DES 15	So. Salton Sea Desalination with Alamo River Water and MCI Distribution	\$182,975,327	\$15,857,901	\$26,438,901	\$529	50,000
DES 2	Keystone Desalination with Well Field and Groundwater Recharge	\$282,399,468	\$13,158,000	\$29,489,000	\$590	50,000

Source: Imperial IRWMP, Chapter 12; see also Imperial IRWMP Appendix N, IID Capital Projects

IID Near Term Water Supply Projections

As mentioned above, IID’s quantified Priority 3(a) water right under the QSA/Transfer Agreements secures 3.1 MAF per year, less transfer obligations of water for IID’s use from the Colorado River, without relying on rainfall in the IID service area. Even with this strong entitlement to water, IID actively promotes on-farm efficiency conservation and is implementing system efficiency conservation measures including seepage recovery from IID canals and the All-American Canal (ACC) and measures to reduce operational discharge. As the IID website [Water Department](#) states:

Through the implementation of extraordinary conservation projects, the development of innovative efficiency measures and the utilization of progressive management tools, the IID Water Department is working to ensure both the long-term viability of agriculture and the continued protection of water resources within its service area.

Overall, agricultural water demand in the Imperial Valley will decrease due to IID system and grower on-farm efficiency conservation measures that are designed to maintain agricultural productivity at pre-QSA levels while producing sufficient yield-at-river to meet IID’s QSA/Transfer Agreements obligations. These efficiencies combined with the conversion of some agricultural land uses to non-agricultural land uses (both solar and municipal), ensure that IID can continue to meet the water delivery demand of its

existing and future agricultural and non-agricultural water users, including this Project for the next 20 years and for the life of the proposed Project under a water supply consistent with the district's full entitlement.

IMPERIAL COUNTY PLANNING AND DEVELOPMENT SERVICES (LEAD AGENCY) FINDINGS

IID serves as the regional wholesale water supplier, importing raw Colorado River water and delivering it, untreated, to agricultural, municipal, industrial, environmental, and recreational water users within its water service area. Imperial County Planning and Development Services serves as the responsible agency with land use authority over the proposed project. Imperial County Planning and Development Services Water Assessment findings are summarized as follows, based on the information contained herein and as supported by IID water supply data:

1. IID's annual entitlement to consumptive use of Colorado River water is capped at 3.1 MAF less water transfer obligations, pursuant to the QSA and Related Agreements. Under the terms of the CRWDA, IID is implementing efficiency conservation measure to reduce net consumptive use of Colorado River water needed to meet its QSA/Transfer Agreements obligations while retaining historical levels of agricultural productivity.
2. In 2022 IID consumptively used 2,577,164 AF of Colorado River water (volume at Imperial Dam); 2,486,061 AF were delivered to customers (including recreational and environmental water deliveries) of which 2,368,642 AF or 95 percent went to agricultural users as per IID's Water Balance run on 3/30/2023.
3. Reduction of IID's net consumptive use of Colorado River water under the terms of the Colorado River Water Delivery Agreement is to be the result of efficiency conservation measures. Crop water use in the Imperial Valley will not decline under these conditions, however IID operational spill and tailwater from field runoff will decline as efficiency conservation measures are implemented, impacting the Salton Sea.
4. The dependability of IID's water rights, Colorado River flows, and Colorado River storage facilities for Colorado River water alone are not sufficient to assure water availability for the Project. The prolonged drought conditions on the Colorado River Basin have made it increasingly likely that the water supply of IID may be disrupted, in dry years or/and under shortage conditions. Mexico, Arizona, and Nevada, which have lower priority than IID, have already experienced Tier 1 and Tier 2a reductions in 2022 as a result of the declared Colorado River water shortage.
5. Due to ongoing Colorado River drought conditions, Lake Mead's declining elevation, reduced inflows from Lake Powell, and the suspension of the federal Inadvertent Overrun and Payback Policy, which eliminates IID's ability to overrun its 3.1 MAF annual entitlement during water shortage conditions, the IID Board has implemented an annual apportionment program (otherwise known as the Equitable Distribution Plan or EDP).
6. IID's EDP apportions the available water supply among all its water users equitably and among three water user categories 1) agricultural water users, 2) commercial/industrial water users, and

- 3) potable water users. Apportionment into these categories as a whole is initiated after deducting from the available water supply water for operational system needs, system conservation yields, environmental mitigation requirements, recreational uses, and similar unmeasured small pipe account water uses. See Attachment B -Equitable Distribution Plan.
7. Historically, IID has never been denied the right to use the annual volume of water it has available for its consumptive uses under its entitlement. Nevertheless, IID is participating in discussions for possible actions in response to continued extreme drought on the Colorado River.
 8. The proposed Project has an estimated total water demand of 293,040 AF and 6,500 AFY amortized over a 50-year term (for all delivery gates for Project). Thus, the proposed Project demand is an increase of 5,730 AFY from the historical 10-year average of 131.3 AFY, a 4,373.7 percent (4,373.7 %), increase from the historic 10-year average annual delivery for agricultural uses at the proposed Project site.
 9. The Project's water delivery will be covered under the Schedule 7 General Industrial Use. In the event that IID determines that the proposed Project is to utilize IWSP for Non-Agricultural Projects water, the Applicant will also need to enter into an IWSP Water Supply Agreement with IID. In which case, the proposed Project would use 31.13 percent (33.13%) of the 19,620 AFY of IWSP water.
 10. Based on the Environmental Impact Report (EIR) prepared for this proposed Project pursuant to the CEQA, California Public Resources Code sections 21000, *et seq.* (SCH No. 2022030704), Imperial County Planning and Development Services hereby finds that the IID projected water supply is sufficient to satisfy the demands of this proposed Project in addition to existing and planned future uses, including agricultural and non-agricultural uses for a 20-year Water Supply Assessment period and for the 30-year proposed Project life.
-

ASSESSMENT CONCLUSION

This Water Supply Assessment has determined that IID water supply is adequate for the Hell's Kitchen PowerCo 1 and LithiumCo 1 Project (proposed Project). The Imperial Irrigation District's IWSP for Non-Agricultural Projects may dedicate up to 25,000 AF of IID's annual conserved water supply to serve new projects. As of August 2023, a total of 18,620 AF per year remain available for new projects providing reasonably sufficient supplies for new non-agricultural water users that enter into a Water Supply Agreement with IID. Imperial County Planning and Development Services estimates a cumulative, non-agricultural project water supply demand of approximately 40,000 AFY within the foreseeable 20-year planning period.

New, non-agricultural projects may be susceptible to delivery cutbacks when an EDP Apportionment is exhausted, thus all approved projects require best management practices and water use efficiency at all times. Given the prolonged drought conditions and recent communication to IID from the Department of the Interior, reductions to all basin contractors, including IID and its water customers, are increasingly likely. If such reductions were to come into effect within an approved project's 20-year life, the Applicants are to work with IID to ensure any anticipated reduction can be managed via the means identified herein or other equivalent measures.

Under an authorized water supply agreement, the Hell's Kitchen PowerCo 1 and LithiumCo 1 Project will be required to acknowledge and accept as a condition of water service that to the extent that IID receives an order or directive from a governmental authority, having appropriate jurisdiction, that reduces the total volume of water available to IID from the Colorado River during all or any part of their water service agreement, IID may reduce the water service agreement amount, as directed by the IID Board, as a proportionate reduction of the total volume of water available to IID. This reduction is separate from and in addition to any allocation authorized pursuant to the EDP.

The Project's water demand of approximately 293,040 AF and 6,500 AFY amortized over 50 years represents 29.9 % of the unallocated supply that may be set aside under the IWSP for non-agricultural projects, and approximately 2.9 percent (2.9 %) of forecasted future non-agricultural water demands planned in the Imperial IRWMP by 2055 (201.4 KAFY). The water demand for the proposed Project represents a 4,373 % increase from the 10-year average historic average agricultural water use for 2013-2022 at the proposed Project site, an increase in water use of 5,730 AFY at full build-out.

For all the reasons described herein, the historical stability of the IID water supply, the amount of foreseeable water available, along with on-farm and system efficiency conservation and other measures being undertaken by IID and its customers suggest that the Hell's Kitchen PowerCo 1 and LithiumCo 1 Project's water needs will be reasonably met for the next 20 years as assessed for compliance under SB-610.

RESOURCES AND REFERENCES

1. California Department of Water Resources. (2003). Guidebook for Implementation of Senate Bill 610 and Senate Bill 221 of 2001 to assist water suppliers, cities, and counties in integrating water and land use planning.
2. Imperial County Planning and Development Services. (2008). Imperial County General Plan 2008 Update. El Centro, CA. General Plan | Imperial County Planning & Development Services (icpds.com), retrieved, 2021
3. Imperial Irrigation District. Website: Equitable Distribution Plan.
4. Imperial Irrigation District Website: 2021 Water Conservation Plan. (2021). Imperial Irrigation District 2021 Water Conservation Plan. Imperial, CA.
5. Imperial Irrigation District. (2022). IID Interactive GIS Water Service Area Map. Imperial, CA.
6. Imperial Irrigation District. (2009). Interim Water Supply Policy for Non-Agricultural Projects. Imperial, CA
7. Imperial Irrigation District. (2012). Temporary Land Conversion Following Policy (TLFCP) for Water Conservation Yield Water conservation yield attributable to land removed from agricultural production and temporarily fallowed. Updated March 27, 2018.
8. Imperial Irrigation District Water Department. (2013). Colorado River Water Accounting and Conservation Commitments Update. Tina Anderholt Shields, PE. Colorado River Resources Manager Imperial, CA.
9. Imperial Irrigation District. (2022). 2022 Water & QSA Implementation Report, Imperial, CA
10. Imperial Irrigation District. (2021). Imperial, CA.
11. Imperial Irrigation District. (2022). Temporary Land Following Conversion Policy. (TLFCP).
12. Imperial Irrigation District. (2023). 2022 IID SWRCB Report.
13. United States Bureau of Reclamation Lower Colorado Region Website: Boulder Canyon Operations Office – Programs and Activities, Lower Colorado River Water Accounting, Water Accounting Reports (1964 - 2015). Compilation of Records in Accordance with Article V of the Decree of the Supreme Court of the United States in Arizona v. California Dated March 9, 1964: Calendar Years 1964 - 2015 Boulder City, NV.

Attachments

Attachment A: IID Interim Water Supply Policy for Non-Agricultural Projects

Attachment B: IID 2022 Equitable Distribution Plan, revised July, 2023

ATTACHMENT A: IID INTERIM WATER SUPPLY POLICY FOR NON-AGRICULTURAL PROJECTS²²

1.0 Purpose.

Imperial Irrigation District (the District) is developing an Integrated Water Resources Management Plan (IWRMP) ²³ that will identify and recommend potential programs and projects to develop new water supplies and new storage, enhance the reliability of existing supplies, and provide more flexibility for District water department operations, all in order to maintain service levels within the District's existing water service area. The first phase of the IWRMP is scheduled to be completed by the end of 2009 and will identify potential projects, implementation strategies and funding sources. Pending development of the IWRMP, the District is adopting this Interim Water Supply Policy (IWSP) for Non-Agricultural Projects, as defined below, in order to address proposed projects that will rely upon a water supply from the District during the time that the IWRMP is still under development. It is anticipated that this IWSP will be modified and/or superseded to take into consideration policies and data developed by the IWRMP.

2.0 Background.

The IWRMP will enable the District to more effectively manage existing water supplies and to maximize the District's ability to store or create water when the available water supplies exceed the demand for such water. The stored water can be made available for later use when there is a higher water demand. Based upon known pending requests to the District for water supply assessments/verifications and pending applications to the County of Imperial for various Non-Agricultural Projects, the District currently estimates that up to 50,000 acre feet per year (AFY) of water could potentially be requested for Non-Agricultural Projects over the next ten to twenty years. Under the IWRMP the District shall evaluate the projected water demand of such projects and the potential means of supplying that amount of water. This IWSP currently designates up to 25,000 AFY of water for potential Non-Agricultural Projects within IID's water service area. Proposed Non-Agricultural projects may be required to pay a Reservation Fee, further described below. The reserved water shall be available for other users until such Non-Agricultural projects are implemented and require the reserved water supply. This IWSP shall remain in effect pending the approval of further policies that will be adopted in association with the IWRMP.

3.0 Terms and Definitions.

3.1 Agricultural Use. Uses of water for irrigation, crop production and leaching.

²² IID Board Resolution 31-2009. Interim Water Supply Policy for New Non-Agricultural Projects. September 29, 2009. <[IID Interim Water Supply Policy for Non-Agricultural Projects](#)>

²³ The 2009 Draft IID IWRMP has been superseded by the October 2012 Imperial IRWMP, which incorporates the conditions of the IWSP by reference.

3.2 Connection Fee. A fee established by the District to physically connect a new Water User to the District water system.

3.3 Industrial Use. Uses of water that are not Agricultural or Municipal, as defined herein, such as manufacturing, mining, cooling water supply, energy generation, hydraulic conveyance, gravel washing, fire protection, oil well re-pressurization and industrial process water.

3.4 Municipal Use. Uses of water for commercial, institutional, community, military, or public water systems, whether in municipalities or in unincorporated areas of Imperial County.

3.5 Mixed Use. Uses of water that involve a combination of Municipal Use and Industrial Use.

3.6 Non-Agricultural Project. Any project which has a water use other than Agricultural Use, as defined herein.

3.7 Processing Fee. A fee charged by the District Water Department to reimburse the District for staff time required to process a request for water supply for a Non-Agricultural Project.

3.8 Reservation Fee. A non-refundable fee charged by the District when an application for water supply for a Non-Agricultural Project is deemed complete and approved. This fee is intended to offset the cost of setting aside the projected water supply for the project during the period commencing from the completion of the application to start-up of construction of the proposed project and/or execution of a water supply agreement. The initial payment of the Reservation Fee will reserve the projected water supply for up to two years. The Reservations Fee is renewable for up to two additional two-year periods upon payment of an additional fee for each renewal.

3.9 Water Supply Development Fee. An annual fee charged to some Non-Agricultural Projects by the District, as further described in Section 5.2 herein. Such fees shall assist in funding IWRMP or related water supply projects,

3.10 Water User. A person or entity that orders or receives water service from the District.

4.0. CEQA Compliance.

4.1 The responsibility for CEQA compliance for new development projects within the unincorporated area of the County of Imperial attaches to the County of Imperial or, if the project is within the boundaries of a municipality, the particular municipality, or if the project is subject to the jurisdiction of another agency, such as the California Energy Commission, the particular agency. The District will coordinate with the County of Imperial, relevant municipality, or other agency to help ensure that the water supply component of their respective general plans is comprehensive and based upon current information. Among other things, the general plans should assess the direct, indirect, and cumulative potential impacts on the environment of using currently available water supplies for new industrial, municipal, commercial and/or institutional uses instead of the historical use of that water for agriculture. Such a change in land

use, and the associated water use, could potentially impact land uses, various aquatic and terrestrial species, water quality, air quality and the conditions of drains, rivers, and the Salton Sea.

4.2 When determining whether to approve a water supply agreement for any Non-Agricultural Project pursuant to this IWSP, the District will consider whether potential environmental and water supply impacts of such proposed projects have been adequately assessed, appropriate mitigation has been developed and appropriate conditions have been adopted by the relevant land use permitting/approving agencies, before the District approves any water supply agreement for such project.

5.0. Applicability of Fees for Non-Agricultural Projects.²⁴

5.1 Pursuant to this Interim Water Supply Policy, applicants for water supply for a Non-Agricultural Project shall be required to pay a Processing Fee and may be required to pay a Reservation Fee as shown in Table A. All Water Users shall also pay the applicable Connection Fee, if necessary, and regular water service fees according to the District water rate schedules, as modified from time to time.

5.2 A Non-Agricultural Project may also be subject to an annual Water Supply Development Fee, depending upon the nature, complexity, and water demands of the proposed project. The District will determine whether a proposed Non-Agricultural Project is subject to the Water Supply Development Fee for water supplied pursuant to this IWSP as follows:

5.2.1. A proposed project that will require water for a Municipal Use shall be subject to an annual Water Supply Development Fee as set forth in Table B if the projected water demand for the project is in excess of the project's estimated population multiplied by the District-wide per capita usage. Municipal Use projects without an appreciable residential component will be analyzed under sub-section 5.2.3.

5.2.2. A proposed project that will require water for an Industrial Use located in an unincorporated area of the County of Imperial shall be subject to an annual Water Supply Development Fee as set forth in Table B.

5.2.3. The applicability of the Water Supply Development Fee set forth in Table B to Mixed Use projects, Industrial Use projects located within a municipality, or Municipal Use projects without an appreciable residential component, will be determined by the District on a case-by-case basis, depending upon the proportion of types of land uses and the water demand proposed for the project.

5.3. A proposed Water User for a Non-Agricultural Projects may elect to provide some or all of the required water supply by paying for and implementing some other means of providing water in a manner approved by the District, such as conservation projects, water storage projects and/or use of an alternative source of supply, such as recycled water or some source of water other than from the District water supply. Such election shall require consultation with the District regarding the details of such alternatives and a determination by the District, in its reasonable discretion, concerning how much credit,

²⁴ The most recent fee schedules can be found in a link at IID/Water/ Municipal, Industrial and Commercial Customers; or visit by URL at [Imperial Irrigation District : Water Rate Schedules](#)

if any, should be given for such alternative water supply as against the project's water demand for purposes of determining the annual Water Supply Development Fee for such project.

5.4 The District Board shall have the right to modify the fees shown on Tables A and B from time to time.

6. Water Supply Development Fees collected by the District under this IWSP shall be accounted for independently, including reasonable accrued interest, and such fees shall only be used to help fund IWRMP or related District water supply projects.

7. Any request for water service for a proposed Non-Agricultural Project that meets the criteria for a water supply assessment pursuant to Water Code Sections 10910-10915 or a water supply verification pursuant to Government Code Section 66473.7 shall include all information required by Water Code Sections 10910 –10915 or Government Code Section 66473.7 to enable the District to prepare the water supply assessment or verification. All submittals should include sufficient detail and analysis regarding the project's water demands, including types of land use and per capita water usage, necessary to make the determinations outlined in Section 5.2.

8. Any request for water service for a proposed Non-Agricultural Project that does not meet the criteria for a water supply assessment pursuant to Water Code Section 10910-10915 or water supply verification pursuant to Government Code Section 66473.7 shall include a complete project description with a detailed map or diagram depicting the footprint of the proposed project, the size of the footprint, projected water demand at full implementation of the project and a schedule for implementing water service. All submittals should include sufficient detail and analysis regarding the project's water demands, including types of land use and per capita water usage, necessary to make the determinations outlined in Section 5.2.

9. All other District rules and policies regarding a project applicant or Water User's responsibility for paying connection fees, costs of capital improvements and reimbursing the District for costs of staff and consultant's time, engineering studies and administrative overhead required to process and implement projects remain in effect.

10. Municipal Use customers shall be required to follow appropriate water use efficiency best management practices (BMPs), including, but not limited to those established by the California Urban Water Conservation Council BMP's (see <http://www.cuwcc.org/mou/exhibit-1-bmp-definitions-schedules-requirements.aspx>), or other water use efficiency standards, adopted by the District or local government agencies.

11. Industrial Use customers shall be required to follow appropriate water use efficiency BMP's, including but not limited to those established by the California Urban Water Conservation Council and California Energy Commission, as well as other water use efficiency standards, adopted by the District or local government agencies.

12. The District may prescribe additional or different BMPs for certain categories of Municipal and Industrial Water Users.

(This page intentionally left blank)

ATTACHMENT B: IID EQUITABLE DISTRIBUTION PLAN²⁵

Adopted December 11, 2007
Revised November 18, 2008
Revised April 07, 2009
Revised April 23, 2013
Revised May 14, 2013
Revised October 28, 2013
Revised June 21, 2022

²⁵ Equitable Distribution Plan documents. June 21, 2022, <https://www.iid.com/water/rules-and-regulations/equitable-distribution>

PC ORIGINAL PKG

**Attachment C:
RESOLUTION FEIR**

RESOLUTION NO.

A RESOLUTION OF THE PLANNING COMMISSION OF THE COUNTY OF IMPERIAL, CALIFORNIA, APPROVING AND CERTIFYING THE FINAL PROJECT ENVIRONMENTAL IMPACT REPORT (EIR) FOR THE HELL'S KITCHEN POWER & LITHIUM PROJECT

WHEREAS, a Final EIR (SCH # **2020030704**) and Candidate CEQA Findings have been prepared in accordance with the requirements of the California Environmental Quality Act, the State CEQA Guidelines, and the County's "Rules and Regulations to Implement CEQA as Amended"; and,

WHEREAS, the Planning Commission of the County of Imperial has been delegated with the responsibility of approving and certifying the Final EIR; and,

WHEREAS, public notice of said application has been given, and the Planning Commission has considered evidence presented by the Imperial County Planning & Development Services Department and other interested parties at a public hearing held with respect to this item on December 13, 2023 and,

NOW THEREFORE, the Planning Commission of the County of Imperial **DOES HEREBY RESOLVE** as follows:

SECTION 1. The Planning Commission has considered the proposed Final Environmental Impact Report (FEIR), and Candidate CEQA Findings prior to making a decision to approve and certify the proposed FEIR and Findings of Fact. The Planning Commission finds and determines that the Environmental Impact Report is adequate and prepared in accordance with the requirements of the California Environmental Quality Act (CEQA) which analyzes environmental effects, based upon the following findings and determinations.

SECTION 2. That in accordance with State Planning and Zoning law and the County of Imperial regulations, the following findings for the approval and certification of the FEIR, MM&RP and Findings of Fact has been made as follows:

1. That the Final Project EIR (SCH# 2020030704), Candidate CEQA Findings for the Hell's Kitchen Power Co 1 LLC ("Project") has been prepared in accordance with the requirements of the California Environmental Quality Act, the State CEQA Guidelines, and the County's "Rules and Regulations to Implement CEQA, as Amended".
2. That the County has reviewed, analyzed, and considered Final Project EIR, the environmental impacts therein identified for this Project, the Candidate CEQA Findings, and the Mitigation Monitoring and Reporting Program, and the entire Record of Proceedings prior to approving this project.

3. That the Final Project EIR, the Candidate CEQA Findings reflect the independent judgment of the County.
4. That the Candidate CEQA Findings are supported by substantial evidence and supported by information provided to the County by experts, including but not limited to the County staff and the EIR preparer, on whom the County relies.
5. That the County accept as its own, incorporate as if set forth in full herein, and make each and every one of the findings contained in the Candidate CEQA Findings, including feasibility of mitigation measures pursuant to Public Resources Code 21081(a)/CEQA Guidelines 15091.
6. That the Mitigation Monitoring and Reporting Program is designed to ensure that during project implementation, the Developer and any other responsible parties implement the Project components and comply with feasible mitigation measures identified in the CEQA Findings, the Project entitlements, and the Mitigation Monitoring and Reporting Program and that these measures are fully enforceable through permit conditions, agreements, and/or other measures, such as their inclusion in the Mitigation Monitoring and Reporting Program.
7. That the Project will not individually or cumulative have an adverse effect on fish and wildlife resources, as defined in Section 711.2 of the Fish and Game Code.
8. That the Record of Proceedings consists of the Final EIR (and all its technical reports and addendums thereto); the County staff reports; the CEQA Findings; the Mitigation Monitoring and Reporting Program; the various Project entitlements and documents referenced therein; all final reports, applications, memoranda, maps, letters, and other planning documents prepared by the EIR planning/environmental consultant; all final reports, memoranda, maps, letters, and other planning documents prepared by the County staff; all documents submitted by members of the public and public agencies in connection with the Final EIR; minutes and transcripts of all public meetings and public hearings; all written and verbal public testimony presented during a noticed public hearing for the proposed project which such testimony was taken and any and all other materials which constitute the record of proceeding pursuant to Public Resources Code section 21167.6(e); and matters of common knowledge to the County staff, and Planning Commission, including, but not limited to the County General Plan, the County Land Use Ordinance, and County policies, which may be found during regular business hours at the Imperial County Planning & Development Services Department at 801 Main Street, El Centro, CA 92243.
9. That the Planning Commission does hereby certify the Final Project EIR and CEQA Findings.

NOW, THEREFORE, based on the above findings, the Planning Commission of the County of Imperial **DOES HEREBY ADOPT AND APPROVE** the following:

PC ORIGINAL PKG

1. Adopt the “CEQA FINDINGS for the FINAL ENVIRONMENTAL IMPACT REPORT FOR THE PROJECT (SCH. No. 2020030704)” attached hereto as Exhibit A and incorporated by this reference; and
2. APPROVE AND CERTIFY the proposed Final Project EIR (SCH# 2020030704) and CEQA Findings for the Project.

Rudy Schaffner, Chairperson
Imperial County Planning Commission

I hereby certify that the preceding resolution was taken by the Planning Commission at a meeting conducted on December 13, 2023 by the following vote:

AYES:

NOES:

ABSENT:

ABSTAIN:

ATTEST:

James A Minnick, Director of Planning & Development Services
Secretary to the Planning Commission

S:\APN\020\010\014\hells kitchen Power 1 LLC\FEIR resolution.doc

PC ORIGINAL PKG

**FINDINGS OF FACT AND STATEMENT OF OVERRIDING
CONSIDERATIONS
IMPERIAL COUNTY, CALIFORNIA
HELL'S KITCHEN POWERCO 1 AND
LITHIUMCO 1 PROJECT
Pursuant to Section 21081 of the Public
Resources Code and
Sections 15091 and 15093 of the State
CEQA Guidelines**

Prepared for:

COUNTY OF IMPERIAL
Planning and Development Services Department
801 Main Street
El Centro, California 92243
(442) 265-1736

Prepared by:

CHAMBERS GROUP, INC.
3151 Airway Avenue, Suite F208
Costa Mesa, California 92626
(949) 261-5414

December 2023

PC ORIGINAL PKG

TABLE OF CONTENTS

	<u>Page</u>
SECTION 1.0 – INTRODUCTION	1
1.1 ORGANIZATION OF CEQA FINDINGS OF FACT	1
1.2 STATUTORY REQUIREMENTS.....	2
1.3 LOCATION AND CUSTODIAN OF RECORD OF PROCEEDINGS	3
1.4 CERTIFICATION OF FINAL EIR.....	3
SECTION 2.0 – ENVIRONMENTAL SETTING AND PROJECT DESCRIPTION.....	4
2.1 PROJECT BACKGROUND AND OBJECTIVES	4
2.1.1 Location.....	4
2.1.2 Adjacent Land Uses.....	4
2.2 PROJECT DESCRIPTION	5
2.3 STATEMENT OF PROJECT GOALS AND OBJECTIVES.....	5
2.4 REQUIRED PERMITS AND APPROVALS.....	6
2.4.1 Lead Agency Approval.....	6
2.4.2 Other Required Permits and Approvals	6
2.5 CUMULATIVE SCENARIO.....	7
SECTION 3.0 – CEQA REVIEW AND PUBLIC PARTICIPATION.....	9
3.1 NOTICE OF PREPARATION/INITIAL STUDY.....	9
3.2 NOTICE OF AVAILABILITY/NOTICE OF COMPLETION FOR DRAFT ENVIRONMENTAL IMPACT REPORT	9
SECTION 4.0 – NO ENVIRONMENTAL IMPACTS.....	10
4.1 AGRICULTURE AND FOREST RESOURCES.....	10
4.2 MINERAL RESOURCES	10
4.3 RECREATION	11
SECTION 5.0 – LESS THAN SIGNIFICANT ENVIRONMENTAL IMPACTS	12
5.1 AESTHETICS.....	12
5.2 ENERGY	13
5.3 GREENHOUSE GAS	14
5.4 LAND USE AND PLANNING	14
5.5 NOISE	15
5.6 POPULATION AND HOUSING	15
5.7 PUBLIC SERVICES.....	16
5.8 WILDFIRE	16
SECTION 6.0 – LESS THAN SIGNIFICANT ENVIRONMENTAL IMPACTS WITH MITIGATION INCORPORATED	18
6.1 AIR QUALITY.....	18

6.2	BIOLOGICAL RESOURCES	21
6.3	CULTURAL RESOURCES	26
6.4	GEOLOGY AND SOILS	29
6.5	HAZARDS AND HAZARDOUS MATERIALS	31
6.6	HYDROLOGY AND WATER QUALITY.....	32
6.7	TRIBAL CULTURAL RESOURCES.....	33
6.8	UTILITIES AND SERVICE SYSTEMS	35
SECTION 7.0 – SIGNIFICANT AND UNAVOIDABLE IMPACTS.....		37
7.1	GROWTH INDUCING IMPACTS.....	37
SECTION 8.0 – FINDINGS REGARDING PROJECT ALTERNATIVES		39
8.1	NO PROJECT ALTERNATIVE.....	39
8.2	REDUCED PROJECT SIZE ALTERNATIVE	39
8.3	CONCLUSION	41
SECTION 9.0 – FINDINGS ON MITIGATION MONITORING AND REPORTING PLAN		42
9.1	INTRODUCTION.....	42
9.2	PURPOSE OF MITIGATION MONITORING AND REPORTING PROGRAM.....	42
SECTION 10.0 – FINDINGS ON CHANGES TO THE DRAFT EIR AND RECIRCULATION.....		64
10.1	CHANGES TO DRAFT EIR	64
10.2	FINDINGS	64
SECTION 12.0 – REFERENCES		1

LIST OF TABLES

	<u>Page</u>
Table 1: Mitigation Measures	Error! Bookmark not defined.

SECTION 1.0 – INTRODUCTION

1.1 ORGANIZATION OF CEQA FINDINGS OF FACT

The content and format of this California Environmental Quality Act (CEQA) Findings of Fact (findings) is designed to meet the current requirements of CEQA and the *CEQA Guidelines*. The Final Focused Environmental Impact Report (EIR) for the Hell's Kitchen PowerCo 1 and LithiumCo 1 Project (Proposed Project) identified significant environmental impacts which will result from its implementation. Although, the Imperial County finds that the inclusion of certain mitigation measures will reduce most potential significant effects to a less than significant level, no impacts will remain Significant and Unavoidable. The Board of Supervisors, in adopting these findings, must also adopt a Statement of Overriding Considerations and a Mitigation Monitoring Plan (MMRP) for the Proposed Project. The Board finds that the MMRP, which is incorporated by reference and made a part of these findings, meets the requirements of Public Resources Code (PRC) Section 21081.6 by providing for the implementation and monitoring of measures intended to mitigate potentially significant effects of the Proposed Project. In accordance with CEQA and the *CEQA Guidelines*, the Imperial County adopts these findings as part of the certification of the Final EIR for the Proposed Project. Pursuant to PRC Section 21082.1 (c)(3), the Imperial County also finds that the Final EIR reflects the Imperial County's independent judgment as the Lead Agency for the Proposed Project.

The content and format of the CEQA Findings of Fact is designed to meet the current requirements of CEQA and the *CEQA Guidelines*. The Findings of Fact is organized into the following sections:

- **Chapter 1, Introduction** outlines the organization of this document and identifies the location and custodian of the record of proceedings.
- **Chapter 2, Environmental Setting and Project Description** describes the location and characteristics of the project site, project overview, project design standards, project objectives and benefits, and the required permits and approvals for the Proposed Project.
- **Chapter 3, CEQA Review and Public Participation** describes the steps Imperial County has undertaken to comply with the *CEQA Guidelines* as they relate to public input, review, and participation during the preparation of the Draft and Final EIRs.
- **Chapter 4, No Environmental Impacts** provides a summary of those environmental issue areas where no impacts would occur.
- **Chapter 5, Less Than Significant Environmental Impacts** provides a summary of less than significant impacts and a finding adopting the Final EIR's conclusions.
- **Chapter 6, Less Than Significant Environmental Impacts With Mitigation Incorporated** provides a summary of potentially significant environmental effects for which implementation of identified mitigation measures would avoid or substantially reduce the environmental effects to less than significant levels.
- **Chapter 7, Significant and Unavoidable Environmental Impacts** provides a summary of potentially significant environmental effect for which no mitigation measures are identified, or

for which implementation of feasible mitigation measures would not avoid or substantially reduce the environmental effects to less than significant levels.

- **Chapter 8, Findings Regarding Project Alternatives** provides a summary of the alternatives considered for the Proposed Project.
- **Chapter 9, Findings on Mitigation Monitoring and Reporting Plan** provides a brief discussion of the Proposed Project's compliance with the *CEQA Guidelines* regarding the adoption of a plan for reporting and monitoring.
- **Chapter 10, Findings on Changes to the Draft EIR and Recirculation** provides a brief overview of reasons for changes to the Draft EIR and why it is not necessary to re-circulate the Draft EIR.
- **Chapter 11, Statement of Overriding Considerations** provides a summary of all the project's significant and unavoidable adverse impacts. In addition, this section identifies the project's substantial benefits that outweigh and override the project's significant unavoidable impacts, such that impacts are considered acceptable.

1.2 STATUTORY REQUIREMENTS

The CEQA (PRC Section 21081 *et seq.*), and the *CEQA Guidelines* (the Guidelines) (14 Cal. Code Regulations, Section 15091 *et seq.*), require that:

- (a) No public agency shall approve or carry out a project for which an EIR has been certified which identifies one or more significant environmental effects of the project unless the public agency makes one or more written findings for each of those significant effects, accompanied by a brief explanation of the rationale for each finding. The possible findings are:
 - (1) Changes or alterations have been required in, or incorporated into, the project which avoid or substantially lessen the significant environmental effect as identified in the final EIR.
 - (2) Such changes or alterations are within the responsibility and jurisdiction of another public agency and not the agency making the finding. Such changes have been adopted by such other agency or can and should be adopted by such other agency.
 - (3) Specific economic, legal, social, technological, or other considerations, including provision of employment opportunities for highly trained workers, make infeasible the mitigation measures or project alternatives identified in the final EIR.

In short, CEQA requires that the lead agency adopt mitigation measures or alternatives, where feasible, to avoid or mitigate significant environmental impacts that would otherwise occur with implementation of the Proposed Project. Project mitigation or alternatives are not required, however, where they are infeasible or where the responsibility for modifying the Proposed Project lies with another agency [*CEQA Guidelines*, Section 15091 (a)].

For those significant effects that cannot be mitigated to a less than significant level, the public agency is required to find that specific overriding economic, legal, social, technological, or other benefits of the

Proposed Project outweigh such significant effects (see, Pub. Res. Code Section 21081 (b)). The Guidelines state in Section 15093 that:

- If the specific economic, legal, social, technological, or other benefits of a proposed project outweigh the unavoidable adverse environmental effects, the adverse environmental effects may be considered 'acceptable.'

1.3 LOCATION AND CUSTODIAN OF RECORD OF PROCEEDINGS

The documents and other materials that constitute the record of proceedings upon which Imperial County's project approval are located at 801 Main Street, El Centro, California 92243. The record of proceedings is provided in compliance with PRC Section 21081.6(a)(2) and California Code of Regulations Title 14, Section 15091(e).

1.4 CERTIFICATION OF FINAL EIR

Pursuant to *CEQA Guidelines* Section 15090, Imperial County further finds and certifies that:

- (a) The Final EIR has been completed in compliance with CEQA;
- (b) The Final EIR has been presented to the Board of Supervisors, which constitutes the decision-making body of the lead agency, and the Board of Supervisors has reviewed and considered the information contained in the Final EIR and in the record of proceedings for the Proposed Project prior to approving the project; and
- (c) The Final EIR reflects the Board of Supervisors's independent judgment and analysis.

SECTION 2.0 – ENVIRONMENTAL SETTING AND PROJECT DESCRIPTION

2.1 PROJECT BACKGROUND AND OBJECTIVES

Controlled Thermal Resources (US) Inc. via its subsidiary Hell's Kitchen Geothermal, LLC is proposing the Hell's Kitchen PowerCo 1 (HKP1), and Hell's Kitchen LithiumCo 1 LLC is proposing the Hell's Kitchen LithiumCo 1 (HKL1) in Imperial County, California. HKP1 involves the development of a geothermal power plant that will produce up to 49.9 megawatts (MW) net of geothermal green energy. HKL1 involves development of mineral extraction and processing facilities capable of producing lithium hydroxide, silica and polymetallic products, and possibly boron compounds, for commercial sale. HKP1 and HKL1 (together referred to as the Proposed Project) will be constructed by Hell's Kitchen PowerCo 1 LLC and Hell's Kitchen LithiumCo 1 LLC respectively, both subsidiaries of Controlled Thermal Resources (US) Inc. (CTR) and will have shared facilities. Hell's Kitchen Operating Services LLC, also a subsidiary of Controlled Thermal Resources (US) Inc. will operate and maintain these facilities.

The HKP1 objectives include the following:

- To produce 49.9MW (net) of geothermal green energy from within CTR's geothermal lease area.
- To provide power to the Imperial Irrigation District and other potential off takers.

The HKL1 objectives include the following:

- To provide a sustainable domestic source of lithium, a designated critical material identified by the U.S. Department of Energy.
- To extract and produce lithium hydroxide, silica, bulk sulfide, and polymetallic products for commercial sale from the geothermal brine within the Hell's Kitchen lease area.
- To minimize the distance between the geothermal power plant and lithium extraction plant for production efficiency and to reduce the extent of pipeline required to convey brine and steam to and from the geothermal power facility to the mineral extraction plant, therefore minimizing the overall industrial footprint of the combined power and mineral operations.

2.1.1 Location

The Project is located within undeveloped land owned by Imperial Irrigation District (IID) and a right-of-way (ROW) corridor for the gen-tie transmission line to the IID interconnect station near Hudson Ranch (HR1). The Project would be located within Sections 11 and 12, Township 11 North, Range 13 East in Imperial County near the eastern shore of the Salton Sea. The Project is approximately 3.6 miles west of the Town of Niland.

2.1.2 Adjacent Land Uses

Zoning designations of the surrounding properties include S-1-G, to the north, east, and south, M-2-G-PE to also the east, and S-2-G to the west. The properties bordering the Project site are designated for Agricultural land use to the north, east, and south, with Government/Special Public land use also to the east in the County's General Plan. No land use is to the west of the Project site as that area is the Salton

Sea (County 2007, 2015a). The land surrounding the Project site is mainly undeveloped agricultural or vacant land. Areas to the north and south of the Project site consist of undeveloped open space. Area to the west is open space followed by the Salton Sea. The State of California manages a wildlife management area, including waterfowl ponds to the east of the Project site. The nearest development is a single-family home located approximately 0.50 miles to the east, and the nearest commercial development is Hudson Ranch, located approximately 1.1 miles south.

2.2 PROJECT DESCRIPTION

The Hell's Kitchen PowerCo 1 (HKP1), and Hell's Kitchen LithiumCo 1 LLC is proposing the Hell's Kitchen LithiumCo 1 (HKL1) in Imperial County, California. HKP1 involves the development of a geothermal power plant. HKL1 involves development of mineral extraction and processing facilities capable of producing lithium hydroxide, silica and polymetallic products, and possibly boron compounds, for commercial sale. HKP1 and HKL1 (together referred to as the Proposed Project) will be constructed by Hell's Kitchen PowerCo 1 LLC and Hell's Kitchen LithiumCo 1 LLC respectively, both subsidiaries of Controlled Thermal Resources (US) Inc. (CTR) and will have shared facilities. Hell's Kitchen Operating Services LLC, also a subsidiary of Controlled Thermal Resources (US) Inc. will operate and maintain these facilities. The Project will consist of the following activities:

- construction and operation of a 49.9-MW geothermal power plant;
- construction of well pads with geothermal production and injection wells;
- construction of pipelines between HKP1 and HKL1 to facilitate the movement of brine between the facilities;
- construction and operation of a mineral-extraction facility to extract lithium hydroxide, silica, and polymetallic products, and possibly boron compounds from the geothermal brine;
- construction and operation of minerals handling and packaging facilities;
- construction of ingress and egress to the Project site from Davis Road;
- paving of Davis Road from McDonald Road to Noffsinger Road (approximately 2 miles);
- construction and operation of a 230-kV gen-tie line (approximately 2 miles south and 0.3 miles east); and
- construction of shared administrative facilities, offices, repair facilities, shipping and receiving facilities, and other infrastructure components.

The development area for the Project would be approximately 68 acres.

2.3 STATEMENT OF PROJECT GOALS AND OBJECTIVES

The intended objectives of the Proposed Project are to:

The HKP1 objectives include the following:

- To produce 49.9MW (net) of geothermal green energy from within CTR's geothermal lease area.
- To provide power to the Imperial Irrigation District and other potential off takers.
- To minimize and mitigate potential impacts to sensitive environmental resources while producing renewable energy and creating jobs.

The HKL1 objectives include the following:

- To provide a sustainable domestic source of lithium, a designated critical material identified by the U.S. Department of Energy.
- To extract and produce lithium hydroxide, silica, bulk sulfide, and polymetallic products for commercial sale from the geothermal brine within the Hell's Kitchen lease area.
- To minimize the distance between the geothermal power plant and lithium extraction plant for production efficiency and to reduce the extent of pipeline required to convey brine and steam to and from the geothermal power facility to the mineral extraction plant, therefore minimizing the overall industrial footprint of the combined power and mineral operations.
- To minimize and mitigate potential impacts to sensitive environmental resources within the Project area.

2.4 REQUIRED PERMITS AND APPROVALS

As required by the *CEQA Guidelines*, this section provides, to the extent the information is known to Imperial County, the CEQA Lead Agency, a list of the agencies that are expected to use this EIR in their decision making and a list of permits and other approvals required to implement the project.

2.4.1 Lead Agency Approval

As required by the CEQA Guidelines, this section provides, to the extent the information is known to the Imperial County, a list of permits and approvals to implement the Proposed Project and list of agencies that will review this Draft Focused EIR and be used in their decision-making process. The following lists Imperial County entitlements and permits that may be required for the Proposed Project prior to construction and operation:

- Imperial County Planning Department – Conditional Use Permit
- Imperial County Planning Department – Zoning Variance
- Imperial County Planning Department – Development Agreement (if required)
- Imperial County Building Department – Building and Grading Permits
- Imperial County Public Works Department – Encroachment Permit(s)

The Final Focused EIR must be certified by the Board of Supervisors as to its adequacy in compliance with CEQA prior to any actions being taken on the Proposed Project. The analysis of this Draft Focused EIR is intended to provide environmental review for the Proposed Project, including potential environmental effects associated with the development of a commercial lithium hydroxide production plant within the Salton Sea geothermal field in Imperial County in accordance with CEQA requirements.

2.4.2 Other Required Permits and Approvals

Other required permits and approvals may be necessary to approve and implement the Proposed Project as the Imperial County finds appropriate. Approvals include but are not limited to architectural plan and design; landscaping; lighting; transportation permits and approvals for driveways and routes; grading;

hauling; and public utilities. Due to the location of the Project, the California State Lands Commission would be a responsible agency. The following permits/agreements would be required from IID:

- Imperial Irrigation District – Encroachment Permit(s)
- Imperial Irrigation District – Water Supply Agreement
- Imperial Irrigation District – Other approvals not yet known for water or power

Reviewing Agencies

Reviewing Agencies include those agencies that do not have discretionary powers, but that may review the Draft EIR for adequacy and accuracy. Potential Reviewing Agencies include the following:

Federal Agencies:

- United States Fish and Wildlife (USFWS) – Incidental Take Permit (ITP; if needed)
- United State Army Corps of Engineers (USACE) – Individual Permit under Section 404 of the Clean Water Act

State Agencies:

- California Department of Transportation (Caltrans) – Encroachment Permit
- California Department of Fish and Wildlife (CDFW) – Lake or Streambed Alteration Agreement and Incidental Take Permit (if needed)
- California Department of Toxic Substances/Certified Unified Program Agency (CUPA) – Hazardous Materials / Environmental Protection Agency Approvals and Permits
- California Geologic Energy Management Division (CalGEM) – Permit(s) to drill

Regional Agencies:

- Regional Water Quality Control Board – Waste Discharge Requirement and 401 Water Quality Certification
- Imperial Irrigation District – Encroachment Permit
- Imperial County Air Pollution Control District – Permit to Construct and Permit to Operate; Use of Generators (if needed)
- Imperial County Public Health Department – Nontransient-Noncommunity Water System Permit
- Imperial County Building Department – Building and Grading Permits
- Imperial County Public Works Department – Encroachment Permit(s)
- Imperial County Fire Department and Office of Emergency Services

2.5 CUMULATIVE SCENARIO

Cumulative impacts refer to the combined effect of Proposed Project impacts with the impacts of other past, present, and reasonably foreseeable future projects. Both CEQA and the CEQA Guidelines require that cumulative impacts be analyzed in an EIR. As set forth in the CEQA Guidelines, the discussion of cumulative impacts must reflect the severity of the impacts, as well as the likelihood of their occurrence; however, the discussion need not be as detailed as the discussion of environmental impacts attributable to the project alone. As stated in CEQA, “a project may have a significant effect on the environment if the

possible effects of a project are individually limited, but cumulatively considerable (CEQA Guidelines 15130).”

According to the CEQA Guidelines 15355:

“Cumulative impacts” refer to two or more individual effects which, when considered together, are considerable and which compound or increase other environmental impacts.

- The individual effects may be changes resulting from a single project or several separate projects.
- The cumulative impact from several projects is the change in the environment, which results from the incremental impact of the proposed project when added to other closely related past, present, and reasonably foreseeable probable future projects. Cumulative impacts can result from individually minor, but collectively significant projects taking place over a period of time.

In addition, as stated in the CEQA Guidelines 15064(h)(4), it should be noted that:

“The mere existence of significant cumulative impacts caused by other projects alone shall not constitute substantial evidence that the Proposed Project’s incremental effects are cumulatively considerable.”

The following project has been identified to occur or are currently scheduled within a 2-mile radius from the Project site.

- Hudson Ranch 1 (CUP 22-0020)- Geothermal Well on approximately 500 acre parcel 0.58 miles from project site.

SECTION 3.0 – CEQA REVIEW AND PUBLIC PARTICIPATION

Imperial County has complied with the *CEQA Guidelines* during the preparation of the Draft EIR for the Proposed Project. The Draft EIR, dated August, 2023, was prepared following input from the public, responsible agencies, and affected agencies through the EIR scoping process. The “scoping” of the EIR was conducted utilizing several of the tools available under CEQA. In accordance with Section 15063 of the *CEQA Guidelines*, a Notice of Preparation (“NOP”) and Initial Study (“IS”) were prepared and distributed to the State Clearinghouse, responsible agencies, affected agencies, and other interested parties on March 31, 2022. The NOP was posted in the Imperial County Clerk’s office for 30 days. Information requested and input provided during the 30-day NOP comment period regarding the scope of the EIR were included in the Draft EIR. Notices informing the community of the public review periods for the NOP/IS and Draft EIR were distributed using three methods: a NOP, a Notice of Availability (“NOA”), and newspaper publication. The NOP and NOA included information on where to view the NOP/IS and Draft EIR, how to comment on the IS and Draft EIR. The public review period and scoping for the NOP/IS was from March 31, 2022 to May 13, 2022, and the public review period for the Draft EIR was from August 30, 2023 to October 13, 2023.

3.1 NOTICE OF PREPARATION/INITIAL STUDY

Per *CEQA Guidelines* Section 15082, an NOP for the Draft EIR was prepared. The IS/NOP was sent to the Office of Planning and Research, State Clearinghouse for distribution to State agencies and directly to regional and local agencies. The NOP was published in March 2022. During the public scoping period, the IS/NOP was made available for review at the following locations:

- Imperial County Planning & Development Services Department, 801 Main Street, El Centro, CA 92243
- In addition, the NOP/IS was made available online at <http://www.icpds.com>

3.2 NOTICE OF AVAILABILITY/NOTICE OF COMPLETION FOR DRAFT ENVIRONMENTAL IMPACT REPORT

In accordance with *CEQA Guidelines* Section 15087(a), a Notice of Availability/Notice of Completion (“NOA/NOC”) of the Draft EIR was prepared. The Draft EIR and the NOA/NOC was sent to the Office of Planning and Research, State Clearinghouse for distribution to State agencies and directly to regional and local agencies. The NOA/NOC was published on August 30, 2023. During the public scoping period, the Draft EIR and the NOA/NOC was made available for review at the following locations:

- Imperial County Planning & Development Services Department, 801 Main Street, El Centro, CA 92243 City of El Centro
- Public Library, 539 State Street, El Centro, California
- In addition, the Draft EIR and NOA/NOC were made available online at <http://www.icpds.com>

SECTION 4.0 – NO ENVIRONMENTAL IMPACTS

Based on the Initial Study and the Record of Proceedings, the Board of Supervisors finds that the Proposed Project would have no impacts associated with:

- Agriculture and Forest Resources
- Mineral Resources
- Recreation

Because the Findings of No Impact were made in the Initial Study, these environmental issues areas were not carried forward for analysis in the EIR.

4.1 AGRICULTURE AND FOREST RESOURCES

According to the California Department of Conservation's Farmland Mapping and Monitoring Program, the Project site is designated as "Other Land" (DOC 2020a). No Prime Farmland, Unique Farmland, or Farmland of Statewide Importance is located within or in proximity to the Project site. The County General Plan designates the Project site as Agriculture land use; however, according to the General Plan Land Use Element, a non-agricultural land use may be permitted within General Plan-designated agricultural land if the use does not conflict with agricultural operations and will not result in the premature elimination of agricultural operations (County 1993). There is no existing agricultural land on the Project site, thus the Project would not conflict with or eliminate agricultural operations. No land within the Project site is zoned for agricultural use. The Project site is not subject to the provisions of a Williamson Act contract (DOC 2018). No land within the Project site is zoned forest land or timberland and there is no existing forest land on the Project site or in the immediate vicinity. The Project would not result in the conversion of agricultural land or forest land. No impacts would occur and no further analysis is required.

FINDINGS

- 1) The Board finds, based on the Initial Study, the Final EIR, and the whole of the record, that the Proposed Project would result in no impact relating to the Agriculture and Forest Resources issues discussed above.

4.2 MINERAL RESOURCES

Although there are geothermal resources and minerals underlying the Project, there are no designated mineral resource zones or mineral resource recovery sites within the vicinity of the Project site. There are a number of mines along the Chocolate Mountain Range to the east, but the closest is approximately 5.3 miles from the Project site (DOC 2020c). Additionally, a part of this Project is a geothermal brine processing plant that would produce commercial-grade lithium hydroxide, silica, bulk sulfide, and polymetallic products, increasing the availability of these mineral resources. In utilizing the waste stream to produce these mineral resources, the Project actually represents a gain in the availability of these resources. The Project would be in alignment with the County General Plan's Renewable Energy and Transmission Element, Objective 3.2, which states that the County should "encourage the continued development of the mineral extraction/production industry for job development using geothermal brines

from the existing and future geothermal flash power plants” (County, 1993). No known mineral resources or mineral resource recovery sites would be lost as a result of the Project; thus, no impacts would occur and no further analysis is required.

FINDINGS

- 1) The Board finds, based on the Initial Study, the Final EIR, and the whole of the record, that the Proposed Project would result in no impact relating to Mineral Resources.

4.3 RECREATION

There are no parks or other developed federal, State, or County recreational facilities in the Project area or immediate vicinity. Further, the Project involves the construction of a geothermal power plant and brine processing plant and would not construct any recreational facilities. It is estimated that there will be up to 500 workers at the Project site during peak construction and approximately 112 full-time employees during operations. These construction workers and employees are expected to come from existing populations that live in and commute from the surrounding local communities. Therefore, the Project would not cause an increase in population that would result in physical deterioration of existing recreational facilities. No impacts would occur, and no further analysis is required.

FINDINGS

The Board finds, based on the Initial Study, the Final EIR, and the whole of the record, that the Proposed Project would result in no impact relating to Recreation resources

SECTION 5.0 – LESS THAN SIGNIFICANT ENVIRONMENTAL IMPACTS

Based on the Final EIR and the Record of Proceedings, the Board of Supervisors finds that the Proposed Project would have less than significant environmental effects associated with the following environmental issues:

- Aesthetics
- Energy
- Greenhouse Gas Emissions
- Land Use and Planning
- Noise
- Population and Housing
- Public Services
- Wildfire

5.1 AESTHETICS

Due to the distance of the Project site from the nearest scenic highway, the Proposed Project is not anticipated to have a substantial adverse effect on a scenic highway. The Proposed Project would not result in substantial adverse effect on a scenic highway because it would neither be located near a scenic highway nor would its presence interrupt the views seen along Highway 111.

The Proposed Project would affect the existing viewshed by partially blocking the mountain ranges to the north of the Project, such as the Orocochia and Chocolate Mountains to the north/northwest. While the mountains within Imperial County provide visual character to the area, the Project site is not a designated scenic viewpoint and therefore, the presence of Project features would not be considered to have a substantial adverse effect on a scenic vista. Furthermore, the Sonny Bono Salton Sea Wildlife Refuge is located 4 miles southwest of the Project site. Due to its distance from the Project site, the construction and operation of the Proposed Project would not result in substantial adverse effect to its use.

The construction and operation of the Proposed Project would not substantially degrade the existing visual character of the area. While the Project is not designated to contain high visual quality, it would be designed and constructed to be consistent with the existing power plants in the region so as to maintain visual consistency. Furthermore, the proposed uses of the site would be consistent with the permitted uses of the area as the land use ordinance by the County authorizes the development and operation of renewable energy projects with a CUP. Impacts therefore are less than significant.

FINDINGS

- 1) The Board finds, based on the Initial Study, the Final EIR, and the whole of the record, that the Proposed Project would result in less than significant impacts relating to the Aesthetics issues discussed above.

5.2 ENERGY

The off-road construction equipment fuel usage was calculated through use of the off-road equipment assumptions and fuel use assumptions provided in Appendix H, which found that the off-road equipment utilized during construction of the Project would consume 636,310 gallons of diesel fuel. The on-road fuel consumption during construction was calculated through use of the construction vehicle trip assumptions and fuel use assumptions provided in Appendix H, which found that the on-road trips generated from construction of the Project would consume 8,554,787 gallons of fuel. As such, the combined fuel used from off-road construction equipment and on-road construction trips for the Project would result in the consumption of 9,191,096 gallons of diesel fuel.

Construction activities associated with the Project would be required to adhere to all State and Imperial County Air Pollution Control District regulations for off-road equipment and on-road trucks, which provide minimum fuel efficiency standards. Construction activities for the Project would not result in the wasteful, inefficient, and unnecessary consumption of energy resources. In addition, the operation of the Project would result in a net increase of 147,732,2kilowatt-hours (kWh) per year.

Operation of the Project would result in increased consumption of petroleum-based fuels related to vehicular travel to and from the Project site. Operations related to fuel consumption were calculated using information related to the estimated number of employees, their estimated vehicle miles traveled per day, and the number of operational days per year. The Based on these assumptions, the Project would consume 25,217,394 gallons of transportation fuel per year (diesel and gasoline).

Additionally, the Project would comply with all federal, State, and County requirements related to the consumption of transportation energy, including CCR Title 24, Part 11, the CALGreen Code, which requires all new parking lots to provide preferred parking for clean air vehicles. Therefore, it is anticipated the Project will be designed and built to minimize transportation energy through the promotion of the use of electric-powered vehicles and that existing and planned capacity and supplies of transportation fuels would be sufficient to support the Project's demand. Thus, impacts regarding transportation energy supply and infrastructure capacity would be less than significant, and no mitigation measures would be required.

The Project would not conflict with or obstruct a State or local plan for renewable energy or energy efficiency. The applicable Renewable Energy and Transmission Element for the Project is included in the County's General Plan. The Proposed Project's consistency with the applicable energy-related policies in the Renewable Energy and Transmission Element of the General Plan are shown in Table 4.4-1 of the FEIR.

FINDINGS

- 1) The Board finds, based on the Initial Study, the Final EIR, and the whole of the record, that the Proposed Project would result in less than significant impacts relating to the Energy issues discussed above.

5.3 GREENHOUSE GAS

The GHG emissions are based on the proposed design detailed in the Project Description as well as IID's adherence to the State's Renewable Portfolio Standards (RPS) that require 60 percent of electricity provided by IID to be from zero-carbon emissions sources by the year 2030. Table 4.7 3 shows that the operational GHG emissions do not exceed either the USEPA's 25,000 MTCO₂e emissions threshold or ICAPCD Rule 903 – 20,000 MTCO₂e emissions threshold, where exceedance of either threshold would require the Project to perform additional GHG emissions recordkeeping and reporting. Therefore, the Project would offset greenhouse gas emissions. and a less than significant impact would occur.

The Proposed Project would not conflict with any applicable plan, policy, or regulation of an agency adopted for the purpose of reducing GHG emissions. As detailed above, neither the ICAPCD nor the County of Imperial has adopted a climate action plan; as such, the only applicable plan for reducing GHGs is the CARB's 2017 Climate Change Scoping Plan. Table 4.7-4 of the FEIR provides a summary of Project consistency with the Plan. With implementation of the Project Design Features committed to by the Project applicant and Statewide regulatory requirements including the CALGreen building standards, the Proposed Project would be consistent with all feasible mitigation measure for individual projects provided in the CARB's 2017 Scoping Plan. Therefore, implementation of the Proposed Project would not conflict with any applicable plan that reduces GHG emissions. Impacts would be less than significant.

FINDINGS

- 1) The Board finds, based on the Initial Study, the Final EIR, and the whole of the record, that the Proposed Project would result in less than significant impacts relating to the Greenhouse Gas issues discussed above.

5.4 LAND USE AND PLANNING

The Project is located in a rural area approximately 3.6 miles west of Niland, CA, which is the closest nearby community. The gen-tie line required by the Project would utilize existing transmission ROW, and traverse the existing area but would not physically divide the area for approximately 2.3 miles southeast. There are no residences in close proximity to the Project site; thus, the Project would not physically divide an established community and no impacts would occur and no further analysis is required.

The power and lithium production facilities are located in an area that is zoned S-1-G (open space / geothermal overlay), S-2-G (open space/preservation/geothermal overlay) (S-1-G) and M-2-G-PE (medium industrial/geothermal overlay) and has an Agricultural land use. S-1-G, S-2-G, and M-2-G-PE allow geothermal exploration with a conditional use permit (CUP). Although S-2-G is for preservation only a well pad would be on the site along with a portion of the S-Berm/Extension Road which are allowed uses. The County Land Use Ordinance, Division 17, includes the Renewable Energy (RE) Overlay Zone, which authorizes the development and operation of renewable energy projects, with an approved conditional use permit (CUP). According to the General Plan Land Use Element, a non-agricultural land use may be permitted within General Plan-designated agricultural land if the use does not conflict with agricultural operations and will not result in the premature elimination of agricultural operations (County 1993). As analyzed in Section II, Agriculture and Forest Resources above, there is no existing agricultural land on the Project site and the land is not designated as Prime Farmland, Unique Farmland, or Farmland of Statewide Importance by the Department of Conservation. The mineral extraction is associated with the geothermal

extraction and would be compatible with the geothermal overlay. Implementation of the Project would require the approval of a CUP by the County to allow for the construction and operation of the proposed geothermal and mineral extraction facility on land designated as agriculture. With obtaining a CUP, the Project would be consistent with the land use plan; therefore, impacts associated with conflicts with land use plan, policy or regulation would be less than significant and no further analysis is required.

FINDINGS

- 1) The Board finds, based on the Initial Study, the Final EIR, and the whole of the record, that the Proposed Project would result in less than significant impacts relating to the Land Use and Planning issues discussed above.

5.5 NOISE

Implementation of the Project would not result in a substantial increase in ambient noise levels at off-site noise-sensitive receptors or exceed the County of Imperial Property Line Noise Standards (70 dBA anytime for Light Industrial/Industrial Park Zones) and the applicable Noise/Land Use Compatibility criteria. Based on reported noise levels from similar operations, it is anticipated that noise levels would not exceed the County property line noise limits at the closest sensitive receptors. Therefore, operational noise impacts would be less than significant.

FINDINGS

- 1) The Board finds, based on the Initial Study, the Final EIR, and the whole of the record, that the Proposed Project would result in less than significant impacts relating to the Noise issues discussed above.

5.6 POPULATION AND HOUSING

The Project involves construction and operation of a geothermal power plant and a geothermal brine processing plant and does not propose the development of any permanent housing on site. Temporary housing will be provided on site for the well drilling crew that will be working 24 hours a day for approximately 6 months; however, the temporary housing will be removed once the well-drilling phase is complete. The Project operation would require approximately 112 full-time employees who are expected to live in and commute from the local surrounding communities. Therefore, the Project is not anticipated to induce population growth directly or indirectly; thus, impacts would be less than significant, and no further analysis is required.

The Project development site is approximately 65 acres and is not zoned for housing. There are no residences within the Project site or and the closest residence is a single residence more than half mile away; thus, no existing people or housing would be displaced as a result of the Project, thus no impact would occur.

FINDINGS

- 1) The Board finds, based on the Initial Study, the Final EIR, and the whole of the record, that the Proposed Project would result in less than significant impacts relating to Population and Housing issues discussed above.

5.7 PUBLIC SERVICES

Fire protection and emergency medical services in the Project area are provided by the Imperial County Fire Department (ICFD). The closest station to the Project site is the Niland Station, approximately 4 miles east, or an approximately 9-minute drive (Google, 2022). During construction, the Project site will be cleared of all vegetation and cleared areas will be maintained throughout construction. Fire extinguishers will also be available around the construction site. In case of emergency response during operations, Project access from Davis Road would have turnaround areas to allow clearance for fire trucks per fire department standards. In addition, a 100,000-gallon water storage tank will be located on site for fire-water storage. The fire protection system will consist of a fire main and surface distribution equipment such as yard hydrants and hose houses, monitors around the perimeter of the cooling tower, automatic sprinklers for the turbine generator and auxiliary equipment, and a complete detection and alarm system. The firewater supply and pumping system will provide an adequate quantity of fire-fighting water.

All fire suppression systems will be designed in accordance with federal, State, and local fire codes; OSHA regulations; and other jurisdictional codes, requirements, and standard practices. The ICFD will be consulted to review and approve any and all proposed fire equipment, apparatus, and related fire prevention plans. Acceptable service ratios and response times for fire protection will be maintained following Project implementation through consultation with the ICFD and the County. Impacts would be less than significant, and no further analysis is required.

Police protection services in the area are provided by the Imperial County Sheriff's Department. The closest police station to the Project site is the Imperial County Sheriff's office in Niland, approximately 4 miles east, or an approximately 10-minute drive (Google, 2022). The increase in construction related traffic is not anticipated to significantly increase demand on law enforcement services due to the rural nature of the Project vicinity. Additionally, the Project site would have a security fence around the Project site and include obscured fencing around processing areas. In addition, approximately 112 full-time employees will be on site 24 hours a day, 7 days a week during operations of the Project, thereby minimizing the need for police surveillance. The workforce for the Project would come from surrounding areas, and the Project workforce would not create a new demand for police protection. Impacts would be less than significant, and no further analysis is required.

FINDINGS

- 1) The Board finds, based on the Initial Study, the Final EIR, and the whole of the record, that the Proposed Project would result in less than significant impacts relating to Public Services issues discussed above.

5.8 WILDFIRE

CALFIRE's Fire Hazard Severity Zone Viewer identifies no very high, high, or moderate fire hazard severity zones in the local or state responsibility areas within 30 miles of the Project site (CALFIRE 2022). Additionally, as mentioned in Section XV Public Services, all fire suppression systems will be designed in accordance with federal, state, and local fire codes; occupational health and safety regulations; and other jurisdictional codes, requirements, and standard practices. The ICFD will also be consulted to review and approve any and all proposed fire equipment, apparatus, and related fire prevention plans. Compliance with local emergency response and evacuation plans, including the EOP and MJHMP, will be maintained

through consultation with the ICFD and the County. Impacts would be less than significant and no further analysis is required.

The Seismic and Public Safety Element of the County General Plan also states that the potential for a major fire in the unincorporated areas of the County is generally low (County 1993). Moreover, the Project site is flat and is not within an area of risk due to slope. Although the County has experienced damage from heavy winds in the past, hazards in the County are managed by the MJHMP which is reviewed and updated every 5 years (County 2021). Further, during construction the Project site and access road will be cleared of all vegetation and cleared areas will be maintained throughout construction. Fire extinguishers will be available around the construction site as well. During operations, a brush control program will be prepared and implemented on those portions of the Project site that will not be developed. Hazardous materials onsite during operations may be flammable, but fire suppression systems will be installed and the ICFD will be consulted to review and approve any and all proposed fire equipment, apparatus, and related fire prevention plans. Thus, employees onsite would not be exposed to pollutant concentrations from a wildfire. Impacts would be less than significant and no further analysis is required.

FINDINGS

- 1) The Board finds, based on the Initial Study, the Final EIR, and the whole of the record, that the Proposed Project would result in less than significant impacts relating to Wildfire issues discussed above.

SECTION 6.0 – LESS THAN SIGNIFICANT ENVIRONMENTAL IMPACTS WITH MITIGATION INCORPORATED

Based on the Final EIR and the Record of Proceedings, the Board of Supervisors finds that the Proposed Project would have less than significant environmental effects with mitigation incorporated associated with the following environmental issues:

- Air Quality
- Biological Resources
- Cultural Resources
- Geology and Soils
- Hazards and Hazardous Materials
- Transportation
- Tribal Cultural Resources
- Utilities and Service Systems

6.1 AIR QUALITY

Both construction and operational emissions created from the Proposed Project would not be within their respective ICAPCD thresholds. According to the ICAPCD Handbook, projects that are within the ICAPCD thresholds are consistent with the regional air quality plans. Furthermore, the standard mitigation measures provided in the ICAPCD Handbook have been incorporated into the Project Description for the Proposed Project as Project Design Features (see Section 2.10), and the Proposed Project will be required to implement all of the ICAPCD Regulation VIII, fugitive dust control measures during construction and operation of the Proposed Project. Furthermore, any stationary sources of emissions operated on site will be required to adhere to ICAPCD Rule 207, New and Modified Stationary Source Review and Rule 201 that require permits to construct and operate stationary sources. The Proposed Project would have the potential to conflict with or obstruct implementation of the applicable air quality plans. However, the Project would implement mitigation measures AQ-1 and AQ-2 to reduce CO and NO_x emissions. Table 4.2-7 in the FEIR shows that once mitigated, all criteria pollutants would be reduced to a level that is less than significant. Therefore, with implementation of the above mitigation measure, impacts to air quality plans would be reduced to a level less than significant.

During start-up conditions, air emissions of CO and NO_x associated with the HKP1 were estimated to exceed the CEQA significance thresholds and air emissions of CO associated with HKP1 were estimated to exceed the Rule 207, Section C.2.g thresholds. ICAPCD Rule 207 Section C.2 requires emissions offsets for sources with pollutant emissions that exceed 137 pounds per day. Pursuant Rule 207, Section C.2.g, the Proposed Project has prepared a CO Air Quality Impact Analysis (Part F of Rule 207), which demonstrates that the HKP1 would not cause or contribute to a violation of the CO NAAQS/CAAQS. The 1-hour and 8-hour CO modeled concentration plus background concentrations are 2,213 and 1,369 micrograms per cubic meter (µg/m³), respectively, which are well below the NAAQS/CAAQS. Therefore, the startup

operations associated with the proposed standby/black-start diesel engine generator would have a less than significant impact on CO concentrations and would not result in cumulatively considerable net increase to any critical pollutant for which the project region is nonattainment under an applicable federal or State ambient air quality standard.

MM-AQ-1: Prior to commencing construction, the Project proponent shall submit a Dust Control Plan to the Imperial County Air Pollution Control District (ICAPCD) for approval identifying all sources of PM10 and PM2.5 emissions and associated mitigation measures during the construction and operational phases of the Project. The Project proponent shall submit a Construction Notification Form to the ICAPCD ten days prior to the commencement of any earthmoving activity. This plan would provide a detailed list of control measures to reduce fugitive emissions from construction and operational activities, including but not limited to watering of unpaved roads, vehicle speed limits, windbreaks, transport container covers, and cleaning and sweeping procedures. The Dust Control Plan submitted to the ICAPCD shall meet all applicable requirements for control of fugitive dust emissions, including the following measures designed to achieve the no greater than 20-percent opacity performance standard for dust control:

- All disturbed areas, including bulk material storage, that is not being actively used shall be effectively stabilized; and visible emissions shall be limited to no greater than 20 percent opacity for dust emissions by using water, chemical stabilizers, dust suppressants, tarps, or other suitable material, such as vegetative groundcover. Bulk material is defined as earth, rock, silt, sediment, and other organic and/or inorganic material consisting of or containing PM with 5 percent or greater silt content.
- All on- and off-site unpaved roadway segments being used for 50 or more average vehicle trips per day shall be effectively stabilized, and visible emissions shall be limited to no greater than 20 percent opacity for dust emissions by the use of restricting vehicle access, paving, chemical stabilizers, dust suppressants, and/or watering.
- All unpaved traffic areas one acre or more in size with 75 or more average vehicle trips per day shall be effectively stabilized, and visible emissions shall be limited to no greater than 20 percent opacity for dust emissions by paving, chemical stabilizers, dust suppressants, and/or watering.
- All track-out or carry-out, which includes bulk materials that adhere to the exterior surfaces of motor vehicles and/or equipment (including tires) that may then fall onto the pavement on paved public roads, shall be cleaned at the end of each workday or immediately when mud or dirt extends a cumulative distance of 50 linear feet or more onto a paved road in an urban area.
- Movement of bulk material handling or transfer shall be stabilized prior to handling or at points of transfer with application of sufficient water or chemical stabilizers, or by sheltering or enclosing the operation and transfer line except, where such material or activity is exempted from stabilization by the rules of ICAPCD.
- Any temporary unpaved road shall be effectively stabilized and visible emissions shall be limited to no greater than 20 percent opacity for dust emission by paving, chemical stabilizers, dust suppressants and/or watering.

- Fugitive dust generation during construction would be minimized by watering as needed to meet Imperial County standards for fugitive dust control. To further reduce fugitive dust emissions, vehicle traffic on unpaved roads would be kept below 15 miles per hour.
- During grading, the Project would be watering actively disturbed on-site areas at least three times a day as necessary to reduce fugitive dust emissions.
- Access to the site would be via Highway 111, McDonald Road, and Davis Road. All workers, vendors and haul trucks would be required to utilize these roadways.
- An agreement between County of Imperial Public Works and the applicant would be established requiring the applicant to improve a two-mile section of the unpaved Davis Road adjacent to the site by installing a 12- to 18-inch- thick engineered Class II base section. In addition, at the request of the County, the applicant would utilize the improved section during construction and would wet the site continuously during construction activities. The road would be immediately paved after construction prior to operations of the plant to avoid damaging a new asphalt section.
- During construction, the Project would be required to maintain daily dust suppression at the two-mile section of Davis Road adjacent to the site using a water truck operating continuously while vehicles are using the road.
- The Project would provide wheel shakers at the exit(s) of the construction site to minimize dust being tracked off the Project site and onto the roadways.
- Operational on-road trips shall not operate on unpaved dirt roads.

MM-AQ-2: Prior to commencing construction, the Project proponent shall submit and commit to a Combustion Exhaust Emissions Control Program. This plan would provide a detailed list of control measures to minimize exhaust emissions during Project construction, including but not limited to fuel use, engine maintenance, and procedures:

- The Exhaust Emission Control Plan shall provide a detailed list of control measures to minimize exhaust emissions during Project construction, including but not limited to fuel use, engine maintenance, and procedures.
- The construction contractor shall be required to utilize construction equipment using diesel engines less than 50 horsepower with certified NOx emissions rated as Tier 3 or better. All off-road diesel-powered equipment greater than 50 horsepower that is used on-site during construction of the Project shall meet USEPA Tier 4 offroad emission standards and Level 3 diesel particulate filters.
- When commercially available, fossil fueled equipment shall be replaced with electrically driven equivalents (provided they are not run via a portable generator set).
- Idling times shall be minimized either by shutting equipment off when not in use or reducing the maximum idling time to five minutes (as required by the California Airborne Toxics Control Measure, Title 13, Section 2485 of California Code of Regulations). Clear signage shall be provided for construction workers at all access points.

- All construction equipment shall be maintained and properly tuned in accordance with manufacturer's specifications. All equipment shall be checked by a certified mechanic and determined to be running in proper condition prior to operation.
- Where access to alternative sources of power are available, portable diesel engines shall be prohibited. Haul truck shall be 2010 model year trucks or newer (a gross vehicle weight rating of at least 14,001 pounds), or best commercially available equipment, that meet the California Air Resources Board 2010 engine emissions standards at 0.01 g/horsepower-hour of particulate matter and 0.20 g/horsepower-hour of NOx emissions or newer, cleaner trucks.
- The volatile organic compounds (VOC) architectural coating limits specify that the use paints and solvents with a VOC content of 100 grams per liter or less for interior and 150 grams per liter or less for exterior surfaces shall be required.

Therefore, implementation of MM-AQ-1 and MM-AQ-2 would reduce impacts associated with Air Quality to less than significant.

FINDINGS

- 1) The Board finds, based on the Initial Study, the Final EIR and the whole of the record, that the Proposed Project would result in less than significant impacts relating to Air Quality discussed above with incorporation of the above mitigation measure.

6.2 BIOLOGICAL RESOURCES

The Project includes removal of cattails and other vegetation that provide breeding habitat for Yuma hispid cotton rat. Yuma hispid cotton rat could be impacted by construction activities if the species were to occur in the construction area at the time of construction. In addition, construction activities include excavation of trenches and steep walled foundations where cotton rat could become trapped. Because a qualified biologist would be on site to observe all vegetation removal activities and could relocate Yuma hispid cotton rat out of harm's way if one were observed in the area, the impact from vegetation removal activities would be less than significant. In addition, because open trenches will be covered to avoid cotton rats from becoming trapped and a biologist will observe open excavations daily, the impact of open excavations on cotton rats will be less than significant.

The Project study area contains wetlands and riparian habitats that are potentially subject to RWQCB, CDFW, and USACE jurisdiction. The removal of vegetation and discharge of fill to these wetland and riparian resources from temporary construction activities, or permanent conversion to a developed land use during operation of the proposed Project, could be a significant impact. Hell's Kitchen PowerCo 1 LLC and Hell's Kitchen LithiumCo 1 LLC will obtain all required USACE, CDFW, and RWQCB permits for impacts to wetlands and riparian areas prior to construction in any jurisdictional wetland or riparian area. The agencies permit processes requires compensatory mitigation for impacts to jurisdictional water resources. Because the Project will comply with all permit requirements, including development of compensatory wetland and riparian mitigation, the impacts on wetlands and riparian areas would be less than significant.

Project construction would occur within a relatively small area of comparatively low habitat quality along the roadside adjacent to the large, contiguous wetlands to the east. Following construction completion, vegetated areas and unvegetated open space would be converted permanently to developed land uses.

The conversion of these vegetated and unvegetated open space areas would not result in a noteworthy loss of habitat compared to the large contiguous wetlands and open space areas to the north, west, and east, and would not impede wildlife access to foraging habitat, breeding habitat, water sources, or other areas necessary for their movement or reproduction. The Project impacts are collocated adjacent to Davis Road, IID's existing power line, and other infrastructure. The Project study area does not contain any wildlife nursery sites. The impact would be less than significant.

Project construction would occur within a relatively small area of comparatively low habitat quality along the roadside adjacent to the large, contiguous wetlands to the east. Following construction completion, vegetated areas and unvegetated open space would be converted permanently to developed land uses. The conversion of these vegetated and unvegetated open space areas would not result in a noteworthy loss of habitat compared to the large contiguous wetlands and open space areas to the north, west, and east, and would not impede wildlife access to foraging habitat, breeding habitat, water sources, or other areas necessary for their movement or reproduction. The Project impacts are collocated adjacent to Davis Road, IID's existing power line, and other infrastructure. The Project study area does not contain any wildlife nursery sites. The impact would be less than significant.

In accordance with the consistency analysis provided in FEIR Table 4.3-1, the proposed Project is not anticipated to conflict with the Imperial County General Plan. There are no other local policies or ordinances protecting biological resources that apply to the proposed Project. Therefore, construction and operation of the proposed Project is anticipated to have a less-than-significant impact with respect to conflicting with any local policies or ordinances protecting biological resources. However, the Imperial County Board of Supervisors provides the ultimate determination regarding the proposed Project's consistency with the Imperial County General Plan.

MM- BIO-1: Designated Biologist- The Applicant shall retain the services of a Qualified Biologist. The Qualified Biologist will be employed during construction and all vegetation removal and ground-disturbing activities. The Qualified Biologist will document compliance with the projects mitigation measures and permits. The Qualified Biologist will have the authority to halt any Project activities that are in violation of the terms and conditions of the Project biological opinion(s) or incidental take permit, as appropriate.

MM- BIO-2: Biological Monitors- Biological monitor(s) will be employed to assist the Designated Biologist in conducting preconstruction surveys and monitoring ground disturbance, grading, construction, decommissioning, and restoration activities. The biological monitor(s) will have sufficient education and field experience to understand resident wildlife species biology. To avoid and minimize effects to biological resources, the biological monitor(s) will assist the Designated Biologist with the following:

- Conduct inspections for listed species during ground-disturbing construction activities and document that habitat within the construction zone is not occupied by Yuma Ridgway's rail or desert pupfish.
- Document compliance with all conservation measures, including but not limited to monitoring for presence of listed species; halting construction activity in the area if an individual listed species is found; and checking the staking/flagging of all disturbance areas to be sure that they are intact and that all construction activities are being kept within the staked/flagged limits. If a Yuma Ridgway's rail or desert pupfish is found within a work area, the Biological Monitor(s) will

immediately notify the Designated Biologist, who will determine measures to be taken to ensure that the individual is not harmed, such as temporarily halting construction.

MM- BIO-3. Worker Environmental Awareness Program Training: A Worker Environmental Awareness Program will be implemented for construction crews prior to the commencement of Project activities. Training materials and briefings will include, but not be limited to, discussion of the federal and State statutes protecting threatened and endangered species, the consequence of noncompliance with these statutes, identification of values of wildlife and natural plant communities, hazardous substance spill prevention and containment measures, and review of all required conservation measures.

MM-BIO-4: Flagging of Work Area Limits: All areas to be disturbed by the Project will be flagged prior to construction. All disturbance will be confined to these flagged areas, and all employees will be instructed that their activities must be confined to locations within the flagged areas.

MM- BIO-5: Power Wash Equipment: All equipment used during construction of the Project will be required to be power washed prior to arrival at the Project site to prevent the transportation and establishment of noxious weeds in the area

MM- BIO-6: Sediment and Erosion Control: The Project proponent will acquire the appropriate Clean Water Act regulatory permits, prepare a Stormwater Pollution and Prevention Plan (SWPPP), and implement BMPs prior to construction and site restoration. The SWPPP will identify specific actions and BMPs relating to the prevention of stormwater pollution from Project-related construction sources by identifying a practical sequence for site restoration, BMP implementation, contingency measures, responsible parties, and agency contacts. The SWPPP reflects localized surface hydrological conditions and will be reviewed by the USFWS prior to commencement of work. A SWPPP will be a condition of the contract with each contractor selected to build and decommission the Project. The SWPPP(s) at a minimum will incorporate soil stabilization and erosion control practices (e.g., hydroseeding, erosion control blankets, mulching), dewatering and/or flow diversion practices, sediment control practices (temporary sediment basins, fiber rolls), temporary and post-construction onsite and offsite runoff controls, and special considerations and BMPs for water crossings, wetlands, and drainages. The SWPPP will be prepared by a qualified SWPPP practitioner with BMPs selected to achieve maximum pollutant removal and that represent the best available technology that is economically achievable. Emphasis for BMPs is placed on controlling discharges of oxygen-depleting substances, floating material, oil and grease, acidic or caustic substances or compounds, and turbidity. Performance and effectiveness of these BMPs are determined either by visual means where applicable (i.e., observation of above-normal sediment release), or by actual water sampling in cases where verification of contaminant reduction or elimination (inadvertent petroleum release) is required to determine adequacy of the measure.

MM- BIO-7: Solid Waste Management: Solid waste will be properly contained in designated collection areas on site and regularly disposed of.

MM-BIO-8: Desert Pupfish Protection and Relocation Plan: A desert pupfish protection and relocation plan will be prepared prior to construction activities in any suitable habitat for desert pupfish. Its implementation will ensure construction in any suitable habitat for desert pupfish will be conducted with minimal effects on desert pupfish. This plan will be submitted to the Service and the CDFW for review and approval prior to any ground-disturbing activities that have a water component. This plan will provide:

1. Protocols for pre-construction or pre-maintenance surveys to assess species presence and spawning within or immediately adjacent to work areas (e.g., in, or at the end of, the irrigation drains/drain canals, open water areas, and around the open water margins). The protocols will also outline the qualifications required for biologists to conduct desert pupfish survey, capture, and relocation activities and the process for biologist approval.
2. Capture (e.g., trapping in the irrigation drains for construction and maintenance; or trapping, dip netting, and seining in open water areas that are drained or if the water level is dropped) and transport methods to minimize handling and stress as well as exposure to heat, low dissolved oxygen (DO), and crowding.
3. Identification of locations for release of captured desert pupfish.
4. Timing windows when construction or maintenance in open water areas and in the irrigation drain mouths/canals may be conducted with minimal effects on desert pupfish spawning.
5. Adaptive management procedures that include assessment of mitigation measure effectiveness, development of revised measures to improve effectiveness, and similar assessment of revised measures to verify effectiveness. Yuma Ridgway's Rail Measures, Black Rail, and Other Marsh Bird Measures.

MM-BIO-9. Construction Timing: Construction activities within habitat for Yuma Ridgway's rail (i.e., cattail marsh) will be scheduled to avoid the nesting and molting flightless season (i.e., February 15 – September 15). Pile driving activities adjacent to Yuma Ridgway's rail habitat will avoid Yuma Ridgway's rail nesting season

MM-BIO-10: Pre-Construction Surveys and Construction Monitoring for Yuma Ridgway's Rail and Black Rail: Pre-construction surveys for Yuma Ridgway's rail and black rail and construction monitoring will be conducted within all Project development areas within suitable habitat and a 500-foot buffer from suitable habitat. In the event that Yuma Ridgway's rail(s) or black rail(s) are detected within the work area (the area of active equipment use), all construction activities in the area will halt and the USFWS and CDFW will be notified no later than noon of the next business day. Project activities in the area may not proceed until the birds have left the work area. The USFWS and CDFW will also be notified if any Yuma Ridgway's rail are detected within 500 feet of the construction area. Project activities may proceed with caution in this buffer area under the direction of the Designated Biologist.

MM-BIO-11: Reduced Vehicle Speed Adjacent to Rail Habitat: Vehicle speeds will be reduced to 15 miles per hour (mph) on access roads adjacent to Yuma Ridgway's rail habitat. These areas will be appropriately signed to identify the speed limit.:

MM-BIO-12: Noise Attenuation: The following noise attenuation measures will be implemented to minimize noise impacts on Yuma Ridgway's rail during the nesting season:

- At least 30 days prior to activities within 500 feet of Yuma Ridgway's rail habitat, the Applicant will conduct a noise study to evaluate the maximum predicted noise level within rail habitat.
- If the maximum predicted noise is less than 60 A-weighted decibel scale (dBA) equivalent continuous sound level (Leq), no additional measures are required.
- If the maximum predicted noise level exceeds 60 dBA Leq in rail habitat, noise attenuation measures such as noise walls or hay bales will be installed between the noise source and the suitable habitat. Noise monitors will be installed at the edge of the nearest Yuma Ridgway's rail

habitat to assess the noise levels and verify that attenuation measures are successful. If necessary, additional noise reduction measures will be implemented to reduce the noise level to below 60 dBA at the edge of occupied habitat.

MM-BIO-13: Habitat Conservation: To offset the loss of Yuma Ridgway's rail habitat, the Project proponent will preserve, create, or enhance habitat near the Project site for Yuma Ridgway's rail. The Project proponent will provide funding for construction and long-term management of the created habitat and will provide financial assurance for the construction of the wetland habitat in the form of performance bonds, escrow accounts, casualty insurance, or letters of credit. The performance bond, escrow account, casualty insurance, or letter of credit shall be of sufficient value to cover all construction, monitoring and reporting costs until the habitat is fully established. The financial assurance shall be in place prior to ground disturbance. Long-term management funding will be provided sufficient to cover, at a minimum, the management costs related to procurement of water from IID, weed control, levee and control structure maintenance, and control structure repair or replacement. The Applicant will prepare a detailed Habitat Enhancement Mitigation and Mitigation Monitoring Plan for review and approval by the USFWS, Corps, and CDFW prior to Project construction. Habitat creation activities will be conducted outside of the bird breeding season (February 15 – September 15) to avoid potential noise impacts on Yuma Ridgway's rail.

MM-BIO-14: Burrowing Owl. A pre-construction survey will be conducted for burrowing owls. The survey will be conducted during peak activity period (one hour before to two hours after sunrise or two hours before to one hour after sunset) no more than 14 days prior to the start of construction and within 500 feet surrounding the construction area. If owls are located during the pre-construction survey between February 1 and August 31 (nesting season), a buffer area will be established according to the guidelines in the 2012 Staff Report. A modified buffer reduction may be used with CDFW concurrence. If burrowing owls are located during the nonbreeding season, owls may be passively relocated in coordination with CDFW, by a qualified biologist according to the procedures outlined in the 2012 Staff Report on Burrowing Owl Mitigation. If burrowing owls are found on site during pre-construction surveys, the Project proponent shall contact CDFW to prepare a plan of action for buffers or passive relocation.

MM- BIO-15: Lighting. Except as necessary for safety or security purposes, no lighting shall be allowed to impact wetland or riparian habitats.

MM-BIO-16: Nesting Bird Plan. Construction activities shall take place outside the general bird breeding season (February 15 to September 30), to the maximum extent practicable. Regardless of the time of year, prior to ground-disturbing activities, a qualified biologist shall conduct a nesting bird survey to comply with CDFW Code 3503 and 3503.5 and the Migratory Bird Treaty Act. The survey shall occur no more than three (3) days prior to initiation of proposed Project activities and shall include any potential habitat (including trees, shrubs, the ground, or nearby structures). Any occupied passerine and/or raptor nests occurring within the proposed Project area or the Project's zone of influence (generally 100-300 feet) shall be delineated and a no-disturbance buffer zone (as determined by the avian biologist) shall be established and maintained during Project activities. Additional follow-up surveys may be required by the resource agencies and Imperial County. The buffer zone shall be sufficient in size to prevent impacts to the nest. A qualified biologist shall monitor active nests to determine whether construction activities are disturbing nesting birds or nestlings. If the qualified biologist determines that construction activities pose a disturbance to nesting, construction work shall be stopped in the area of the nest and the no disturbance buffer shall be expanded. Once nesting has ceased and the fledglings are no longer using the nest area as

confirmed by a qualified biologist, the buffer may be removed. A nesting bird survey report shall be provided to Imperial County and CDFW. If an active nest is encountered during construction, construction shall stop immediately until a qualified biologist can determine the status of the nest and when work can proceed without risking violation to state or federal laws.

MM-BIO-17: Bird Flight Diverters. Bird flight diverters will be installed on any new transmission and power lines serving the Project, to limit bird mortality associated with introducing new transmission lines in bird flyways. Flight diverters make transmission lines more visible to birds. The transmission and power lines will be designed to meet Avian Power Line Interaction Committee (APLIC) guidelines.

MM-BIO-18: Excavation Areas. Any open trench or excavated area shall be securely covered anytime Project activities within the excavated/trenched area have ceased. The designated biologist shall oversee the covering of all excavated, steep-walled holes or trenches by placing plywood or other barrier materials such that animals are unable to enter and become entrapped. The use of temporary fencing around the perimeter or trenches or holes may be an acceptable minimization measure, if deemed appropriate by the biological monitor. Before holes or trenches are filled, the Biological Monitors shall thoroughly inspect the areas for trapped animals. If any worker discovers that any animal has become trapped, they shall halt Project-related activities and notify the biological monitor immediately.

MM-BIO-19: Wetland and Riparian Area Restoration/Compensation. The Project will provide restoration/compensation for all unavoidable impacts on areas under the jurisdiction of USACE, RWQCB, and CDFW. Impacts on jurisdictional areas will be avoided to the extent feasible. Where avoidance of jurisdictional areas is not feasible, the Project applicant will provide the necessary mitigation required as part of wetland permitting, by creation, restoration, or preservation of suitable jurisdictional or equivalent habitat along with adequate buffers to protect the function and values of jurisdictional areas. The Mitigation ratio will be 1:1 or as approved by the permitting agencies. The proposed Mitigation Plan area is located in Section 35 approximately 2 miles north of the HKP1 and HKL1 Projects at the corner of Beach Road and Access Road. The proposed mitigation area will total 159.61 acres; approximately 152 acres will be created native wetland/open water habitat and approximately 7 acres will be enhanced native upland habitat. Proposed native wetland communities include Willow Scrub Shrub, Cattail Bullrush Marsh and Desert Riparian Woodlands. Proposed upland communities include Sonoran Desert Scrub/Alkali Sink.

Therefore, implementation of MM-1 through MM-19 would reduce impacts associated with Biological Resources to less than significant.

FINDINGS

- 1) The Board finds, based on the Initial Study, the Final EIR and the whole of the record, that the Proposed Project would result in less than significant impacts relating to Biological Resources issues discussed above with incorporation of the above mitigation measures.

6.3 CULTURAL RESOURCES

The intensive pedestrian survey resulted in identification of a newly recorded resources which consists of a remnant of a historic-era house dating back to 1953 (TES-HK-001H). The structure is comprised of adobe brick. However, the structure has been altered over the years. The structure no longer contains walls, windows, doors, and room, and shows evidence of damage, graffiti, and other modern effects such as furniture and refuse. Based on the condition of the structure, there is not enough original structure

remaining to understand the original appearance of the structure. Standard DPR site records have been completed for this resource and are waiting permanent designation from the information center. Its severely dilapidated condition does not allow for the structure to meet the criteria needed for listing on the CRHR and is not known to be affiliated with anyone of significance or contribute to local cultural heritage or yield additional information to local history. Therefore, the Proposed Project would not result in significant impact to a historical resource. Impacts would be less than significant. An archaeological investigation was conducted for the Project to determine if there are any impacts that would occur that would disrupt or adversely affect a prehistoric or historic-era archaeological site to a community, ethnic or social group. The investigation resulted in resources being found within the Project area. However, because of the conditions of these resources, these have not been determined to be significantly impacted by the Proposed Project. However, given the largely undeveloped nature of the Project site with no previous development, there remains potential that the Project's ground disturbing activity would impact undiscovered resources. These resources could include but not limited to lithic materials, faunal, pottery, ceramics, building materials, or glassware.

Construction of the Proposed Project would involve grading, which may have the potential to uncover unknown human remains. However, if human remains are encountered during the proposed work, no further excavation or disturbance may occur near the find until the County coroner has been contacted. HSC 7050.5 states (a) Every person who knowingly mutilates or disinters, wantonly disturbs, or willfully removes any human remains in or from any location other than a dedicated cemetery without authority of law is guilty of a misdemeanor, except as provided in Section 5097.99 of the Public Resources Code. (b) In the event of discovery or recognition of any human remains in any location other than a dedicated cemetery, there shall be no further excavation or disturbance of the site or any nearby area reasonably suspected to overlie adjacent remains until the coroner of the county in which the human remains area discovered has determined that the remains are not subject to the provisions of Section 27481. The coroner shall make his or her determination within two working days from the time the person responsible for the excavation, or to his or her authorized representative, notifying the coroner of the discovery if recognition of human remains. (c) If the coroner determines that the remains are not subject to his or her authority and if the coroner recognizes the human remains to be those of a Native American, or has reason to believe that they are those of a Native American, he or she shall contact, by telephone within 24 hours, the Native American Heritage Commission. Compliance with these regulations would ensure impacts to human remains resulting from the Project would be less than significant.

MM-CUL-1 The Applicant shall retain the services of a Qualified Archaeologist, meeting the Secretary of the Interior Standards or County standards, whichever is greater, and require that all initial ground-disturbing work be monitored by archaeological specialist (monitor) proficient in artifact and feature identification in monitoring contexts. The Consultant (Qualified Archaeologist and/or monitor) shall be present at the Project construction phase kickoff meeting.

MM-CUL-2 Prior to commencing construction activities and thus prior to any ground disturbance in the Proposed Project site, the Consultant shall conduct initial Worker Environmental Awareness Program (WEAP) training to all construction personnel, including supervisors, present at the outset of the Project construction work phase, for which the Lead Contractor and all subcontractors shall make their personnel available. A tribal monitor shall be provided an opportunity to attend the preconstruction briefing, if requested. This WEAP training will educate construction personnel on how to work with the monitor(s) to identify and minimize impacts to archaeological resources and maintain environmental compliance. This WEAP training will educate the monitor(s) of construction procedures to avoid construction-related

injury or harm. This training may be performed periodically, such as for new personnel coming on to the Project as needed.

MM-CUL-3 The Contractor shall provide the Consultant with a schedule of initial potential ground-disturbing activities. A minimum of 48 hours will be provided to the Consultant of commencement of any initial ground-disturbing activities such as vegetation grubbing or clearing, grading, trenching, or mass excavation.

A monitor shall be present on-site at the commencement of ground-disturbing activities related to the Project. The monitor, in consultation with the Qualified Archaeologist, shall observe initial ground-disturbing activities and, as they proceed, adjust the number of monitors as needed to provide adequate observation and oversight. All monitors will have stop-work authority to allow for recordation and evaluation of finds during construction. The monitor will maintain a daily record of observations to serve as an ongoing reference resource and to provide a resource for final reporting upon completion of the Project.

The Consultant and the Lead Contractor and subcontractors shall maintain a line of communication regarding schedule and activity such that the monitor is aware of all ground-disturbing activities in advance to provide appropriate oversight.

MM-CUL-4 In the event of the discovery of previously unidentified archaeological materials, the Contractor shall immediately cease all work activities within an area of no less than 100 feet of the discovery. After cessation of excavation, the Contractor shall immediately contact the County. Except in the case of cultural items that fall within the scope of the Native American Grave Protection and Repatriation Act (NAGPRA), California Health and Safety Code 7050.5, CEQA 15064.5, or California Public Resources Code 5097.98, the discovery of any cultural resource within the Project area shall not be grounds for a Project-wide "stop work" notice or otherwise interfere with the Project's continuation except as set forth in this paragraph. Additionally, all consulting Native American Tribal groups that requested notification of any unanticipated discovery of archaeological resources on the Project shall be notified appropriately. If a discovery results in the identification of cultural items that fall within the scope of NAGPRA, the Contractor shall immediately cease all work activities within an area of no less than 100 feet (30 meters) of the discovery. In the event of an unanticipated discovery of archaeological materials during construction, the Applicant-retained Qualified Professional Archaeologist shall be contacted to evaluate the significance of the materials prior to resuming any construction-related activities near the find. If the Qualified Archaeologist determines that the discovery constitutes a significant resource under CEQA and it cannot be avoided, the Applicant shall implement an archaeological data recovery program.

MM-CUL-5 At the completion of all ground-disturbing activities, the Consultant shall prepare an Archaeological Resources Monitoring Report summarizing all monitoring efforts and observations, as performed, and any and all prehistoric or historic archaeological finds as well as providing follow-up reports of any finds to the SCCIC, as required.

In the event unanticipated, buried prehistoric archaeological resources (lithic material, faunal, pottery, etc.) or historical archaeological resources (ceramics, building materials, glassware, etc.) are unearthed during construction or any ground disturbing activities within the Project area, additional resource treatments would become necessary. Once a potential resource has been identified, all work within 100 feet must be halted until the find can be assessed by a qualified archaeologist.

Therefore, implementation of MM-CUL-1 through MM-CUL-5 would reduce impacts associated with Cultural Resources to less than significant.

FINDINGS

- 1) The Board finds, based on the Initial Study, the Final EIR and the whole of the record, that the Proposed Project would result in less than significant impacts relating to Cultural Resources issues discussed above with incorporation of the above mitigation measures.

6.4 GEOLOGY AND SOILS

The CBC requires that a site-specific ground motion hazard analysis be performed in accordance with American Society of Civil Engineers (ASCE) 7-16 Section 11.4.8 for structures. The parameters were determined and provided in the Geohazard Evaluation Report. General earthwork considerations pertaining to the Project include remedial grading/over excavation, excavatability, and fill materials. Design considerations would take into account expansion potential, collapse potential, and corrosivity. The Geohazard Evaluation Report notes that based on the preliminary site plans, no conditions on the Project site would preclude development of the Proposed Project, provided that Mitigation Measures GEO-1 and GEO-2 would be implemented. Therefore, the Proposed Project would be less than significant and is considered feasible from a geotechnical standpoint.

Based on the presence of shallow groundwater and the nature of subsurface soils, the potential for liquefaction is high. As such, site-specific liquefaction and dynamic settlement shall be evaluated with data obtained through the soils borings during the Project's geotechnical investigation phase. Implementation of Mitigation Measures GEO-1 and GEO-2, in addition to compliance with the CBC, would result in less than significant impacts.

Based on the Project's topography and relatively flat nature of the Project site, the risk of landslides is considered remote. However, unstable soils could result in subsidence, expansive soil, liquefaction and lateral spreading. Therefore, site-specific potential for these instabilities shall be evaluated with data from the soil borings during the geotechnical investigation phase. Implementation of Mitigation Measures GEO-1 and GEO-2, as well as the considerations provided in the Geohazard Evaluation Report, would ensure that construction of the Proposed Project would not result in significant impacts due to subsidence, expansive soil, liquefaction and lateral spreading. Impacts would be less than significant with mitigation incorporated

MM-GEO-1: A complete geotechnical engineering investigation shall be completed, with a Final Geotechnical Report to be prepared prior to submittal of a grading permit. The Final Geotechnical Report shall be prepared by a qualified consultant and be submitted to the County for review and approval. The investigation will include soil test borings; specific and detailed recommendations; soil and sediment analysis; detailed analysis and design standards; geotechnical design criteria; and detailed design recommendations.

MM-GEO-2: All grading operations and construction shall be conducted in conformance with the recommendations included in the Geohazard Evaluation Report prepared on August 17, 2022, and Final Geotechnical Report on the Project site. Design, grading, and construction shall be performed in accordance with the recommendations of the project geotechnical consultant and corrosion engineer, subject to review by the County, prior to commencement of grading activities.

PALEO-1: The Applicant shall retain the services of a Qualified Paleontologist and require that all initial ground-disturbing work be monitored by someone trained in fossil identification in monitoring contexts. The Qualified Paleontologist shall prepare a Paleontological Resource Mitigation Plan to be implemented during ground-disturbing activity for the proposed Project. This program should outline the procedures for paleontological monitoring, including extent and duration; protocols for salvage and preparation of fossils; and the requirements for a final mitigation and monitoring report. The Qualified Paleontologist and a paleontological monitor shall be present at the Project construction-phase kickoff meeting.

PALEO-2: Prior to commencing construction activities and, thus, prior to any ground disturbance in the Proposed Project site, the Qualified Paleontologist and paleontological monitor shall conduct initial Worker Environmental Awareness Program (WEAP) training to all construction personnel, including supervisors, present at the start of the Project construction work phase, for which the Applicant, or their designated Contractor, and all subcontractors shall make their personnel available. This WEAP training will educate construction personnel on how to work with the monitor(s) to identify and minimize impacts to paleontological resources and maintain environmental compliance, and it shall be performed periodically for new personnel coming on to the Project as needed.

PALEO-3: The Applicant, or their designated Contractor, shall provide the Qualified Paleontologist with a schedule of initial potential ground-disturbing activities. A minimum of 48 hours will be provided to the consultant prior to the commencement of any initial ground-disturbing activities, such as vegetation grubbing or clearing, grading, trenching, or mass excavation.

As detailed in the schedule provided, a paleontological monitor shall be present on-site at the commencement of ground-disturbing activities related to the Project. The monitor, in consultation with the Qualified Paleontologist, shall observe initial ground-disturbing activities and, as they proceed, make adjustments to the number of monitors as needed to provide adequate observation and oversight. All monitors will have stop-work authority to allow for recordation and evaluation of finds during construction. The monitor will maintain a daily record of observations as an ongoing reference resource and to provide a resource for final reporting upon completion of the Project.

The Qualified Paleontologist, paleontological monitor, and the Applicant, or their designated Contractor, and subcontractors shall maintain a line of communication regarding schedule and activity such that the monitor is aware of all ground-disturbing activities in advance to provide appropriate oversight.

PALEO-4: If paleontological resources are discovered, construction shall be halted within 50 feet of any paleontological finds and shall not resume until the Qualified Paleontologist can determine the significance of the find and/or the find has been fully investigated, documented, and cleared.

PALEO-5: At the completion of all ground-disturbing activities, the Qualified Paleontologist shall prepare a Paleontological Resources Monitoring Report summarizing all monitoring efforts and observations, as performed, and any and all paleontological finds and shall provide follow-up reports of any finds to the preferred paleontological repository, as required.

Therefore, implementation of MM-GEO-1 through MM GEO-2 and PALEO-1 through PALEO-5 would reduce impacts associated with Geology and Soils to less than significant.

FINDINGS

- 1) The Board finds, based on the Initial Study, the Final EIR and the whole of the record, that the Proposed Project would result in less than significant impacts relating to Geology and Soils issues discussed above with incorporation of the above mitigation measures.

6.5 HAZARDS AND HAZARDOUS MATERIALS

During construction and operations of the Project, hazardous materials would be transported to and from the Project site. Traffic barriers would protect piping and tanks on the site from potential traffic hazards. The Project Applicant would be required to follow all applicable federal, State, and local laws and regulations. Further, transportation would be subject to licensing and inspection by the CHP. With adherence to the regulatory measures and requirements for hazardous materials, impacts would be less than significant.

Based on the assessment conducted at the Project site, further investigations may be required if the areas containing RECs cannot be avoided by future development. Therefore, for the Project to not have a significant impact to the public and environment, the Project shall comply with local, State and federal guidelines and to the Mitigation Measures HAZ-1 and HAZ-2 to ensure the any accidental releases would be mitigated to a less than significant impact.

During operations, a brush control program would be prepared and implemented on those portions of the Project site that will not be developed. The Imperial County Fire District would be consulted to review and approve all proposed fire equipment, apparatus, and related fire prevention plans. Due to compliance with the measures identified above, and the distance from an identified area of high fire hazard risk, the Project would result in a less than significant impact associated with wildfires.

MM HAZ-1: To avoid health risks to construction workers, the Applicant shall require the contractor to prepare and implement a site Health and Safety Plan (HSP) if areas containing hazardous materials are to be disturbed. This plan will outline measures that will be employed to protect construction workers and the public from exposure to hazardous materials during construction activities. This plan shall be prepared prior to any ground-disturbing activities and shall be reviewed and approved by the Project Applicant. Workers shall review and sign the site HSP prior to proceeding with the assigned work.

MM HAZ-2: For any gen-tie structures or other areas of project ground disturbance that are close to a REC, a Phase 2 limited soil sampling shall be conducted to determine if there are any hazardous materials present on-site. The soil sampling shall be conducted during final design and prior to construction. Soil sampling will determine the California Human Health Screening Levels (CHHSL) of the testing protocol (CAM 17 metals, a list of 17 metals found typically in hazardous materials and mining sites). The CHHSLs are a list of 54 hazardous chemicals in soil or soil gas that the California Environmental Protection Agency (CalEPA) considers to be below thresholds for risks to human health. The Imperial County Public Health Department, Division of Environmental Health (DEH) shall review the soil sampling results. If the results are above the CHHSLs, then the DEH would refer the project to the California Department of Toxic Substances Control for proper soil handling and removal procedures.

Therefore, implementation of MM HAZ-1 and HAZ-2 would reduce impacts associated with Hazards and Hazardous Materials to less than significant.

FINDINGS

- 1) The Board finds, based on the Initial Study, the Final EIR and the whole of the record, that the Proposed Project would result in less than significant impacts relating to with Hazards and Hazardous Materials issues discussed above with incorporation of the above mitigation measures.

6.6 HYDROLOGY AND WATER QUALITY

Due to the size of the Project, Postconstruction Standards from the Phase II Small MS4 Permit will be applied to the Project. The proposed Project will implement site-design BMPs, source-control measures, low-impact development (LID) BMPs, and hydromodification-management BMPs to meet the permit criteria. The Project owner will maintain all on-site site-design BMPs, source-control measures, postconstruction BMPs, and retention basins during the lifetime of the Project. A full list of postconstruction BMPs is provided in Appendix I. With implementation of Mitigation Measures HWQ-1 and HWQ-2 impacts to water quality standards and waste discharge requirements would be less than significant.

MM-HWQ-1 Prepare SWPPP and Implement BMPs Prior to Construction and Site Restoration. The Project applicant or its contractor shall prepare a Storm Water Pollution Prevention Plan (SWPPP) specific to the Project and be responsible for securing coverage under the State Water Resources Control Board's National Pollution Discharge Elimination System stormwater permit for general construction activity (Order 2009-0009-DWQ). The SWPPP shall identify specific actions and best management practices (BMPs) related to the prevention of stormwater pollution from Project-related construction sources by identifying a practical sequence for site restoration, BMP implementation, contingency measures, responsible parties, and agency contacts. The SWPPP shall reflect localized surface hydrological conditions and shall be reviewed and approved by the appropriate agency prior to commencement of work and shall be made conditions of the contract with the contractor selected to build and decommission the Project. The SWPPP shall incorporate control measures in the following categories:

- Soil stabilization and erosion control practices
- Sediment control practices
- Temporary and postconstruction on- and off-site runoff controls
- Special considerations and BMPs for water crossings and drainages
- Monitoring protocols for discharge(s) and receiving waters, with emphasis place on the following water quality objectives: dissolved oxygen, floating material, oil and grease, potential of hydrogen (pH), and turbidity
- Waste management, handling, and disposal control practices
- Corrective action and spill contingency measures
- Agency and responsible party contact information
- Training procedures that shall be used to ensure that workers are aware of permit requirements and proper installation methods for BMPs specified in the SWPPP

The SWPPP shall be prepared by a Qualified SWPPP Practitioner and/or Qualified SWPPP Developer, with BMPs selected to achieve maximum pollutant removal and representative of the best available technology that is economically achievable. Emphasis for BMPs shall be placed on controlling discharges of oxygen-depleting substances; floating material; oil and grease; acidic or caustic substances or compounds; and turbidity. BMPs for soil-stabilization, erosion-control, and sediment-control practices will also be required. Performance and effectiveness of these BMPs shall be determined either by visual means where applicable (i.e., observation of above-normal sediment release), or by actual water sampling in cases

where verification of contaminant reduction or elimination, (inadvertent petroleum release) is required to determine adequacy of the measure.

MM-HWQ-2: Incorporate Postconstruction Runoff BMPs into Project Drainage Plan. The Project Drainage Plan shall adhere to the County's Engineering Guidelines Manual, IID Draft Hydrology Manual or other recognized source with approval by the County Engineer to control and manage the on- and off-site discharge of stormwater to existing drainage systems. Infiltration basins will be integrated into the Drainage Plan to the maximum extent practical. The Drainage Plan shall provide both short and long-term drainage solutions to ensure the proper sequencing of drainage facilities and management of runoff generated from Project-related impervious surfaces as necessary.

Therefore, implementation of MM-HWQ-1 and MM-HWQ-2 would reduce impacts associated with Hazards and Hazardous Materials to less than significant.

FINDINGS

- 1) The Board finds, based on the Initial Study, the Final EIR and the whole of the record, that the Proposed Project would result in less than significant impacts relating to Hazards and Hazardous Materials issues discussed above with incorporation of the above mitigation measures.

6.7 TRIBAL CULTURAL RESOURCES

Based on the results of the Cultural Resources Survey and in consultation with the tribes, the County has determined there are no known tribal cultural resources within the Project site. However, the potential remains for the Project's ground-disturbing activity to impact undiscovered resources. These resources could include but not be limited to lithic materials, faunal, pottery, ceramics, building materials, or glassware. Impacts would be considered less than significant with implementation of the mitigation measures outlined in Cultural Resources, Section 4.4 of the FEIR.

MM-CUL-1 The Applicant shall retain the services of a Qualified Archaeologist, meeting the Secretary of the Interior Standards or County standards, whichever is greater, and require that all initial ground-disturbing work be monitored by archaeological specialist (monitor) proficient in artifact and feature identification in monitoring contexts. The Consultant (Qualified Archaeologist and/or monitor) shall be present at the Project construction phase kickoff meeting.

MM-CUL-2 Prior to commencing construction activities and thus prior to any ground disturbance in the Proposed Project site, the Consultant shall conduct initial Worker Environmental Awareness Program (WEAP) training to all construction personnel, including supervisors, present at the outset of the Project construction work phase, for which the Lead Contractor and all subcontractors shall make their personnel available. A tribal monitor shall be provided an opportunity to attend the preconstruction briefing, if requested. This WEAP training will educate construction personnel on how to work with the monitor(s) to identify and minimize impacts to archaeological resources and maintain environmental compliance. This WEAP training will educate the monitor(s) of construction procedures to avoid construction-related injury or harm. This training may be performed periodically, such as for new personnel coming on to the Project as needed.

MM-CUL-3 The Contractor shall provide the Consultant with a schedule of initial potential ground-disturbing activities. A minimum of 48 hours will be provided to the Consultant of commencement of any initial ground-disturbing activities such as vegetation grubbing or clearing, grading, trenching, or mass excavation.

A monitor shall be present on-site at the commencement of ground-disturbing activities related to the Project. The monitor, in consultation with the Qualified Archaeologist, shall observe initial ground-disturbing activities and, as they proceed, adjust the number of monitors as needed to provide adequate observation and oversight. All monitors will have stop-work authority to allow for recordation and evaluation of finds during construction. The monitor will maintain a daily record of observations to serve as an ongoing reference resource and to provide a resource for final reporting upon completion of the Project.

The Consultant and the Lead Contractor and subcontractors shall maintain a line of communication regarding schedule and activity such that the monitor is aware of all ground-disturbing activities in advance to provide appropriate oversight.

MM-CUL-4 In the event of the discovery of previously unidentified archaeological materials, the Contractor shall immediately cease all work activities within an area of no less than 100 feet of the discovery. After cessation of excavation, the Contractor shall immediately contact the County. Except in the case of cultural items that fall within the scope of the Native American Grave Protection and Repatriation Act (NAGPRA), California Health and Safety Code 7050.5, CEQA 15064.5, or California Public Resources Code 5097.98, the discovery of any cultural resource within the Project area shall not be grounds for a Project-wide "stop work" notice or otherwise interfere with the Project's continuation except as set forth in this paragraph. Additionally, all consulting Native American Tribal groups that requested notification of any unanticipated discovery of archaeological resources on the Project shall be notified appropriately. If a discovery results in the identification of cultural items that fall within the scope of NAGPRA, the Contractor shall immediately cease all work activities within an area of no less than 100 feet (30 meters) of the discovery. In the event of an unanticipated discovery of archaeological materials during construction, the Applicant-retained Qualified Professional Archaeologist shall be contacted to evaluate the significance of the materials prior to resuming any construction-related activities near the find. If the Qualified Archaeologist determines that the discovery constitutes a significant resource under CEQA and it cannot be avoided, the Applicant shall implement an archaeological data recovery program.

MM-CUL-5 At the completion of all ground-disturbing activities, the Consultant shall prepare an Archaeological Resources Monitoring Report summarizing all monitoring efforts and observations, as performed, and any and all prehistoric or historic archaeological finds as well as providing follow-up reports of any finds to the SCCIC, as required.

In the event unanticipated, buried prehistoric archaeological resources (lithic material, faunal, pottery, etc.) or historical archaeological resources (ceramics, building materials, glassware, etc.) are unearthed during construction or any ground disturbing activities within the Project area, additional resource treatments would become necessary. Once a potential resource has been identified, all work within 100 feet must be halted until the find can be assessed by a qualified archaeologist.

Therefore, implementation of MM-CUL-1 through MM-CUL-5 would reduce impacts associated with Tribal Cultural Resources to less than significant.

FINDINGS

- 1) The Board finds, based on the Initial Study, the Final EIR and the whole of the record, that the Proposed Project would result in less than significant impacts relating to Tribal Cultural Resource issues discussed above with incorporation of the above mitigation measures.

6.8 UTILITIES AND SERVICE SYSTEMS

New facilities would be constructed for the purpose of water, wastewater treatment, stormwater drainage, electric power, natural gas, and telecommunications. Expansion of these facilities would utilize existing infrastructure no limited to existing irrigation canals and power/telephone lines which would minimize damage to existing facilities. Therefore, no significant environmental effects are expected to result. Impacts would be less than significant.

When drought conditions exist within the IID water service area, as has been the case for the past decade or so, the water supply available to meet agricultural and nonagricultural water demands remains the same as normal year water supply because IID continues to rely on its entitlement for Colorado River water. Due to the priority of water rights and other agreements, drought affecting Colorado River water supplies causes shortages for Arizona, Nevada, and Mexico, but not California or IID. Therefore, the likelihood that IID will not receive its annual 3.1 million AF apportionment under the QSA obligations of Colorado River water is low due to the high priority of the IID entitlement relative to other Colorado River contractors (see Appendix J for further details on the IID's water rights). If such reductions were to come into effect within the life of the 30-year Project, a significant impact would occur. If such reductions do occur, Mitigation Measure (MM) UTIL-1 would be implemented, requiring the Applicant to work with IID to ensure any reduction in water availability during the life of the Project can be managed. Therefore, with implementation of MM UTIL-1, impacts would remain less than significant.

It is estimated that 90 percent of filter cakes would fall below California thresholds for soluble threshold limit concentration (STLC) and total threshold limit concentration (TTLIC). The remaining 10 percent, or approximately 4,178 cy, would exceed these standards and would be trucked to the Copper Mountain Landfill located at 34853 County 12th Street in Wellton, Arizona, approximately 96 miles southeast of the Project site. This landfill has a design capacity for 2.5 million megagrams. Although the remaining landfill capacity is not available, the amount of solid waste sent to this facility would be minimal. If the filter cakes were to exceed Arizona's toxicity standards which is not expected to occur, the Applicant will arrange for hazardous materials to be trucked to Idaho or Nevada.

As mentioned in Chapter 2: Project Description, approximately every three years the Project facilities will be shut down for about three weeks to complete a facility cleaning. This process would remove mineral scale from Project plant piping. The scale removed during this process has the potential to exceed STLC and TTLIC standards for Arizona, in which case solid waste would be required to be trucked to Nevada. However, this is an extremely rare occurrence, and in the past 10 years only two truckloads have needed to be transported to Nevada. The implementation of the Proposed Project would not increase the amount of solid waste needing to go out of state. Therefore, solid waste facilities have adequate permitted capacity for solid waste materials generated by the Project. Impacts would be less than significant.

Disposal of solid/hazardous wastes generated during Project construction and operations would be in compliance with local federal, State, and County regulations and disposed of at authorized facilities. Therefore, a less than significant impact would occur.

MM-UTIL-1: If the IID does not receive its annual 3.1 maf water apportionment according to the QSA obligations of Colorado River water during the Project's 30-year lifespan, the Applicant shall work with IID to ensure any reduction in water availability can be managed by the Project.

Therefore, implementation of MM-UTIL-1 would reduce impacts associated with Utilities and Service Systems to less than significant.

FINDINGS

- 1) The Board finds, based on the Initial Study, the Final EIR and the whole of the record, that the Proposed Project would result in less than significant impacts relating to Utilities and Service Systems issues discussed above with incorporation of the above mitigation measures.

SECTION 7.0 – SIGNIFICANT AND UNAVOIDABLE IMPACTS

This Section describes the environmental issue areas on which the Proposed Project would have significant and unavoidable impacts. Section 8 discusses the degree to which the Proposed Project Alternatives (including the recommended Proposed Project Alternative) reduce or increase these significant and unavoidable impacts.

The potentially adverse effects of the Proposed Project are identified in the Final EIR. After implementation of the mitigation measures, the Proposed Project will not have a significant and unavoidable impact on any environmental resource areas

7.1 GROWTH INDUCING IMPACTS

Pursuant to Section 15126.2 of the CEQA Guidelines: an EIR must address whether a project will directly or indirectly foster growth as follows:

[An EIR shall] discuss the ways in which the Proposed Project could foster economic or population growth, or the construction of additional housing, either directly or indirectly, in the surrounding environment. Included in this are projects which would remove obstacles to population growth (a major expansion of wastewater treatment plant, might, for example, allow for more construction in service areas). Increases in the population may further tax existing community service facilities so consideration must be given to this impact. Also, discuss the characteristics of some projects, which may encourage and facilitate other activities that could significantly affect the environment, either individually or cumulatively. It must not be assumed that growth in any area is necessarily beneficial, detrimental, or of little significance to the environment.

As discussed below, this analysis evaluates whether the Proposed Project would directly or indirectly induce economic, population, or housing growth in the surrounding environment.

Direct Growth-inducing Impacts in the Surrounding Environment

The Project involves construction and operation of a plant to extract lithium hydroxide, silica, bulk sulfide, and other commercially viable substances from geothermal brine. The Project would not include the construction of any housing and would not involve the development of any new public roadways, new water systems, or sewer. Therefore, the Project would not further facilitate additional development into outlying areas.

Indirect Growth-inducing Impacts in the Surrounding Environment

Indirect growth-inducing impacts typically include substantial new, permanent employment opportunities that can result from a project. The Project is located within the unincorporated area of Imperial County, and it does not involve the development of permanent residences that would directly result in population growth in the area. Approximately 200 to 250 workers are anticipated to be required at peak periods of Project construction. Beginning with startup operations, the Project is expected to be operated by a total staff of approximately 112 full-time, onsite employees. The unemployment rate in Imperial County as of December 2020 was 17.7 percent with 11,900 people unemployed (EDD 2021). The Applicant expects to utilize available workers from the local and regional area. Based on the unemployment rate and the

availability of the local workforce, the Project would not have a growth-inducing effect related to workers moving into the area and increasing the demand for housing and services.

FINDINGS

- 1) The Board finds, based on the Initial Study, the Final EIR and the whole of the record, that the Proposed Project would result in no unavoidable impacts with mitigation relating to growth-inducing impacts.

SECTION 8.0 – FINDINGS REGARDING PROJECT ALTERNATIVES

The Final EIR discussed several alternatives to the Proposed Project in order to present a reasonable range of options. The alternatives evaluated include:

- No Project Alternative
- Reduced Project Size Alternative

8.1 NO PROJECT ALTERNATIVE

Section 15126.6(e) of the CEQA Guidelines requires analysis of a No Project alternative that (1) discusses existing site conditions at the time the NOP is prepared or the Draft EIR is commenced, and (2) analyzes what is reasonably expected to occur in the foreseeable future based on current plans if the Proposed Project were not approved. Potential effects for the No Project Alternative were compared to the areas of potentially significant effects prior to mitigation that could be a result of the Proposed Project.

FINDINGS

- 1) While the No Project Alternative would not result in any significant environmental impacts, the Board finds this alternative to be infeasible and less desirable than the Proposed Project. The Board rejects this alternative, because the No Project Alternative would not contribute to the attainment of any of the Project Objectives. It would not provide a sustainable domestic source of lithium, a designated critical material identified by the U.S. Department of Energy, (2) produce 49.9MW (net) of geothermal green energy from within CTR's geothermal lease area.; or (3) minimize the distance between the geothermal power plant and lithium extraction plant for production efficiency and to reduce the extent of pipeline required to convey brine and steam to and from the geothermal power facility to the mineral extraction plant, therefore minimizing the overall industrial footprint of the combined power and mineral operations. Furthermore, the No Project Alternative may result in future projects other than and potentially with greater impacts than the Proposed Project.

8.2 REDUCED PROJECT SIZE ALTERNATIVE

The possibility of reducing the overall size of the Project was considered; however, this alternative was deemed infeasible. The Project has been designed using three different components crafted by three different companies, each having very specific parameters. Considering the components currently on market and available for sale to the Applicant, the current scale of the Project is the smallest system possible to execute Project objectives. The various vessels associated with the Project all have to match each other to ensure proper function of the facility and to uphold safety standards. Engineers have not been able to identify a feasible way to scale the Project down. As a result, the reduced Project alternative was considered but rejected from further review.

FINDINGS

- 1) While the Reduced Project Size Alternative would not result in any significant and unavoidable environmental impacts, the Board finds this alternative to be infeasible and less desirable than

the Proposed Project. The Board rejects this alternative, because it would not achieve the any Project Objectives.

8.3 CONCLUSION

Of the alternatives analyzed in the EIR, the No Project Alternative is considered the environmentally superior alternative as it would avoid or reduce most of the potential impacts associated with construction and operation of the Proposed Project.

CEQA Guidelines requires that if the No Project Alternative is determined to be the environmentally superior alternative, an environmentally superior alternative must also be identified among the remaining alternatives. As such, the No Project Alternative would result in the fewest environmental impacts as compared to the Proposed Project, and would not achieve any of the objectives of the Proposed Project.

SECTION 9.0 – FINDINGS ON MITIGATION MONITORING AND REPORTING PLAN

9.1 INTRODUCTION

In accordance with CEQA, the Imperial County is acting as the Lead Agency for this Proposed Project. Pursuant to CEQA and *CEQA Guidelines* Sections 15091(d) and 15097, the Lead Agency must adopt a program for monitoring or reporting mitigation measures identified in the EIR, if the Lead Agency makes findings of significant impacts during the process of certifying the EIR.¹ The primary purpose of the MMRP is to ensure that the mitigation measures identified in the EIR are implemented thereby reducing or avoiding identified environmental impacts.

9.2 PURPOSE OF MITIGATION MONITORING AND REPORTING PROGRAM

The purpose of the MMRP is to ensure the effective implementation of the mitigation measures imposed by the Imperial County for the Proposed Project. In addition, this MMRP provides a means for identifying corrective actions, if necessary, before irreversible environmental damage occurs. This plan includes:

- A brief description of each impact expected to occur from the Proposed Project;
- Mitigation measure(s) associated with each impact;
- Responsible monitoring party;
- Responsible implementing party;
- Implementation phase (i.e., pre-construction, construction, prior to occupancy, post occupancy); and
- Complete date/initials of reviewing party.

As the Lead Agency for the Proposed Project, the Imperial County will be required to comply with all applicable plans, permits, and conditions of approval for the Proposed Project, in addition to implementation of this MMRP. The mitigation measures presented in Table 1 will be implemented as indicated to avoid or minimize environmental impacts of the Proposed Project.

¹ CEQA. Public Resources Code (PRC), Section 21081.6. 2007.

Mitigation Measure	Implementation Time Frame	Monitoring Method	Implementation Responsibility	Verification Responsibility
Air Quality				
<p>Mitigation Measure AQ-1</p> <p>Prior to commencing construction, the Project proponent shall submit a Dust Control Plan to the Imperial County Air Pollution Control District (ICAPCD) for approval identifying all sources of PM10 and PM2.5 emissions and associated mitigation measures during the construction and operational phases of the Project. The Project proponent shall submit a Construction Notification Form to the ICAPCD ten days prior to the commencement of any earthmoving activity. This plan would provide a detailed list of control measures to reduce fugitive emissions from construction and operational activities, including but not limited to watering of unpaved roads, vehicle speed limits, windbreaks, transport container covers, and cleaning and sweeping procedures. The Dust Control Plan submitted to the ICAPCD shall meet all applicable requirements for control of fugitive dust emissions, including the following measures designed to achieve the no greater than 20-percent opacity performance standard for dust control:</p> <ul style="list-style-type: none"> • All disturbed areas, including bulk material storage, that is not being actively used shall be effectively stabilized; and visible emissions shall be limited to no greater than 20 percent opacity for dust emissions by using water, chemical stabilizers, dust suppressants, tarps, or other suitable material, such as vegetative groundcover. Bulk material is defined as earth, rock, silt, sediment, and other organic and/or inorganic material consisting of or containing PM with 5 percent or greater silt content. • All on- and off-site unpaved roadway segments being used for 50 or more average vehicle trips per day shall be effectively stabilized, and visible emissions shall be limited to no greater than 20 percent opacity for dust emissions by the use of restricting vehicle access, paving, chemical stabilizers, dust suppressants, and/or watering. 	<p>Prior to Construction</p>	<p>Develop Dust Control Plan</p>	<p>Applicant</p>	<p>Department of Planning and Development Services and ICAPCD</p>

<ul style="list-style-type: none"> • All unpaved traffic areas one acre or more in size with 75 or more average vehicle trips per day shall be effectively stabilized, and visible emissions shall be limited to no greater than 20 percent opacity for dust emissions by paving, chemical stabilizers, dust suppressants, and/or watering. • All track-out or carry-out, which includes bulk materials that adhere to the exterior surfaces of motor vehicles and/or equipment (including tires) that may then fall onto the pavement on paved public roads, shall be cleaned at the end of each workday or immediately when mud or dirt extends a cumulative distance of 50 linear feet or more onto a paved road in an urban area. • Movement of bulk material handling or transfer shall be stabilized prior to handling or at points of transfer with application of sufficient water or chemical stabilizers, or by sheltering or enclosing the operation and transfer line except, where such material or activity is exempted from stabilization by the rules of ICAPCD. • Any temporary unpaved road shall be effectively stabilized and visible emissions shall be limited to no greater than 20 percent opacity for dust emission by paving, chemical stabilizers, dust suppressants and/or watering. • Fugitive dust generation during construction would be minimized by watering as needed to meet Imperial County standards for fugitive dust control. To further reduce fugitive dust emissions, vehicle traffic on unpaved roads would be kept below 15 miles per hour. • During grading, the Project would be watering actively disturbed on-site areas at least three times a day as necessary to reduce fugitive dust emissions. • Access to the site would be via Highway 111, McDonald Road, and Davis Road. All workers, vendors and haul trucks would be required to utilize these roadways. • An agreement between County of Imperial Public Works and the applicant would be established requiring the applicant to improve a two-mile section of the unpaved Davis Road adjacent 				
---	--	--	--	--

<p>to the site by installing a 12- to 18-inch- thick engineered Class II base section. In addition, at the request of the County, the applicant would utilize the improved section during construction and would wet the site continuously during construction activities. The road would be immediately paved after construction prior to operations of the plant to avoid damaging a new asphalt section.</p> <ul style="list-style-type: none"> • During construction, the Project would be required to maintain daily dust suppression at the two-mile section of Davis Road adjacent to the site using a water truck operating continuously while vehicles are using the road. • The Project would provide wheel shakers at the exit(s) of the construction site to minimize dust being tracked off the Project site and onto the roadways. • Operational on-road trips shall not operate on unpaved dirt roads. 				
<p>Mitigation Measure AQ-2</p> <p>Prior to commencing construction, the Project proponent shall submit and commit to a Combustion Exhaust Emissions Control Program. This plan would provide a detailed list of control measures to minimize exhaust emissions during Project construction, including but not limited to fuel use, engine maintenance, and procedures:</p> <ul style="list-style-type: none"> • The Exhaust Emission Control Plan shall provide a detailed list of control measures to minimize exhaust emissions during Project construction, including but not limited to fuel use, engine maintenance, and procedures. • The construction contractor shall be required to utilize construction equipment using diesel engines less than 50 horsepower with certified NOx emissions rated as Tier 3 or better. All off-road diesel-powered equipment greater than 50 horsepower that is used on-site during construction of the Project shall meet USEPA Tier 4 offroad emission standards and Level 3 diesel particulate filters. 	<p>Prior to Construction</p>	<p>Develop Combustion Exhaust Emissions Control Program</p>	<p>Applicant</p>	<p>Department of Planning and Development Services and ICAPCD</p>

<ul style="list-style-type: none"> • When commercially available, fossil fueled equipment shall be replaced with electrically driven equivalents (provided they are not run via a portable generator set). • Idling times shall be minimized either by shutting equipment off when not in use or reducing the maximum idling time to five minutes (as required by the California Airborne Toxics Control Measure, Title 13, Section 2485 of California Code of Regulations). Clear signage shall be provided for construction workers at all access points. • All construction equipment shall be maintained and properly tuned in accordance with manufacturer's specifications. All equipment shall be checked by a certified mechanic and determined to be running in proper condition prior to operation. • Where access to alternative sources of power are available, portable diesel engines shall be prohibited. Haul truck shall be 2010 model year trucks or newer (a gross vehicle weight rating of at least 14,001 pounds), or best commercially available equipment, that meet the California Air Resources Board 2010 engine emissions standards at 0.01 g/horsepower-hour of particulate matter and 0.20 g/horsepower-hour of NOx emissions or newer, cleaner trucks. • The volatile organic compounds (VOC) architectural coating limits specify that the use paints and solvents with a VOC content of 100 grams per liter or less for interior and 150 grams per liter or less for exterior surfaces shall be required. 				
Biological Resources				
<p>Mitigation Measure BIO-1. Designated Biologist: The Applicant shall retain the services of a Qualified Biologist. The Qualified Biologist will be employed during construction and all vegetation removal and ground-disturbing activities. The Qualified Biologist will document compliance with the projects mitigation measures and permits. The Qualified Biologist will have the authority to halt any Project activities that are in violation of the terms and conditions of the Project biological opinion(s) or incidental take permit, as appropriate.</p>	<p>During construction</p>	<p>The Qualified Biologist will Document Compliance</p>	<p>Applicant</p>	<p>Department of Planning and Development Services</p>

<p>Mitigation Measure BIO-2: Biological Monitors: Biological monitor(s) will be employed to assist the Designated Biologist in conducting preconstruction surveys and monitoring ground disturbance, grading, construction, decommissioning, and restoration activities. The biological monitor(s) will have sufficient education and field experience to understand resident wildlife species biology. To avoid and minimize effects to biological resources, the biological monitor(s) will assist the Designated Biologist with the following:</p> <ul style="list-style-type: none"> • Conduct inspections for listed species during ground-disturbing construction activities and document that habitat within the construction zone is not occupied by Yuma Ridgway's rail or desert pupfish. • Document compliance with all conservation measures, including but not limited to monitoring for presence of listed species; halting construction activity in the area if an individual listed species is found; and checking the staking/flagging of all disturbance areas to be sure that they are intact and that all construction activities are being kept within the staked/flagged limits. If a Yuma Ridgway's rail or desert pupfish is found within a work area, the Biological Monitor(s) will immediately notify the Designated Biologist, who will determine measures to be taken to ensure that the individual is not harmed, such as temporarily halting construction. 	<p>Prior to start of construction</p>	<p>Conduct Inspections</p>	<p>Applicant</p>	<p>Department of Planning and Development Services</p>
<p>Mitigation Measure BIO-3: Worker Environmental Awareness Program Training: A Worker Environmental Awareness Program will be implemented for construction crews prior to the commencement of Project activities. Training materials and briefings will include, but not be limited to, discussion of the federal and State statutes protecting threatened and endangered species, the consequence of noncompliance with these statutes, identification of values of wildlife and natural plant communities, hazardous substance spill prevention and containment measures, and review of all required conservation measures.</p>	<p>Prior to start of construction</p>	<p>Worker Environmental Awareness Program</p>	<p>Applicant</p>	<p>Department of Planning and Development Services</p>

<p>Mitigation Measure BIO-4: Flagging of Work Area Limits: All areas to be disturbed by the Project will be flagged prior to construction. All disturbance will be confined to these flagged areas, and all employees will be instructed that their activities must be confined to locations within the flagged areas.</p>	<p style="text-align: center;">Prior to Construction</p>	<p style="text-align: center;">Flagging Project Site</p>	<p style="text-align: center;">Applicant</p>	<p style="text-align: center;">Department of Planning and Development Services</p>
<p>Mitigation Measure BIO-5: Power Wash Equipment: All equipment used during construction of the Project will be required to be power washed prior to arrival at the Project site to prevent the transportation and establishment of noxious weeds in the area.</p>	<p style="text-align: center;">Prior to Construction</p>	<p style="text-align: center;">Power Wash Equipment</p>	<p style="text-align: center;">Applicant</p>	<p style="text-align: center;">Department of Planning and Development Services</p>

<p>Mitigation Measure BIO-6: Sediment and Erosion Control: The Project proponent will acquire the appropriate Clean Water Act regulatory permits, prepare a Stormwater Pollution and Prevention Plan (SWPPP), and implement BMPs prior to construction and site restoration. The SWPPP will identify specific actions and BMPs relating to the prevention of stormwater pollution from Project-related construction sources by identifying a practical sequence for site restoration, BMP implementation, contingency measures, responsible parties, and agency contacts. The SWPPP reflects localized surface hydrological conditions and will be reviewed by the USFWS prior to commencement of work. A SWPPP will be a condition of the contract with each contractor selected to build and decommission the Project. The SWPPP(s) at a minimum will incorporate soil stabilization and erosion control practices (e.g., hydroseeding, erosion control blankets, mulching), dewatering and/or flow diversion practices, sediment control practices (temporary sediment basins, fiber rolls), temporary and post-construction onsite and offsite runoff controls, and special considerations and BMPs for water crossings, wetlands, and drainages. The SWPPP will be prepared by a qualified SWPPP practitioner with BMPs selected to achieve maximum pollutant removal and that represent the best available technology that is economically achievable. Emphasis for BMPs is placed on controlling discharges of oxygen-depleting substances, floating material, oil and grease, acidic or caustic substances or compounds, and turbidity. Performance and effectiveness of these BMPs are determined either by visual means where applicable (i.e., observation of above-normal sediment release), or by actual water sampling in cases where verification of contaminant reduction or elimination (inadvertent petroleum release) is required to determine adequacy of the measure.</p>	<p>Prior to Construction</p>	<p>Develop SWPPP</p>	<p>Applicant</p>	<p>Department of Planning and Development Services</p>
---	------------------------------	----------------------	------------------	--

<p>Mitigation Measure BIO-7: Solid Waste Management: Solid waste will be properly contained in designated collection areas on site and regularly disposed of.</p>	<p>During Construction</p>	<p>Solid Waste Management</p>	<p>Applicant</p>	<p>Department of Planning and Development Services</p>
<p>Mitigation Measure BIO-8: A desert pupfish protection and relocation plan will be prepared prior to construction activities in any suitable habitat for desert pupfish. Its implementation will ensure construction in any suitable habitat for desert pupfish will be conducted with minimal effects on desert pupfish. This plan will be submitted to the Service and the CDFW for review and approval prior to any ground-disturbing activities that have a water component. This plan will provide:</p> <ol style="list-style-type: none"> 1. Protocols for pre-construction or pre-maintenance surveys to assess species presence and spawning within or immediately adjacent to work areas (e.g., in, or at the end of, the irrigation drains/drain canals, open water areas, and around the open water margins). The protocols will also outline the qualifications required for biologists to conduct desert pupfish survey, capture, and relocation activities and the process for biologist approval. 2. Capture (e.g., trapping in the irrigation drains for construction and maintenance; or trapping, dip netting, and seining in open water areas that are drained or if the water level is dropped) and transport methods to minimize handling and stress as well as exposure to heat, low dissolved oxygen (DO), and crowding. 3. Identification of locations for release of captured desert pupfish. 	<p>Prior to Construction</p>	<p>Desert Pupfish Protection and Relocation Plan</p>	<p>Applicant</p>	<p>Department of Planning and Development Services</p>

<p>4. Timing windows when construction or maintenance in open water areas and in the irrigation drain mouths/canals may be conducted with minimal effects on desert pupfish spawning.</p> <p>5. Adaptive management procedures that include assessment of mitigation measure effectiveness, development of revised measures to improve effectiveness, and similar assessment of revised measures to verify effectiveness. Yuma Ridgway's Rail Measures, Black Rail, and Other Marsh Bird Measures.</p>				
<p>Mitigation Measure BIO-9. Construction Timing: Construction activities within habitat for Yuma Ridgway's rail (i.e., cattail marsh) will be scheduled to avoid the nesting and molting flightless season (i.e., February 15 – September 15). Pile driving activities adjacent to Yuma Ridgway's rail habitat will avoid Yuma Ridgway's rail nesting season.</p>	<p>During Construction</p>	<p>Construction Timing</p>	<p>Applicant</p>	<p>Department of Planning and Development Services</p>
<p>Mitigation Measure BIO-10: Pre-Construction Surveys and Construction Monitoring for Yuma Ridgway's Rail and Black Rail: Pre-construction surveys for Yuma Ridgway's rail and black rail and construction monitoring will be conducted within all Project development areas within suitable habitat and a 500-foot buffer from suitable habitat. In the event that Yuma Ridgway's rail(s) or black rail(s) are detected within the work area (the area of active equipment use), all construction activities in the area will halt and the USFWS and CDFW will be notified no later than noon of the next business day. Project activities in the area may not proceed until the birds have left the work area. The USFWS and CDFW will also be notified if any Yuma Ridgway's rail are detected within 500 feet of the construction area. Project activities may proceed with caution in this buffer area under the direction of the Designated Biologist.</p>	<p>Prior to Construction</p>	<p>Pre-Construction Surveys and Construction Monitoring</p>	<p>Applicant</p>	<p>Department of Planning and Development Services</p>

<p>Mitigation Measure BIO-11: Reduced Vehicle Speed Adjacent to Rail Habitat: Vehicle speeds will be reduced to 15 miles per hour (mph) on access roads adjacent to Yuma Ridgway's rail habitat. These areas will be appropriately signed to identify the speed limit.</p>	<p>During Construction</p>	<p>Reduced Vehicle Speeds</p>	<p>Applicant</p>	<p>Department of Planning and Development Services</p>
<p>Mitigation Measure BIO-12: Noise Attenuation: The following noise attenuation measures will be implemented to minimize noise impacts on Yuma Ridgway's rail during the nesting season:</p> <ul style="list-style-type: none"> • At least 30 days prior to activities within 500 feet of Yuma Ridgway's rail habitat, the Applicant will conduct a noise study to evaluate the maximum predicted noise level within rail habitat. • If the maximum predicted noise is less than 60 A-weighted decibel scale (dBA) equivalent continuous sound level (Leq), no additional measures are required. • If the maximum predicted noise level exceeds 60 dBA Leq in rail habitat, noise attenuation measures such as noise walls or hay bales will be installed between the noise source and the suitable habitat. Noise monitors will be installed at the edge of the nearest Yuma Ridgway's rail habitat to assess the noise levels and verify that attenuation measures are successful. If necessary, additional noise reduction measures will be implemented to reduce the noise level to below 60 dBA at the edge of occupied habitat. 	<p>Prior to Construction</p>	<p>Noise Attenuation</p>	<p>Applicant</p>	<p>Department of Planning and Development Services</p>

<p>Mitigation Measure BIO-13. Habitat Conservation: To offset the loss of Yuma Ridgway's rail habitat, the Project proponent will preserve, create, or enhance habitat near the Project site for Yuma Ridgway's rail. The Project proponent will provide funding for construction and long-term management of the created habitat and will provide financial assurance for the construction of the wetland habitat in the form of performance bonds, escrow accounts, casualty insurance, or letters of credit. The performance bond, escrow account, casualty insurance, or letter of credit shall be of sufficient value to cover all construction, monitoring and reporting costs until the habitat is fully established. The financial assurance shall be in place prior to ground disturbance. Long-term management funding will be provided sufficient to cover, at a minimum, the management costs related to procurement of water from IID, weed control, levee and control structure maintenance, and control structure repair or replacement. The Applicant will prepare a detailed Habitat Enhancement Mitigation and Mitigation Monitoring Plan for review and approval by the USFWS, Corps, and CDFW prior to Project construction. Habitat creation activities will be conducted outside of the bird breeding season (February 15 – September 15) to avoid potential noise impacts on Yuma Ridgway's rail.</p>	<p>After Construction</p>	<p>Habitat Conservation</p>	<p>Applicant</p>	<p>Department of Planning and Development Services</p>
<p>Mitigation Measure BIO-14: Burrowing Owl. A pre-construction survey will be conducted for burrowing owls. The survey will be conducted during peak activity period (one hour before to two hours after sunrise or two hours before to one hour after sunset) no more than 14 days prior to the start of construction and within 500 feet surrounding the construction area. If owls are located during the pre-construction survey between February 1 and August 31 (nesting season), a buffer area will be established according to the guidelines in the 2012 Staff Report. A modified buffer reduction may be used with CDFW concurrence. If burrowing owls are located during the nonbreeding season, owls may be passively relocated in coordination with CDFW, by a qualified biologist according to the procedures outlined in the 2012 Staff Report on Burrowing Owl Mitigation. If burrowing owls are found on site during pre-construction surveys, the Project proponent shall contact CDFW to prepare a plan of action for buffers or passive relocation.</p>	<p>Prior To Construction</p>	<p>Burrowing Owl Surveys</p>	<p>Applicant</p>	<p>Department of Planning and Development Services</p>

<p>Mitigation Measure BIO-15: Lighting. Except as necessary for safety or security purposes, no lighting shall be allowed to impact wetland or riparian habitats.</p>	<p style="text-align: center;">During Construction</p>	<p style="text-align: center;">Lighting</p>	<p style="text-align: center;">Applicant</p>	<p style="text-align: center;">Department of Planning and Development Services</p>
<p>Mitigation Measure BIO-16: Nesting Bird Plan. Construction activities shall take place outside the general bird breeding season (February 15 to September 30), to the maximum extent practicable. Regardless of the time of year, prior to ground-disturbing activities, a qualified biologist shall conduct a nesting bird survey to comply with CDFW Code 3503 and 3503.5 and the Migratory Bird Treaty Act. The survey shall occur no more than three (3) days prior to initiation of proposed Project activities and shall include any potential habitat (including trees, shrubs, the ground, or nearby structures). Any occupied passerine and/or raptor nests occurring within the proposed Project area or the Project's zone of influence (generally 100-300 feet) shall be delineated and a no-disturbance buffer zone (as determined by the avian biologist) shall be established and maintained during Project activities. Additional follow-up surveys may be required by the resource agencies and Imperial County. The buffer zone shall be sufficient in size to prevent impacts to the nest. A qualified biologist shall monitor active nests to determine whether construction activities are disturbing nesting birds or nestlings. If the qualified biologist determines that construction activities pose a disturbance to nesting, construction work shall be stopped in the area of the nest and the no disturbance buffer shall be expanded. Once nesting has ceased and the fledglings are no longer using the nest area as confirmed by a qualified biologist, the buffer may be removed. A nesting bird survey report shall be provided to Imperial County and CDFW. If an active nest is encountered</p>	<p style="text-align: center;">Prior to Grading or Construction</p>	<p style="text-align: center;">Nesting Bird Plan</p>	<p style="text-align: center;">Applicant</p>	<p style="text-align: center;">Department of Planning and Development Services</p>

<p>during construction, construction shall stop immediately until a qualified biologist can determine the status of the nest and when work can proceed without risking violation to state or federal laws..</p>				
<p>Mitigation Measure BIO-18: Excavation Areas. Any open trench or excavated area shall be securely covered anytime Project activities within the excavated/trenched rea have ceased. The designated biologist shall oversee the covering of all excavated, steep-walled holes or trenches by placing plywood or other barrier materials such that animals are unable to enter and become entrapped. The use of temporary fencing around the perimeter or trenches or holes may be an acceptable minimization measure, if deemed appropriate by the biological monitor. Before holes or trenches are filled, the Biological Monitors shall thoroughly inspect the areas for trapped animals. If any worker discovers that any animal has become trapped, they shall halt Project-related activities and notify the biological monitor immediately.</p>	<p>During Construction</p>	<p>Excavation Area</p>	<p>Applicant</p>	<p>Department of Planning and Development Services</p>

<p>Mitigation Measure BIO-19: Wetland and Riparian Area Restoration/Compensation. The Project will provide restoration/compensation for all unavoidable impacts on areas under the jurisdiction of USACE, RWQCB, and CDFW. Impacts on jurisdictional areas will be avoided to the extent feasible. Where avoidance of jurisdictional areas is not feasible, the Project applicant will provide the necessary mitigation required as part of wetland permitting, by creation, restoration, or preservation of suitable jurisdictional or equivalent habitat along with adequate buffers to protect the function and values of jurisdictional areas. The Mitigation ratio will be 1:1 or as approved by the permitting agencies. The proposed Mitigation Plan area is located in Section 35 approximately 2 miles north of the HKP1 and HKL1 Projects at the corner of Beach Road and Access Road. The proposed mitigation area will total 159.61 acres; approximately 152 acres will be created native wetland/open water habitat and approximately 7 acres will be enhanced native upland habitat. Proposed native wetland communities include Willow Scrub Shrub, Cattail Bullrush Marsh and Desert Riparian Woodlands. Proposed upland communities include Sonoran Desert Scrub/Alkali Sink.</p>	<p>During Construction</p>	<p>Wetland and Riparian Area Restoration/Compensation</p>	<p>Applicant</p>	<p>Department of Planning and Development Services</p>
<p>Cultural Resources</p>				
<p>Mitigation Measure CUL-1: The Applicant shall retain the services of a Qualified Archaeologist, meeting the Secretary of the Interior Standards or County standards, whichever is greater, and require that all initial ground-disturbing work be monitored by archaeological specialist (monitor) proficient in artifact and feature identification in monitoring contexts. The Consultant (Qualified Archaeologist and/or monitor) shall be present at the Project construction phase kickoff meeting.</p>	<p>During Grading or construction</p>	<p>Monitoring during construction</p>	<p>Applicant/Construction contractor</p>	<p>Department of Planning and Development Services</p>
<p>Mitigation Measure CUL-2: Prior to commencing construction activities and thus prior to any ground disturbance in the Proposed Project site, the Consultant shall conduct initial Worker Environmental Awareness Program (WEAP) training to all construction personnel, including supervisors, present at the outset of the Project construction work phase, for which the Lead Contractor and all subcontractors shall make their personnel available. A tribal monitor shall be provided an opportunity to attend the preconstruction briefing, if requested. This WEAP training will educate construction personnel on how to work with the monitor(s) to identify and minimize impacts to archaeological resources and maintain environmental compliance. This WEAP</p>	<p>Prior to Commencing Construction Activities</p>	<p>Worker Environmental Awareness Program</p>	<p>Applicant</p>	<p>Department of Planning and Development Services</p>

<p>training will educate the monitor(s) of construction procedures to avoid construction-related injury or harm. This training may be performed periodically, such as for new personnel coming on to the Project as needed.</p>				
<p>Mitigation Measure CUL-3: The Contractor shall provide the Consultant with a schedule of initial potential ground-disturbing activities. A minimum of 48 hours will be provided to the Consultant of commencement of any initial ground-disturbing activities such as vegetation grubbing or clearing, grading, trenching, or mass excavation.</p> <p>A monitor shall be present on-site at the commencement of ground-disturbing activities related to the Project. The monitor, in consultation with the Qualified Archaeologist, shall observe initial ground-disturbing activities and, as they proceed, adjust the number of monitors as needed to provide adequate observation and oversight. All monitors will have stop-work authority to allow for recordation and evaluation of finds during construction. The monitor will maintain a daily record of observations to serve as an ongoing reference resource and to provide a resource for final reporting upon completion of the Project.</p> <p>The Consultant and the Lead Contractor and subcontractors shall maintain a line of communication regarding schedule and activity such that the monitor is aware of all ground-disturbing activities in advance to provide appropriate oversight.</p>	<p>Prior to Construction</p>	<p>Project Scheduling</p>	<p>Applicant</p>	<p>Department of Planning and Development Services</p>
<p>Mitigation Measure: CUL-4: In the event of the discovery of previously unidentified archaeological materials, the Contractor shall immediately cease all work activities within an area of no less than 100 feet of the discovery. After cessation of excavation, the Contractor shall immediately contact the County. Except in the case of cultural items that fall within the scope of the Native American Grave Protection and Repatriation Act (NAGPRA), California Health and Safety Code 7050.5, CEQA 15064.5, or California Public Resources Code 5097.98, the discovery of any cultural resource within the Project area shall not be grounds for a Project-wide "stop work" notice or otherwise interfere with the Project's continuation except as set forth in this paragraph. Additionally, all consulting Native American Tribal groups that requested notification of any unanticipated discovery of archaeological resources on the Project shall be notified appropriately. If a discovery results in the identification of cultural items that fall within the scope of NAGPRA, the Contractor shall immediately cease all work activities within an area of no less</p>	<p>During Construction</p>	<p>Identified Archaeological Materials Protocol</p>	<p>Applicant</p>	<p>Department of Planning and Development Services</p>

<p>than 100 feet (30 meters) of the discovery. In the event of an unanticipated discovery of archaeological materials during construction, the Applicant-retained Qualified Professional Archaeologist shall be contacted to evaluate the significance of the materials prior to resuming any construction-related activities near the find. If the Qualified Archaeologist determines that the discovery constitutes a significant resource under CEQA and it cannot be avoided, the Applicant shall implement an archaeological data recovery program.</p>				
<p>Mitigation Measure: CUL-5: At the completion of all ground-disturbing activities, the Consultant shall prepare an Archaeological Resources Monitoring Report summarizing all monitoring efforts and observations, as performed, and any and all prehistoric or historic archaeological finds as well as providing follow-up reports of any finds to the SCCIC, as required.</p> <p>In the event unanticipated, buried prehistoric archaeological resources (lithic material, faunal, pottery, etc.) or historical archaeological resources (ceramics, building materials, glassware, etc.) are unearthed during construction or any ground disturbing activities within the Project area, additional resource treatments would become necessary. Once a potential resource has been identified, all work within 100 feet must be halted until the find can be assessed by a qualified archaeologist.</p>	<p>After Ground Disturbing Activities</p>	<p>Archaeological Resources Monitoring Report</p>	<p>Applicant</p>	<p>Department of Planning and Development Services</p>
Geology and Soils				
<p>Mitigation Measure GEO-1: A complete geotechnical engineering investigation shall be completed, with a Final Geotechnical Report to be prepared prior to submittal of a grading permit. The Final Geotechnical Report shall be prepared by a qualified consultant and be submitted to the County for review and approval. The investigation will include soil test borings; specific and detailed recommendations; soil and sediment analysis; detailed analysis and design standards; geotechnical design criteria; and detailed design recommendations.</p>	<p>Prior to Construction</p>	<p>Final Geotechnical Report</p>	<p>Applicant</p>	<p>Department of Planning and Development Services</p>
<p>Mitigation Measure GEO-2: All grading operations and construction shall be conducted in conformance with the recommendations included in the Geohazard Evaluation Report prepared on August 17, 2022, and Final Geotechnical Report on the Project site. Design, grading, and construction shall be performed in accordance with the recommendations of the project geotechnical consultant and corrosion engineer, subject to review by the County, prior to commencement of grading</p>	<p>During Grading and Construction</p>	<p>Conformance to Geohazard Evaluation Report</p>	<p>Applicant</p>	<p>Department of Planning and Development Services</p>

activities.				
<p>Mitigation Measure PALEO-1:The Applicant shall retain the services of a Qualified Paleontologist and require that all initial ground-disturbing work be monitored by someone trained in fossil identification in monitoring contexts. The Qualified Paleontologist shall prepare a Paleontological Resource Mitigation Plan to be implemented during ground-disturbing activity for the proposed Project. This program should outline the procedures for paleontological monitoring, including extent and duration; protocols for salvage and preparation of fossils; and the requirements for a final mitigation and monitoring report. The Qualified Paleontologist and a paleontological monitor shall be present at the Project construction-phase kickoff meeting.</p>	During Grading and Excavation	Paleontological Resource Mitigation Plan	Applicant	Department of Planning and Development Services
<p>Mitigation Measure PALEO-2: Prior to commencing construction activities and, thus, prior to any ground disturbance in the Proposed Project site, the Qualified Paleontologist and paleontological monitor shall conduct initial Worker Environmental Awareness Program (WEAP) training to all construction personnel, including supervisors, present at the start of the Project construction work phase, for which the Applicant, or their designated Contractor, and all subcontractors shall make their personnel available. This WEAP training will educate construction personnel on how to work with the monitor(s) to identify and minimize impacts to paleontological resources and maintain environmental compliance, and it shall be performed periodically for new personnel coming on to the Project as needed.</p>	Prior to Construction Activities	Worker Environmental Awareness Program (WEAP)	Applicant	Department of Planning and Development Services
<p>Mitigation Measure PALEO-3: The Applicant, or their designated Contractor, shall provide the Qualified Paleontologist with a schedule of initial potential ground-disturbing activities. A minimum of 48 hours will be provided to the consultant prior to the commencement of any initial ground-disturbing activities, such as vegetation grubbing or clearing, grading, trenching, or mass excavation.</p> <p>As detailed in the schedule provided, a paleontological monitor shall be present on-site at the commencement of ground-disturbing activities related to the Project. The monitor, in consultation with the Qualified Paleontologist, shall observe initial ground-disturbing activities and, as they proceed, make adjustments to the number of monitors as needed to provide adequate observation and oversight. All monitors will have stop-work authority to allow for recordation and evaluation of finds during construction. The monitor will maintain a daily record of</p>	Prior to Construction Activities	Paleontologist Scheduling	Applicant	Department of Planning and Development Services

observations as an ongoing reference resource and to provide a resource for final reporting upon completion of the Project. The Qualified Paleontologist, paleontological monitor, and the Applicant, or their designated Contractor, and subcontractors shall maintain a line of communication regarding schedule and activity such that the monitor is aware of all ground-disturbing activities in advance to provide appropriate oversight.				
Mitigation Measure PALEO-4: If paleontological resources are discovered, construction shall be halted within 50 feet of any paleontological finds and shall not resume until the Qualified Paleontologist can determine the significance of the find and/or the find has been fully investigated, documented, and cleared.	During Construction Activities	Resource Investigation	Applicant	Department of Planning and Development Services
Mitigation Measure PALEO-5: At the completion of all ground-disturbing activities, the Qualified Paleontologist shall prepare a Paleontological Resources Monitoring Report summarizing all monitoring efforts and observations, as performed, and any and all paleontological finds and shall provide follow-up reports of any finds to the preferred paleontological repository, as required.	After Ground Disturbing Activities	Paleontological Resources Monitoring Report	Applicant	Department of Planning and Development Services
Hazards and Hazardous Materials				
Mitigation Measure HAZ-1: To avoid health risks to construction workers, the Applicant shall require the contractor to prepare and implement a site Health and Safety Plan (HSP) if areas containing hazardous materials are to be disturbed. This plan will outline measures that will be employed to protect construction workers and the public from exposure to hazardous materials during construction activities. This plan shall be prepared prior to any ground-disturbing activities and shall be reviewed and approved by the Project Applicant. Workers shall review and sign the site HSP prior to proceeding with the assigned work.	Prior to Construction	Health and Safety Plan	Applicant	Department of Planning and Development Services
Mitigation Measure HAZ-2: For any gen-tie structures or other areas of project ground disturbance that are close to a REC, a Phase 2 limited soil sampling shall be conducted to determine if there are any hazardous materials present on-site. The soil sampling shall be conducted during final design and prior to construction. Soil sampling will determine the California Human Health Screening Levels (CHHSL) of the testing protocol (CAM 17 metals, a list of 17 metals found typically in hazardous materials and mining sites). The CHHSLs are a list of 54 hazardous chemicals in soil or soil gas that the California Environmental Protection Agency (CalEPA) considers to be below thresholds for risks to human health. The Imperial County Public Health Department, Division of Environmental Health	Prior to Construction Activities	Determination of Hazardous Materials	Applicant	Department of Planning and Development Services

<p>(DEH) shall review the soil sampling results. If the results are above the CHHSLs, then the DEH would refer the project to the California Department of Toxic Substances Control for proper soil handling and removal procedures.</p>				
Hydrology and Water Quality				
<p>Mitigation Measures HWQ-1: Prepare SWPPP and Implement BMPs Prior to Construction and Site Restoration. The Project applicant or its contractor shall prepare a Storm Water Pollution Prevention Plan (SWPPP) specific to the Project and be responsible for securing coverage under the State Water Resources Control Board's National Pollution Discharge Elimination System stormwater permit for general construction activity (Order 2009-0009-DWQ). The SWPPP shall identify specific actions and best management practices (BMPs) related to the prevention of stormwater pollution from Project-related construction sources by identifying a practical sequence for site restoration, BMP implementation, contingency measures, responsible parties, and agency contacts. The SWPPP shall reflect localized surface hydrological conditions and shall be reviewed and approved by the appropriate agency prior to commencement of work and shall be made conditions of the contract with the contractor selected to build and decommission the Project. The SWPPP shall incorporate control measures in the following categories:</p> <ul style="list-style-type: none"> - Soil stabilization and erosion control practices - Sediment control practices - Temporary and postconstruction on- and off-site runoff controls - Special considerations and BMPs for water crossings and drainages - Monitoring protocols for discharge(s) and receiving waters, with emphasis place on the following water quality objectives: dissolved oxygen, floating material, oil and grease, potential of hydrogen (pH), and turbidity - Waste management, handling, and disposal control practices - Corrective action and spill contingency measures - Agency and responsible party contact information - Training procedures that shall be used to ensure that workers are aware of permit requirements and proper installation methods for BMPs specified in the SWPPP <p>The SWPPP shall be prepared by a Qualified SWPPP Practitioner</p>	<p>Prior to Construction</p>	<p>Storm Water Pollution Prevention Plan</p>	<p>Applicant</p>	<p>Department of Planning and Development Services</p>

and/or Qualified SWPPP Developer, with BMPs selected to achieve maximum pollutant removal and representative of the best available technology that is economically achievable. Emphasis for BMPs shall be placed on controlling discharges of oxygen-depleting substances; floating material; oil and grease; acidic or caustic substances or compounds; and turbidity. BMPs for soil-stabilization, erosion-control, and sediment-control practices will also be required. Performance and effectiveness of these BMPs shall be determined either by visual means where applicable (i.e., observation of above-normal sediment release), or by actual water sampling in cases where verification of contaminant reduction or elimination, (inadvertent petroleum release) is required to determine adequacy of the measure.				
Mitigation Measures HWQ-2: Incorporate Postconstruction Runoff BMPs into Project Drainage Plan. The Project Drainage Plan shall adhere to the County's Engineering Guidelines Manual, IID Draft Hydrology Manual or other recognized source with approval by the County Engineer to control and manage the on- and off-site discharge of stormwater to existing drainage systems. Infiltration basins will be integrated into the Drainage Plan to the maximum extent practical. The Drainage Plan shall provide both short and long-term drainage solutions to ensure the proper sequencing of drainage facilities and management of runoff generated from Project-related impervious surfaces as necessary.	Post Construction	Project Drainage Plan	Applicant	Department of Planning and Development Services
Tribal Cultural Resources				
Mitigation Measures CUL1-CUL5 apply here				
Utilities and Service Systems				
Mitigation Measures UTIL-1: If the IID does not receive its annual 3.1 maf water apportionment according to the QSA obligations of Colorado River water during the Project's 30-year lifespan, the Applicant shall work with IID to ensure any reduction in water availability can be managed by the Project.	Prior to Construction	Water Apportionment	Applicant	Department of Planning and Development Services

SECTION 10.0 – FINDINGS ON CHANGES TO THE DRAFT EIR AND RECIRCULATION

10.1 CHANGES TO DRAFT EIR

The Draft EIR has incorporated clarifications since its publication. These revisions have been incorporated into the Final EIR.

10.2 FINDINGS

Pursuant to CEQA, on the basis of the review and consideration of the Final EIR, the Board of Supervisors finds:

- Factual corrections and minor changes are set forth as additions and corrections to the Draft EIR.
- The factual and minor changes to the Draft EIR are not substantial changes that would deprive the public of a meaningful opportunity to comment on a substantial adverse environmental effect of the Proposed Project or any Proposed Project Alternative, a feasible way to mitigate or avoid such an effect, or a feasible Proposed Project alternative.
- The factual corrections and minor changes in the Draft EIR would not result in new significant environmental effects or substantially increase the severity of the previously identified significant effects disclosed in the Draft SEIR.
- The factual corrections and minor changes in the Draft EIR would not involve mitigation measures or alternatives that are considerably different from those analyzed in the Draft EIR that would substantially reduce one or more significant effect(s) on the environment.
- The Draft EIR is not fundamentally inadequate and/or so conclusionary in nature that meaningful public review and comment were precluded.

Thus, based on the Draft EIR, the Final EIR, and the whole of the record, none of the conditions set forth in *CEQA Guidelines* Section 15088.5 requiring recirculation of a Draft EIR have been met. Incorporation of the factual corrections and minor changes to the Draft EIR into the Final EIR does not require the Final EIR to be circulated for public and/or agency comment.

SECTION 12.0 – REFERENCES

California Department of Conservation (DOC)

2018 The Williamson Act Status Report 2016-17. Available online at:
https://www.conservation.ca.gov/dlrp/wa/Documents/stats_reports/2018%20WA%20Status%20Report.pdf.

2020a California Important Farmland Finder. Accessed October 2020. Available online at:
<https://maps.conservation.ca.gov/DLRP/CIFF/>

2020c Mines Online. Accessed October 2020. Available online at:
<https://maps.conservation.ca.gov/mol/index.html>.

California Department of Forestry and Fire Protection (CAL Fire)

2022 Fire Hazard Severity Zone Viewer. Accessed February 2023. Available online at:
<https://egis.fire.ca.gov/FHSZ/>.

County of Imperial (County)

1993 General Plan. Available online at: <http://www.icpds.com/?pid=571>

2007 Land Use Map. Available online at: <https://www.icpds.com/assets/planning/land-use-element/landuse-map.pdf>

2015a General Plan: Land Use Element. Available online at:
<https://www.icpds.com/assets/planning/land-use-element/land-use-element-2015.pdf>.

2021 Imperial County Multi-Jurisdictional Hazard Mitigation Plan (MHMP). Available online at:
https://firedept.imperialcounty.org/wp-content/uploads/2021/01/Imperial-County-MHMP-2021-Plan-Update-2021_01_11.pdf

Google

2022 Google Earth Pro, 2022.

**FINAL ENVIRONMENTAL IMPACT REPORT
FOR THE
HELL'S KITCHEN POWERCO 1 AND LITHIUMCO 1
PROJECT
IMPERIAL COUNTY, CALIFORNIA**

Prepared for:

COUNTY OF IMPERIAL
Planning and Development Services Department
801 Main Street
El Centro, California 92243
(442) 265-1736

Prepared by:



CHAMBERS GROUP, INC.
3151 Airway Ave., Suite F208
Costa Mesa, California 92626
(949) 261-5414

December 2023

PC ORIGINAL PKG

TABLE OF CONTENTS

	<u>Page</u>
EXECUTIVE SUMMARY	ES-1
SECTION 1.0 – PROJECT OVERVIEW	45
1.1 INTRODUCTION.....	45
1.2 PROJECT SUMMARY	45
1.3 PROJECT DESCRIPTION SUMMARY.....	45
1.4 ADEQUACY OF THE FINAL FEIR	45
1.5 COMMENTS ON THE DRAFT EIR	46
1.6 LIST OF COMMENTERS	46
SECTION 2.0 – RESPONSES TO COMMENTS	47
2.1 AGENCY COMMENTS.....	47
2.2 INDIVIDUAL COMMENTS.....	101
2.3 ORGANIZATION COMMENTS.....	188
SECTION 3.0 – DRAFT EIR REVISIONS.....	191

LIST OF TABLES

	<u>Page</u>
Table ES-1: Summary of Significant Impacts and Mitigation Measures	Error! Bookmark not defined.

EXECUTIVE SUMMARY

E.S.1 INTRODUCTION

This Environmental Impact Report (EIR), prepared in accordance with the California Environmental Quality Act (CEQA), addresses potential environmental effects associated with the development of a commercial lithium hydroxide production plant within the Salton Sea geothermal field in Imperial County, California. The DEIR provides an overview of the Project and considered alternatives, identifies the anticipated environmental impacts from the Project and the alternatives, and identifies mitigation measures designed to reduce the level of significance of any impact.

E.S.2 PURPOSE OF THE ENVIRONMENTAL IMPACT REPORT

The primary purpose of the CEQA process is to inform the public and decision-makers as to the potential impacts of a project and to allow an opportunity for public input to ensure informed decision-making by the Lead Agency. CEQA requires all State and local government agencies to consider the environmental effects of projects over which they have discretionary authority. CEQA also requires each public agency to mitigate or avoid the significant environmental impacts resulting from proposed projects, when feasible, and to identify a range of feasible alternatives to the proposed project that could reduce those environmental effects.

Under CEQA, an EIR analyzes the impacts of an individual activity or specific project and focuses primarily on changes in the environment that would result from that activity or project. The EIR must include the contents required by CEQA and the CEQA Guidelines and examine all phases of the project, including planning, construction, operation, and any reasonably foreseeable future phases.

This Final Environmental Impact Report (Final EIR/FEIR) has been prepared in accordance with the requirements of the CEQA Guidelines in Section 15132 which states that the Final EIR must contain:

- a) Comments and recommendations received on the draft EIR either verbatim or in summary.
- b) A list of persons, organizations, and public agencies commenting on the draft EIR.
- c) Responses of the Lead Agency to significant environmental points raised in the review and consultation process.
- d) Any other information added by the Lead Agency.

The response and evaluation to public comments is an important part of the CEQA process as it allows the opportunity to review and comment on the methods of analysis in the Draft EIR, the ability to detect omissions which may have occurred during the preparation of the Draft EIR, the ability to review of accuracy of the analysis in the Draft EIR, to share expertise, and identify public concerns.

E.S.3 Organization of the Final EIR

The Final EIR incorporates the Draft EIR and Technical Appendices to the Draft EIR, and a response to the comment letters received in response to the Draft EIR. The Final EIR is comprised by the following sections:

Chapter 1 Project Overview: This section provides an introduction and summary of the Proposed Project and list of commenters for the Draft EIR.

Chapter 2 Response to Comments: This section contains a copy of the actual comments submitted during the public review period and provides response to each comment which is broken down by topic or paragraph.

Chapter 3 Draft EIR Revisions: This section includes a summary of the changes made to the Draft EIR. Any changes made to the Draft EIR are shown in ~~strikeout~~ (with a strike through the text) and **additions** (noted in bold with an underline) to identify the changes that have been made.

E.S.4 PROJECT DESCRIPTION

Controlled Thermal Resources (US) Inc. via its subsidiary Hell's Kitchen Geothermal, LLC is proposing the Hell's Kitchen PowerCo 1 (HKP1), and Hell's Kitchen LithiumCo 1 LLC is proposing the Hell's Kitchen LithiumCo 1 (HKL1) in Imperial County, California. HKP1 involves the development of a geothermal power plant that will produce up to 49.9 megawatts (MW) net of geothermal green energy. HKL1 involves development of mineral extraction and processing facilities capable of producing lithium hydroxide, silica and polymetallic products, and possibly boron compounds, for commercial sale. HKP1 and HKL1 (together referred to as the Proposed Project) will be constructed by Hell's Kitchen PowerCo 1 LLC and Hell's Kitchen LithiumCo 1 LLC respectively, both subsidiaries of Controlled Thermal Resources (US) Inc. (CTR) and will have shared facilities. Hell's Kitchen Operating Services LLC, also a subsidiary of Controlled Thermal Resources (US) Inc. will operate and maintain these facilities.

E.S.5 PROJECT ACTIONS

The County will use this Draft EIR to provide information on the potential environmental effects of the following proposed actions:

- Imperial County Planning Department – Conditional Use Permit
- Imperial County Planning Department – Zoning Variance
- Imperial County Planning Department – Development Agreement (if required)
- Imperial County Building Department – Building and Grading Permits
- Imperial County Public Works Department – Encroachment Permit(s)

E.S.6 PROJECT OBJECTIVES

The Proposed Project has the following objectives:

The HKP1 objectives include the following:

- To produce 49.9MW (net) of geothermal green energy from within CTR's geothermal lease area.
- To provide power to the Imperial Irrigation District and other potential off takers.
- To minimize and mitigate potential impacts to sensitive environmental resources while producing renewable energy and creating jobs.

The HKL1 objectives include the following:

- To provide a sustainable domestic source of lithium, a designated critical material identified by the U.S. Department of Energy.

- To extract and produce lithium hydroxide, silica, bulk sulfide, and polymetallic products for commercial sale from the geothermal brine within the Hell's Kitchen lease area.
- To minimize the distance between the geothermal power plant and lithium extraction plant for production efficiency and to reduce the extent of pipeline required to convey brine and steam to and from the geothermal power facility to the mineral extraction plant, therefore minimizing the overall industrial footprint of the combined power and mineral operations.
- To minimize and mitigate potential impacts to sensitive environmental resources within the Project area.

E.S.7 SUMMARY OF ALTERNATIVES AND ENVIRONMENTALLY SUPERIOR ALTERNATIVE

As previously discussed, only one alternative was considered feasible and analyzed in this analysis. A comparison of the Project's impacts and the No Project Alternative impacts is shown in Table 5.0-2. The No Project Alternative would be considered the environmentally superior alternative, as it would avoid or reduce all of the potential impacts associated with construction and operation of the Project. The No Project Alternative would not meet most of the Project objectives including that it would not provide a sustainable domestic source of lithium, a designated critical material identified by the U.S. Department of Energy, (2) produce 49.9MW (net) of geothermal green energy from within CTR's geothermal lease area.; or (3) minimize the distance between the geothermal power plant and lithium extraction plant for production efficiency and to reduce the extent of pipeline required to convey brine and steam to and from the geothermal power facility to the mineral extraction plant, therefore minimizing the overall industrial footprint of the combined power and mineral operations. Furthermore, the No Project Alternative may result in future projects other than and potentially with greater impacts than the Proposed Project.

CEQA Guidelines requires that, if the No Project Alternative is determined to be the environmentally superior alternative, an environmentally superior alternative must also be identified among the remaining alternatives. However, reducing the Project size and relocating the Project to another site in the area were deemed to be infeasible alternatives. Thus, the only environmentally superior alternative identified is the No Project Alternative.

E.S.8 TABLE OF SIGNIFICANT IMPACTS AND MITIGATION MEASURES

The Table ES-1 on the following pages summarizes potential significant adverse impacts of the Proposed Project. Each resource area is summarized in Chapter 3.0. Impacts found to be significant are listed with proposed mitigation measures. The resulting impact after each mitigation is indicated, and cumulative impacts, if any, will be identified as required under CEQA.

Table ES-1: Summary of Significant Impacts and Mitigation Measures

Project Impacts	Level of Significance before Mitigation	Mitigation	Level of Significance After Mitigation
Aesthetics			
Threshold a) Have a substantial adverse effect on a scenic vista or scenic highway?			
<p>Due to the distance of the Project site from the nearest scenic highway, the Proposed Project is not anticipated to have a substantial adverse effect on a scenic highway. Additionally, as shown in viewpoint 3 in Figure 4.1-4, the Proposed Project would not result in substantial adverse effect on a scenic highway because it would neither be located near a scenic highway nor would its presence interrupt the views seen along Highway 111. Viewpoints 1 and 2 show that the Proposed Project would affect the existing viewshed by partially blocking the mountain ranges to the north of the Project, such as the Orocopia and Chocolate Mountains to the north/northwest. While the mountains within Imperial County provide visual character to the area, the Project site is not a designated scenic viewpoint and therefore, the presence of Project features would not be considered to have a substantial adverse effect on a scenic vista. Furthermore, the Sonny Bono Salton Sea Wildlife Refuge is located 4 miles southwest of the Project site. Due to its distance from the Project site, the construction and operation of the Proposed Project would not result in substantial adverse effect to its use.</p>	Less than Significant	No Mitigation Required.	Less than Significant
Threshold c) In non-urbanized areas, substantially degrade the existing visual character or quality of public views of the site and its surrounding? (Public views are those that are experienced from publicly accessible vantage point.) If the project is in an urbanized area, would the project conflict with applicable zoning and other regulations governing scenic quality?			
The construction and operation of the Proposed Project would not substantially degrade the existing visual	Less than Significant	No Mitigation Required.	Less than Significant

Table ES-1: Summary of Significant Impacts and Mitigation Measures

Project Impacts	Level of Significance before Mitigation	Mitigation	Level of Significance After Mitigation
<p>character of the area. While the Project is not designated to contain high visual quality, it would be designed and constructed to be consistent with the existing power plants in the region so as to maintain visual consistency. Furthermore, the proposed uses of the site would be consistent with the permitted uses of the area as the land use ordinance by the County authorizes the development and operation of renewable energy projects with a CUP. Impacts therefore are less than significant.</p>			
Air Quality			
Threshold a) Conflict with or obstruct implementation of the applicable air quality plan?			
<p>Both construction and operational emissions created from the Proposed Project would not be within their respective ICAPCD thresholds. According to the ICAPCD Handbook, projects that are within the ICAPCD thresholds are consistent with the regional air quality plans. Furthermore, the standard mitigation measures provided in the ICAPCD Handbook have been incorporated into the Project Description for the Proposed Project as Project Design Features (see Section 2.10), and the Proposed Project will be required to implement all of the ICAPCD Regulation VIII, fugitive dust control measures during construction and operation of the Proposed Project. Furthermore, any stationary sources of emissions operated on site will be required to adhere to ICAPCD Rule 207, New and Modified Stationary Source Review and Rule 201 that require permits to construct and operate stationary sources. The Proposed Project would have the potential to conflict with or obstruct implementation of the applicable air quality plans. However, the Project</p>	<p>Potentially Significant</p>	<p>MM-AQ-1 Prior to commencing construction, the Project proponent shall submit a Dust Control Plan to the Imperial County Air Pollution Control District (ICAPCD) for approval identifying all sources of PM10 and PM2.5 emissions and associated mitigation measures during the construction and operational phases of the Project. The Project proponent shall submit a Construction Notification Form to the ICAPCD ten days prior to the commencement of any earthmoving activity. This plan would provide a detailed list of control measures to reduce fugitive emissions from construction and operational activities, including but not limited to watering of unpaved roads, vehicle speed limits, windbreaks, transport container covers, and cleaning and sweeping procedures. The Dust Control Plan submitted to the ICAPCD shall meet all applicable requirements for control of fugitive dust emissions, including the following measures designed to achieve the no greater than 20-percent opacity performance standard for dust control:</p> <ul style="list-style-type: none"> All disturbed areas, including bulk material storage, that is not being actively used shall be effectively stabilized; and 	<p>Less than Significant</p>

Table ES-1: Summary of Significant Impacts and Mitigation Measures

Project Impacts	Level of Significance before Mitigation	Mitigation	Level of Significance After Mitigation
<p>would implement mitigation measures AQ-1 and AQ-2 to reduce CO and NOx emissions. Table 4.2 7 shows that once mitigated, all criteria pollutants would be reduced to a level that is less than significant. Therefore, with implementation of the above mitigation measure, impacts to air quality plans would be reduced to a level less than significant.</p>		<p>visible emissions shall be limited to no greater than 20 percent opacity for dust emissions by using water, chemical stabilizers, dust suppressants, tarps, or other suitable material, such as vegetative groundcover. Bulk material is defined as earth, rock, silt, sediment, and other organic and/or inorganic material consisting of or containing PM with 5 percent or greater silt content.</p> <ul style="list-style-type: none"> • All on- and off-site unpaved roadway segments being used for 50 or more average vehicle trips per day shall be effectively stabilized, and visible emissions shall be limited to no greater than 20 percent opacity for dust emissions by the use of restricting vehicle access, paving, chemical stabilizers, dust suppressants, and/or watering. • All unpaved traffic areas one acre or more in size with 75 or more average vehicle trips per day shall be effectively stabilized, and visible emissions shall be limited to no greater than 20 percent opacity for dust emissions by paving, chemical stabilizers, dust suppressants, and/or watering. • All track-out or carry-out, which includes bulk materials that adhere to the exterior surfaces of motor vehicles and/or equipment (including tires) that may then fall onto the pavement on paved public roads, shall be cleaned at the end of each workday or immediately when mud or dirt extends a cumulative distance of 50 linear feet or more onto a paved road in an urban area. • Movement of bulk material handling or transfer shall be stabilized prior to handling or at points of transfer with application of sufficient water or chemical stabilizers, or by sheltering or enclosing the operation and transfer line except, where such material or activity is exempted from stabilization by the rules of ICAPCD. 	

Table ES-1: Summary of Significant Impacts and Mitigation Measures

Project Impacts	Level of Significance before Mitigation	Mitigation	Level of Significance After Mitigation
		<ul style="list-style-type: none"> • Any temporary unpaved road shall be effectively stabilized and visible emissions shall be limited to no greater than 20 percent opacity for dust emission by paving, chemical stabilizers, dust suppressants and/or watering. • Fugitive dust generation during construction would be minimized by watering as needed to meet Imperial County standards for fugitive dust control. To further reduce fugitive dust emissions, vehicle traffic on unpaved roads would be kept below 15 miles per hour. • During grading, the Project would be watering actively disturbed on-site areas at least three times a day as necessary to reduce fugitive dust emissions. • Access to the site would be via Highway 111, McDonald Road, and Davis Road. All workers, vendors and haul trucks would be required to utilize these roadways. • An agreement between County of Imperial Public Works and the applicant would be established requiring the applicant to improve a two-mile section of the unpaved Davis Road adjacent to the site by installing a 12- to 18-inch- thick engineered Class II base section. In addition, at the request of the County, the applicant would utilize the improved section during construction and would wet the site continuously during construction activities. The road would be immediately paved after construction prior to operations of the plant to avoid damaging a new asphalt section. • During construction, the Project would be required to maintain daily dust suppression at the two-mile section of Davis Road adjacent to the site using a water truck operating continuously while vehicles are using the road. 	

Table ES-1: Summary of Significant Impacts and Mitigation Measures

Project Impacts	Level of Significance before Mitigation	Mitigation	Level of Significance After Mitigation
		<ul style="list-style-type: none"> • The Project would provide wheel shakers at the exit(s) of the construction site to minimize dust being tracked off the Project site and onto the roadways. • Operational on-road trips shall not operate on unpaved dirt roads. <p>MM-AQ-2 Prior to commencing construction, the Project proponent shall submit and commit to a Combustion Exhaust Emissions Control Program. This plan would provide a detailed list of control measures to minimize exhaust emissions during Project construction, including but not limited to fuel use, engine maintenance, and procedures:</p> <ul style="list-style-type: none"> • The Exhaust Emission Control Plan shall provide a detailed list of control measures to minimize exhaust emissions during Project construction, including but not limited to fuel use, engine maintenance, and procedures. • The construction contractor shall be required to utilize construction equipment using diesel engines less than 50 horsepower with certified NOx emissions rated as Tier 3 or better. All off-road diesel-powered equipment greater than 50 horsepower that is used on-site during construction of the Project shall meet USEPA Tier 4 offroad emission standards and Level 3 diesel particulate filters. • When commercially available, fossil fueled equipment shall be replaced with electrically driven equivalents (provided they are not run via a portable generator set). • Idling times shall be minimized either by shutting equipment off when not in use or reducing the maximum idling time to five minutes (as required by the California Airborne Toxics Control Measure, Title 13, Section 2485 of California 	

Table ES-1: Summary of Significant Impacts and Mitigation Measures

Project Impacts	Level of Significance before Mitigation	Mitigation	Level of Significance After Mitigation
		<p>Code of Regulations). Clear signage shall be provided for construction workers at all access points.</p> <ul style="list-style-type: none"> All construction equipment shall be maintained and properly tuned in accordance with manufacturer's specifications. All equipment shall be checked by a certified mechanic and determined to be running in proper condition prior to operation. Where access to alternative sources of power are available, portable diesel engines shall be prohibited. Haul truck shall be 2010 model year trucks or newer (a gross vehicle weight rating of at least 14,001 pounds), or best commercially available equipment, that meet the California Air Resources Board 2010 engine emissions standards at 0.01 g/horsepower-hour of particulate matter and 0.20 g/horsepower-hour of NOx emissions or newer, cleaner trucks. The volatile organic compounds (VOC) architectural coating limits specify that the use paints and solvents with a VOC content of 100 grams per liter or less for interior and 150 grams per liter or less for exterior surfaces shall be required. 	
<p>Threshold b) Result in a cumulatively considerable net increase of any criteria pollutant for which the project region is nonattainment under an applicable federal or State ambient air quality standard?</p>			
<p>During start-up conditions, air emissions of CO and NOx associated with the HKP1 were estimated to exceed the CEQA significance thresholds and air emissions of CO associated with HKP1 were estimated to exceed the Rule 207, Section C.2.g thresholds. ICAPCD Rule 207 Section C.2 requires emissions offsets for sources with pollutant emissions that exceed 137 pounds per day. Pursuant Rule 207, Section C.2.g, the Proposed Project has prepared a CO Air Quality Impact Analysis (Part F of Rule 207), which</p>	<p>Less Than Significant</p>	<p>None required.</p>	<p>Less than Significant</p>

Table ES-1: Summary of Significant Impacts and Mitigation Measures

Project Impacts	Level of Significance before Mitigation	Mitigation	Level of Significance After Mitigation
<p>demonstrates that the HKP1 would not cause or contribute to a violation of the CO NAAQS/CAAQS. The 1-hour and 8-hour CO modeled concentration plus background concentrations are 2,213 and 1,369 micrograms per cubic meter ($\mu\text{g}/\text{m}^3$), respectively, which are well below the NAAQS/CAAQS. Therefore, the startup operations associated with the proposed standby/black-start diesel engine generator would have a less than significant impact on CO concentrations.</p>			
Biological Resources			
<p>Threshold a) Have a substantial adverse effect, either directly or through habitat modifications, on any species identified as a candidate, sensitive, or special status species in local or regional plans, policies, or regulations, or by the California Department of Fish and Game or U.S. Fish and Wildlife Service?</p>			
<p>The Project includes removal of cattails and other vegetation that provide breeding habitat for Yuma hispid cotton rat. Yuma hispid cotton rat could be impacted by construction activities if the species were to occur in the construction area at the time of construction. In addition, construction activities include excavation of trenches and steep walled foundations where cotton rat could become trapped. Because a qualified biologist would be on site to observe all vegetation removal activities and could relocate Yuma hispid cotton rat out of harm's way if one were observed in the area, the impact from vegetation removal activities would be less than significant. In addition, because open trenches will be covered to avoid cotton rats from becoming trapped and a biologist will observe open excavations daily, the impact of open excavations on cotton rats will be less than significant.</p>	<p>Potentially Significant</p>	<p>BIO-1. Designated Biologist: The Applicant shall retain the services of a Qualified Biologist. The Qualified Biologist will be employed during construction and all vegetation removal and ground-disturbing activities. The Qualified Biologist will document compliance with the projects mitigation measures and permits. The Qualified Biologist will have the authority to halt any Project activities that are in violation of the terms and conditions of the Project biological opinion(s) or incidental take permit, as appropriate.</p> <p>BIO-2. Biological Monitors: Biological monitor(s) will be employed to assist the Designated Biologist in conducting preconstruction surveys and monitoring ground disturbance, grading, construction, decommissioning, and restoration activities. The biological monitor(s) will have sufficient education and field experience to understand resident wildlife species biology. To avoid and minimize effects to biological resources, the biological monitor(s) will assist the Designated Biologist with the following:</p>	<p>Less Than Significant</p>

Table ES-1: Summary of Significant Impacts and Mitigation Measures

Project Impacts	Level of Significance before Mitigation	Mitigation	Level of Significance After Mitigation
		<ul style="list-style-type: none"> • Conduct inspections for listed species during ground-disturbing construction activities and document that habitat within the construction zone is not occupied by Yuma Ridgway's rail or desert pupfish. • Document compliance with all conservation measures, including but not limited to monitoring for presence of listed species; halting construction activity in the area if an individual listed species is found; and checking the staking/flagging of all disturbance areas to be sure that they are intact and that all construction activities are being kept within the staked/flagged limits. If a Yuma Ridgway's rail or desert pupfish is found within a work area, the Biological Monitor(s) will immediately notify the Designated Biologist, who will determine measures to be taken to ensure that the individual is not harmed, such as temporarily halting construction. <p>BIO-3. Worker Environmental Awareness Program Training: A Worker Environmental Awareness Program will be implemented for construction crews prior to the commencement of Project activities. Training materials and briefings will include, but not be limited to, discussion of the federal and State statutes protecting threatened and endangered species, the consequence of noncompliance with these statutes, identification of values of wildlife and natural plant communities, hazardous substance spill prevention and containment measures, and review of all required conservation measures.</p> <p>BIO-4. Flagging of Work Area Limits: All areas to be disturbed by the Project will be flagged prior to construction. All disturbance</p>	

Table ES-1: Summary of Significant Impacts and Mitigation Measures

Project Impacts	Level of Significance before Mitigation	Mitigation	Level of Significance After Mitigation
		<p>will be confined to these flagged areas, and all employees will be instructed that their activities must be confined to locations within the flagged areas.</p> <p>BIO-5. Power Wash Equipment: All equipment used during construction of the Project will be required to be power washed prior to arrival at the Project site to prevent the transportation and establishment of noxious weeds in the area.</p> <p>BIO-6. Sediment and Erosion Control: The Project proponent will acquire the appropriate Clean Water Act regulatory permits, prepare a Stormwater Pollution and Prevention Plan (SWPPP), and implement BMPs prior to construction and site restoration. The SWPPP will identify specific actions and BMPs relating to the prevention of stormwater pollution from Project-related construction sources by identifying a practical sequence for site restoration, BMP implementation, contingency measures, responsible parties, and agency contacts. The SWPPP reflects localized surface hydrological conditions and will be reviewed by the USFWS prior to commencement of work. A SWPPP will be a condition of the contract with each contractor selected to build and decommission the Project. The SWPPP(s) at a minimum will incorporate soil stabilization and erosion control practices (e.g., hydroseeding, erosion control blankets, mulching), dewatering and/or flow diversion practices, sediment control practices (temporary sediment basins, fiber rolls), temporary and post-construction onsite and offsite runoff controls, and special considerations and BMPs for water crossings, wetlands, and drainages. The SWPPP will be prepared by a qualified SWPPP practitioner with BMPs selected to achieve maximum pollutant removal and that represent the best available technology that is economically achievable. Emphasis for BMPs is placed on controlling discharges of oxygen-depleting</p>	

Table ES-1: Summary of Significant Impacts and Mitigation Measures

Project Impacts	Level of Significance before Mitigation	Mitigation	Level of Significance After Mitigation
		<p>substances, floating material, oil and grease, acidic or caustic substances or compounds, and turbidity. Performance and effectiveness of these BMPs are determined either by visual means where applicable (i.e., observation of above-normal sediment release), or by actual water sampling in cases where verification of contaminant reduction or elimination (inadvertent petroleum release) is required to determine adequacy of the measure.</p> <p>BIO-7. Solid Waste Management: Solid waste will be properly contained in designated collection areas on site and regularly disposed of.</p> <p>BIO-8. A desert pupfish protection and relocation plan will be prepared prior to construction activities in any suitable habitat for desert pupfish. Its implementation will ensure construction in any suitable habitat for desert pupfish will be conducted with minimal effects on desert pupfish. This plan will be submitted to the Service and the CDFW for review and approval prior to any ground-disturbing activities that have a water component. This plan will provide:</p> <ol style="list-style-type: none"> 1. Protocols for pre-construction or pre-maintenance surveys to assess species presence and spawning within or immediately adjacent to work areas (e.g., in, or at the end of, the irrigation drains/drain canals, open water areas, and around the open water margins). The protocols will also outline the qualifications required for biologists to conduct desert pupfish survey, capture, and relocation activities and the process for biologist approval. 2. Capture (e.g., trapping in the irrigation drains for construction and maintenance; or trapping, dip netting, and seining in open water areas that are 	

Table ES-1: Summary of Significant Impacts and Mitigation Measures

Project Impacts	Level of Significance before Mitigation	Mitigation	Level of Significance After Mitigation
		<p>drained or if the water level is dropped) and transport methods to minimize handling and stress as well as exposure to heat, low dissolved oxygen (DO), and crowding.</p> <ol style="list-style-type: none"> 3. Identification of locations for release of captured desert pupfish. 4. Timing windows when construction or maintenance in open water areas and in the irrigation drain mouths/canals may be conducted with minimal effects on desert pupfish spawning. 5. Adaptive management procedures that include assessment of mitigation measure effectiveness, development of revised measures to improve effectiveness, and similar assessment of revised measures to verify effectiveness. <p>BIO-9. Construction Timing: Construction activities within habitat for Yuma Ridgway's rail (i.e., cattail marsh) will be scheduled to avoid the nesting and molting flightless season (i.e., February 15 – September 15). Pile driving activities adjacent to Yuma Ridgway's rail habitat will avoid Yuma Ridgway's rail nesting season.</p> <p>BIO-10. Pre-Construction Surveys and Construction Monitoring for Yuma Ridgway's Rail and Black Rail: Pre-construction surveys for Yuma Ridgway's rail and black rail and construction monitoring will be conducted within all Project development areas within suitable habitat and a 500-foot buffer from suitable habitat. In the event that Yuma Ridgway's rail(s) or black rail(s) are detected within the work area (the area of active equipment use), all construction activities in the area will halt and the USFWS and CDFW will be notified no later than noon of the next business day. Project activities in the area may not proceed until</p>	

Table ES-1: Summary of Significant Impacts and Mitigation Measures

Project Impacts	Level of Significance before Mitigation	Mitigation	Level of Significance After Mitigation
		<p>the birds have left the work area. The USFWS and CDFW will also be notified if any Yuma Ridgway's rail are detected within 500 feet of the construction area. Project activities may proceed with caution in this buffer area under the direction of the Designated Biologist.</p> <p>BIO-11. Reduced Vehicle Speed Adjacent to Rail Habitat: Vehicle speeds will be reduced to 15 miles per hour (mph) on access roads adjacent to Yuma Ridgway's rail habitat. These areas will be appropriately signed to identify the speed limit.</p> <p>BIO-12. Noise Attenuation: The following noise attenuation measures will be implemented to minimize noise impacts on Yuma Ridgway's rail during the nesting season:</p> <ul style="list-style-type: none"> • At least 30 days prior to activities within 500 feet of Yuma Ridgway's rail habitat, the Applicant will conduct a noise study to evaluate the maximum predicted noise level within rail habitat. • If the maximum predicted noise is less than 60 A-weighted decibel scale (dBA) equivalent continuous sound level (Leq), no additional measures are required. • If the maximum predicted noise level exceeds 60 dBA Leq in rail habitat, noise attenuation measures such as noise walls or hay bales will be installed between the noise source and the suitable habitat. Noise monitors will be installed at the edge of the nearest Yuma Ridgway's rail habitat to assess the noise levels and verify that attenuation measures are successful. If necessary, additional noise reduction measures will be implemented to reduce the noise level to below 60 dBA at the edge of occupied habitat. <p>BIO-13. Habitat Conservation: To offset the loss of Yuma Ridgway's rail habitat, the Project proponent will preserve,</p>	

Table ES-1: Summary of Significant Impacts and Mitigation Measures

Project Impacts	Level of Significance before Mitigation	Mitigation	Level of Significance After Mitigation
		<p>create, or enhance habitat near the Project site for Yuma Ridgway's rail. The Project proponent will provide funding for construction and long-term management of the created habitat and will provide financial assurance for the construction of the wetland habitat in the form of performance bonds, escrow accounts, casualty insurance, or letters of credit. The performance bond, escrow account, casualty insurance, or letter of credit shall be of sufficient value to cover all construction, monitoring and reporting costs until the habitat is fully established. The financial assurance shall be in place prior to ground disturbance. Long-term management funding will be provided sufficient to cover, at a minimum, the management costs related to procurement of water from IID, weed control, levee and control structure maintenance, and control structure repair or replacement. The Applicant will prepare a detailed Habitat Enhancement Mitigation and Mitigation Monitoring Plan for review and approval by the USFWS, Corps, and CDFW prior to Project construction. Habitat creation activities will be conducted outside of the bird breeding season (February 15 – September 15) to avoid potential noise impacts on Yuma Ridgway's rail.</p> <p>BIO-14. Burrowing Owl. A pre-construction survey will be conducted for burrowing owls. The survey will be conducted during peak activity period (one hour before to two hours after sunrise or two hours before to one hour after sunset) no more than 14 days prior to the start of construction and within 500 feet surrounding the construction area. If owls are located during the pre-construction survey between February 1 and August 31 (nesting season), a buffer area will be established according to the guidelines in the 2012 Staff Report. A modified buffer reduction may be used with CDFW concurrence. If</p>	

Table ES-1: Summary of Significant Impacts and Mitigation Measures

Project Impacts	Level of Significance before Mitigation	Mitigation	Level of Significance After Mitigation
		<p>burrowing owls are located during the nonbreeding season, owls may be passively relocated in coordination with CDFW, by a qualified biologist according to the procedures outlined in the 2012 Staff Report on Burrowing Owl Mitigation. If burrowing owls are found on site during pre-construction surveys, the Project proponent shall contact CDFW to prepare a plan of action for buffers or passive relocation.</p> <p>BIO-15. Lighting. Except as necessary for safety or security purposes, no lighting shall be allowed to impact wetland or riparian habitats.</p> <p>BIO-16. Nesting Bird Plan. Construction activities shall take place outside the general bird breeding season (February 15 to September 30), to the maximum extent practicable. Regardless of the time of year, prior to ground-disturbing activities, a qualified biologist shall conduct a nesting bird survey to comply with CDFW Code 3503 and 3503.5 and the Migratory Bird Treaty Act. The survey shall occur no more than three (3) days prior to initiation of proposed Project activities and shall include any potential habitat (including trees, shrubs, the ground, or nearby structures). Any occupied passerine and/or raptor nests occurring within the proposed Project area or the Project's zone of influence (generally 100-300 feet) shall be delineated and a no-disturbance buffer zone (as determined by the avian biologist) shall be established and maintained during Project activities. Additional follow-up surveys may be required by the resource agencies and Imperial County. The buffer zone shall be sufficient in size to prevent impacts to the nest. A qualified biologist shall monitor active nests to determine whether construction activities are disturbing nesting birds or nestlings. If the qualified biologist determines that construction activities pose a disturbance to nesting, construction work shall be</p>	

Table ES-1: Summary of Significant Impacts and Mitigation Measures

Project Impacts	Level of Significance before Mitigation	Mitigation	Level of Significance After Mitigation
		<p>stopped in the area of the nest and the no disturbance buffer shall be expanded. Once nesting has ceased and the fledglings are no longer using the nest area as confirmed by a qualified biologist, the buffer may be removed. A nesting bird survey report shall be provided to Imperial County and CDFW. If an active nest is encountered during construction, construction shall stop immediately until a qualified biologist can determine the status of the nest and when work can proceed without risking violation to state or federal laws.</p> <p>BIO-17. Bird Flight Diverters. Bird flight diverters will be installed on any new transmission and power lines serving the Project, to limit bird mortality associated with introducing new transmission lines in bird flyways. Flight diverters make transmission lines more visible to birds. The transmission and power lines will be designed to meet Avian Power Line Interaction Committee (APLIC) guidelines.</p> <p>BIO-18. Excavation Areas. Any open trench or excavated area shall be securely covered anytime Project activities within the excavated/trenched area have ceased. The designated biologist shall oversee the covering of all excavated, steep-walled holes or trenches by placing plywood or other barrier materials such that animals are unable to enter and become entrapped. The use of temporary fencing around the perimeter or trenches or holes may be an acceptable minimization measure, if deemed appropriate by the biological monitor. Before holes or trenches are filled, the Biological Monitors shall thoroughly inspect the areas for trapped animals. If any worker discovers that any animal has become trapped, they shall halt Project-related activities and notify the biological monitor immediately.</p>	

Table ES-1: Summary of Significant Impacts and Mitigation Measures

Project Impacts	Level of Significance before Mitigation	Mitigation	Level of Significance After Mitigation
Threshold b) Have a substantial adverse effect on any riparian habitat or other sensitive natural community identified in local or regional plans, policies, regulations or by the California Department of Fish and Wildlife or U.S. Fish and Wildlife Service?			
<p>The Project study area contains wetlands and riparian habitats that are potentially subject to RWQCB, CDFW, and USACE jurisdiction. The removal of vegetation and discharge of fill to these wetland and riparian resources from temporary construction activities, or permanent conversion to a developed land use during operation of the proposed Project, could be a significant impact. Hell's Kitchen PowerCo 1 LLC and Hell's Kitchen LithiumCo 1 LLC will obtain all required USACE, CDFW, and RWQCB permits for impacts to wetlands and riparian areas prior to construction in any jurisdictional wetland or riparian area. The agencies permit processes requires compensatory mitigation for impacts to jurisdictional water resources. Because the Project will comply with all permit requirements, including development of compensatory wetland and riparian mitigation, the impacts on wetlands and riparian areas would be less than significant. Further details on the proposed wetland mitigation plan can be found in Section 4.3.8, Mitigation Measure BIO-19.</p>	Potentially Significant	<p>BIO-19. Wetland and Riparian Area Restoration/Compensation. The Project will provide restoration/compensation for all unavoidable impacts on areas under the jurisdiction of USACE, RWQCB, and CDFW. Impacts on jurisdictional areas will be avoided to the extent feasible. Where avoidance of jurisdictional areas is not feasible, the Project applicant will provide the necessary mitigation required as part of wetland permitting, by creation, restoration, or preservation of suitable jurisdictional or equivalent habitat along with adequate buffers to protect the function and values of jurisdictional areas. The Mitigation ratio will be 1:1 or as approved by the permitting agencies. The proposed Mitigation Plan area is located in Section 35 approximately 2 miles north of the HKP1 and HKL1 Projects at the corner of Beach Road and Access Road. The proposed mitigation area will total 159.61 acres; approximately 152 acres will be created native wetland/open water habitat and approximately 7 acres will be enhanced native upland habitat. Proposed native wetland communities include Willow Scrub Shrub, Cattail Bullrush Marsh and Desert Riparian Woodlands. Proposed upland communities include Sonoran Desert Scrub/Alkali Sink.</p>	Less than Significant
Threshold c) Have a substantial adverse effect on state or federally protected wetlands (including, but not limited to, marsh, vernal pool, coastal, etc.) through direct removal, filling, hydrological interruption, or other means?			
<p>Project construction would occur within a relatively small area of comparatively low habitat quality along the roadside adjacent to the large, contiguous wetlands to the east. Following construction completion, vegetated areas and unvegetated open space would be converted</p>		<p>BIO-19. Wetland and Riparian Area Restoration/Compensation. The Project will provide restoration/compensation for all unavoidable impacts on areas under the jurisdiction of USACE, RWQCB, and CDFW. Impacts on jurisdictional areas will be avoided to the extent feasible. Where avoidance of</p>	Less than Significant

Table ES-1: Summary of Significant Impacts and Mitigation Measures

Project Impacts	Level of Significance before Mitigation	Mitigation	Level of Significance After Mitigation
<p>permanently to developed land uses. The conversion of these vegetated and unvegetated open space areas would not result in a noteworthy loss of habitat compared to the large contiguous wetlands and open space areas to the north, west, and east, and would not impede wildlife access to foraging habitat, breeding habitat, water sources, or other areas necessary for their movement or reproduction. The Project impacts are collocated adjacent to Davis Road, IID's existing power line, and other infrastructure. As discussed in Section 4.3.4, the Project study area does not contain any wildlife nursery sites. The impact would be less than significant.</p>		<p>jurisdictional areas is not feasible, the Project applicant will provide the necessary mitigation required as part of wetland permitting, by creation, restoration, or preservation of suitable jurisdictional or equivalent habitat along with adequate buffers to protect the function and values of jurisdictional areas. The Mitigation ratio will be 1:1 or as approved by the permitting agencies. The proposed Mitigation Plan area is located in Section 35 approximately 2 miles north of the HKP1 and HKL1 Projects at the corner of Beach Road and Access Road. The proposed mitigation area will total 159.61 acres; approximately 152 acres will be created native wetland/open water habitat and approximately 7 acres will be enhanced native upland habitat. Proposed native wetland communities include Willow Scrub Shrub, Cattail Bullrush Marsh and Desert Riparian Woodlands. Proposed upland communities include Sonoran Desert Scrub/Alkali Sink.</p>	
<p>Threshold d) Interfere substantially with the movement of any native resident or migratory fish or wildlife species or with established native resident or migratory wildlife corridors, or impede the use of native wildlife nursery sites?</p>			
<p>Project construction would occur within a relatively small area of comparatively low habitat quality along the roadside adjacent to the large, contiguous wetlands to the east. Following construction completion, vegetated areas and unvegetated open space would be converted permanently to developed land uses. The conversion of these vegetated and unvegetated open space areas would not result in a noteworthy loss of habitat compared to the large contiguous wetlands and open space areas to the north, west, and east, and would not impede wildlife access to foraging habitat, breeding habitat, water</p>	<p>Less than Significant</p>	<p>No Mitigation Required.</p>	<p>Less than Significant</p>

Table ES-1: Summary of Significant Impacts and Mitigation Measures

Project Impacts	Level of Significance before Mitigation	Mitigation	Level of Significance After Mitigation
sources, or other areas necessary for their movement or reproduction. The Project impacts are collocated adjacent to Davis Road, IID's existing power line, and other infrastructure. As discussed in Section 4.3.4, the Project study area does not contain any wildlife nursery sites. The impact would be less than significant.			
Threshold e) Conflict with any local policies or ordinances protecting biological resources, such as a tree preservation policy or ordinance?			
In accordance with the consistency analysis provided in Table 4.3-1, the proposed Project is not anticipated to conflict with the Imperial County General Plan. There are no other local policies or ordinances protecting biological resources that apply to the proposed Project. Therefore, construction and operation of the proposed Project is anticipated to have a less-than-significant impact with respect to conflicting with any local policies or ordinances protecting biological resources. However, the Imperial County Board of Supervisors provides the ultimate determination regarding the proposed Project's consistency with the Imperial County General Plan.	Less than Significant	No Mitigation Required.	Less than Significant
Cultural Resources			
Threshold a) Would the project cause a substantial adverse change in the significance of a historical resource pursuant to §15064.5?			
Threshold b) Would the project cause a substantial adverse change in the significance of an archaeological resource pursuant to §15064.5?			
The intensive pedestrian survey resulted in identification of a newly recorded resources which consists of a remnant of a historic-era house dating back to 1953(TES-HK-001H). The structure is comprised of adobe brick. However, the structure has been altered over the years. The structure no longer contains walls, windows, doors, and room,	Less than Significant	CUL-1 The Applicant shall retain the services of a Qualified Archaeologist, meeting the Secretary of the Interior Standards or County standards, whichever is greater, and require that all initial ground-disturbing work be monitored by archaeological specialist (monitor) proficient in artifact and feature identification in monitoring contexts. The Consultant (Qualified	Less than Significant

Table ES-1: Summary of Significant Impacts and Mitigation Measures

Project Impacts	Level of Significance before Mitigation	Mitigation	Level of Significance After Mitigation
<p>and shows evidence of damage, graffiti, and other modern effects such as furniture and refuse. Based on the condition of the structure, there is not enough original structure remaining to understand the original appearance of the structure. Standard DPR site records have been completed for this resource and are waiting permanent designation from the information center. Its severely dilapidated condition does not allow for the structure to meet the criteria needed for listing on the CRHR and is not known to be affiliated with anyone of significance or contribute to local cultural heritage or yield additional information to local history. Therefore, the Proposed Project would not result in significant impact to a historical resource. Impacts would be less than significant. An archaeological investigation was conducted for the Project to determine if there are any impacts that would occur that would disrupt or adversely affect a prehistoric or historic-era archaeological site to a community, ethnic or social group. The investigation resulted in resources being found within the Project area. However, because of the conditions of these resources, these have not been determined to be significantly impacted by the Proposed Project. However, given the largely undeveloped nature of the Project site with no previous development, there remains potential that the Project's ground disturbing activity would</p>		<p>Archaeologist and/or monitor) shall be present at the Project construction phase kickoff meeting.</p> <p>CUL-2 Prior to commencing construction activities and thus prior to any ground disturbance in the Proposed Project site, the Consultant shall conduct initial Worker Environmental Awareness Program (WEAP) training to all construction personnel, including supervisors, present at the outset of the Project construction work phase, for which the Lead Contractor and all subcontractors shall make their personnel available. A tribal monitor shall be provided an opportunity to attend the preconstruction briefing, if requested. This WEAP training will educate construction personnel on how to work with the monitor(s) to identify and minimize impacts to archaeological resources and maintain environmental compliance. This WEAP training will educate the monitor(s) of construction procedures to avoid construction-related injury or harm. This training may be performed periodically, such as for new personnel coming on to the Project as needed.</p> <p>CUL-3 The Contractor shall provide the Consultant with a schedule of initial potential ground-disturbing activities. A minimum of 48 hours will be provided to the Consultant of commencement of any initial ground-disturbing activities such as vegetation grubbing or clearing, grading, trenching, or mass excavation.</p> <p>A monitor shall be present on-site at the commencement of ground-disturbing activities related to the Project. The monitor, in consultation with the Qualified Archaeologist, shall observe initial ground-disturbing activities and, as they proceed, adjust the number of monitors as needed to provide adequate</p>	

Table ES-1: Summary of Significant Impacts and Mitigation Measures

Project Impacts	Level of Significance before Mitigation	Mitigation	Level of Significance After Mitigation
<p>impact undiscovered resources. These resources could include but not limited to lithic materials, faunal, pottery, ceramics, building materials, or glassware. Therefore, mitigation measure CUL-1 through CUL-5 would be implemented to ensure that impacts would be less than significant.</p>		<p>observation and oversight. All monitors will have stop-work authority to allow for recordation and evaluation of finds during construction. The monitor will maintain a daily record of observations to serve as an ongoing reference resource and to provide a resource for final reporting upon completion of the Project.</p> <p>The Consultant and the Lead Contractor and subcontractors shall maintain a line of communication regarding schedule and activity such that the monitor is aware of all ground-disturbing activities in advance to provide appropriate oversight.</p> <p>CUL-4 In the event of the discovery of previously unidentified archaeological materials, the Contractor shall immediately cease all work activities within an area of no less than 100 feet of the discovery. After cessation of excavation, the Contractor shall immediately contact the County. Except in the case of cultural items that fall within the scope of the Native American Grave Protection and Repatriation Act (NAGPRA), California Health and Safety Code 7050.5, CEQA 15064.5, or California Public Resources Code 5097.98, the discovery of any cultural resource within the Project area shall not be grounds for a Project-wide “stop work” notice or otherwise interfere with the Project’s continuation except as set forth in this paragraph. Additionally, all consulting Native American Tribal groups that requested notification of any unanticipated discovery of archaeological resources on the Project shall be notified appropriately. If a discovery results in the identification of cultural items that fall within the scope of NAGPRA, the Contractor shall immediately cease all work activities within an area of no less than 100 feet (30 meters) of the discovery. In the event of an unanticipated discovery of archaeological materials</p>	

Table ES-1: Summary of Significant Impacts and Mitigation Measures

Project Impacts	Level of Significance before Mitigation	Mitigation	Level of Significance After Mitigation
		<p>during construction, the Applicant-retained Qualified Professional Archaeologist shall be contacted to evaluate the significance of the materials prior to resuming any construction-related activities near the find. If the Qualified Archaeologist determines that the discovery constitutes a significant resource under CEQA and it cannot be avoided, the Applicant shall implement an archaeological data recovery program.</p> <p>CUL-5 At the completion of all ground-disturbing activities, the Consultant shall prepare an Archaeological Resources Monitoring Report summarizing all monitoring efforts and observations, as performed, and any and all prehistoric or historic archaeological finds as well as providing follow-up reports of any finds to the SCCIC, as required.</p> <p>In the event unanticipated, buried prehistoric archaeological resources (lithic material, faunal, pottery, etc.) or historical archaeological resources (ceramics, building materials, glassware, etc.) are unearthed during construction or any ground disturbing activities within the Project area, additional resource treatments would become necessary. Once a potential resource has been identified, all work within 100 feet must be halted until the find can be assessed by a qualified archaeologist.</p>	
Threshold c) Would the project disturb any human remains, including those interred outside of formal cemeteries?			
Construction of the Proposed Project would involve grading, which may have the potential to uncover unknown human remains. However, if human remains are encountered during the proposed work, no further excavation or disturbance may occur near the find until the County coroner has been contacted. HSC 7050.5 states (a) Every person who knowingly mutilates or	Less than Significant	No Mitigation Required.	Less than Significant

Table ES-1: Summary of Significant Impacts and Mitigation Measures

Project Impacts	Level of Significance before Mitigation	Mitigation	Level of Significance After Mitigation
<p>disinters, wantonly disturbs, or willfully removes any human remains in or from any location other than a dedicated cemetery without authority of law is guilty of a misdemeanor, except as provided in Section 5097.99 of the Public Resources Code. (b) In the event of discovery or recognition of any human remains in any location other than a dedicated cemetery, there shall be no further excavation or disturbance of the site or any nearby area reasonably suspected to overlie adjacent remains until the coroner of the county in which the human remains area discovered has determined that the remains are not subject to the provisions of Section 27481. The coroner shall make his or her determination within two working days from the time the person responsible for the excavation, or to his or her authorized representative, notifying the coroner of the discovery if recognition of human remains. (c) If the coroner determines that the remains are not subject to his or her authority and if the coroner recognizes the human remains to be those of a Native American, or has reason to believe that they are those of a Native American, he or she shall contact, by telephone within 24 hours, the Native American Heritage Commission. Compliance with these regulations would ensure impacts to human remains resulting from the Project would be less than significant.</p>			
Energy			
Threshold a) Result in potentially significant environmental impact due to wasteful, inefficient, or unnecessary consumption of energy resources, during project construction or operation?			
The off-road construction equipment fuel usage was calculated through use of the off-road equipment	Less than Significant	No Mitigation Required.	Less than Significant

Table ES-1: Summary of Significant Impacts and Mitigation Measures

Project Impacts	Level of Significance before Mitigation	Mitigation	Level of Significance After Mitigation
<p>assumptions and fuel use assumptions provided in Appendix H, which found that the off-road equipment utilized during construction of the Project would consume 636,310 gallons of diesel fuel. The on-road fuel consumption during construction was calculated through use of the construction vehicle trip assumptions and fuel use assumptions provided in Appendix H, which found that the on-road trips generated from construction of the Project would consume 8,554,787 gallons of fuel. As such, the combined fuel used from off-road construction equipment and on-road construction trips for the Project would result in the consumption of 9,191,096 gallons of diesel fuel.</p> <p>Construction activities associated with the Project would be required to adhere to all State and Imperial County Air Pollution Control District regulations for off-road equipment and on-road trucks, which provide minimum fuel efficiency standards. Construction activities for the Project would not result in the wasteful, inefficient, and unnecessary consumption of energy resources. In addition, the operation of the Project would result in a net increase of 147,732,2kilowatt-hours (kWh) per year.</p> <p>Operation of the Project would result in increased consumption of petroleum-based fuels related to vehicular travel to and from the Project site. Operations related to fuel consumption were calculated using information related to the estimated number of employees, their estimated vehicle miles traveled per day, and the number of operational days per year. The</p>			

Table ES-1: Summary of Significant Impacts and Mitigation Measures

Project Impacts	Level of Significance before Mitigation	Mitigation	Level of Significance After Mitigation
<p>Based on these assumptions, the Project would consume 25,217,394 gallons of transportation fuel per year (diesel and gasoline). Additionally, the Project would comply with all federal, State, and County requirements related to the consumption of transportation energy, including CCR Title 24, Part 11, the CALGreen Code, which requires all new parking lots to provide preferred parking for clean air vehicles. Therefore, it is anticipated the Project will be designed and built to minimize transportation energy through the promotion of the use of electric-powered vehicles and that existing and planned capacity and supplies of transportation fuels would be sufficient to support the Project's demand. Thus, impacts regarding transportation energy supply and infrastructure capacity would be less than significant, and no mitigation measures would be required.</p>			
<p>Threshold b) Conflict with or obstruct a state or local plan for renewable energy or energy efficiency?</p>			
<p>The Project would not conflict with or obstruct a State or local plan for renewable energy or energy efficiency. The applicable Renewable Energy and Transmission Element for the Project is included in the County's General Plan. The Proposed Project's consistency with the applicable energy-related policies in the Renewable Energy and Transmission Element of the General Plan are shown in Table 4.4-1.</p>	<p>Less than Significant</p>	<p>No Mitigation Required.</p>	<p>Less than Significant</p>

Table ES-1: Summary of Significant Impacts and Mitigation Measures

Project Impacts	Level of Significance before Mitigation	Mitigation	Level of Significance After Mitigation
Geology and Soils			
<p>Threshold a) i) Directly or indirectly cause potential substantial adverse effects, including the risk of loss, injury, or death involving rupture of a known earthquake fault, as delineated on the most recent Alquist-Priolo Earthquake Fault Zoning Map issued by the State Geologist for the area or based on other substantial evidence of a known fault? Refer to Division of Mines and Geology Special Publication 42.</p>			
<p>ii) Directly or indirectly cause potential substantial adverse effects, including the risk of loss, injury, or death involving strong seismic ground shaking?</p>			
<p>The CBC requires that a site-specific ground motion hazard analysis be performed in accordance with American Society of Civil Engineers (ASCE) 7-16 Section 11.4.8 for structures. The parameters were determined and provided in the Geohazard Evaluation Report. General earthwork considerations pertaining to the Project include remedial grading/over excavation, excavatability, and fill materials. Design considerations would take into account expansion potential, collapse potential, and corrosivity. The Geohazard Evaluation Report notes that based on the preliminary site plans, no conditions on the Project site would preclude development of the Proposed Project, provided that Mitigation Measures GEO-1 and GEO-2 would be implemented. Therefore, the Proposed Project would be less than significant and is considered feasible from a geotechnical standpoint.</p>	<p>Potentially Significant</p>	<p>GEO-1: A complete geotechnical engineering investigation shall be completed, with a Final Geotechnical Report to be prepared prior to submittal of a grading permit. The Final Geotechnical Report shall be prepared by a qualified consultant and be submitted to the County for review and approval. The investigation will include soil test borings; specific and detailed recommendations; soil and sediment analysis; detailed analysis and design standards; geotechnical design criteria; and detailed design recommendations.</p> <p>GEO-2: All grading operations and construction shall be conducted in conformance with the recommendations included in the Geohazard Evaluation Report prepared on August 17, 2022, and Final Geotechnical Report on the Project site. Design, grading, and construction shall be performed in accordance with the recommendations of the project geotechnical consultant and corrosion engineer, subject to review by the County, prior to commencement of grading activities.</p>	<p>Less than Significant</p>
<p>iii) Directly or indirectly cause potential substantial adverse effects, including the risk of loss, injury, or death involving seismic-related ground failure, including liquefaction?</p>			
<p>As discussed, based on the presence of shallow groundwater and the nature of subsurface soils, the</p>	<p>Potentially Significant</p>	<p>GEO-1: A complete geotechnical engineering investigation shall be completed, with a Final Geotechnical Report to be</p>	<p>Less than Significant</p>

Table ES-1: Summary of Significant Impacts and Mitigation Measures

Project Impacts	Level of Significance before Mitigation	Mitigation	Level of Significance After Mitigation
<p>potential for liquefaction is high. As such, site-specific liquefaction and dynamic settlement shall be evaluated with data obtained through the soils borings during the Project's geotechnical investigation phase. Implementation of Mitigation Measures GEO-1 and GEO-2, in addition to compliance with the CBC, would result in less than significant impacts.</p>		<p>prepared prior to submittal of a grading permit. The Final Geotechnical Report shall be prepared by a qualified consultant and be submitted to the County for review and approval. The investigation will include soil test borings; specific and detailed recommendations; soil and sediment analysis; detailed analysis and design standards; geotechnical design criteria; and detailed design recommendations.</p> <p>GEO-2: All grading operations and construction shall be conducted in conformance with the recommendations included in the Geohazard Evaluation Report prepared on August 17, 2022, and Final Geotechnical Report on the Project site. Design, grading, and construction shall be performed in accordance with the recommendations of the project geotechnical consultant and corrosion engineer, subject to review by the County, prior to commencement of grading activities.</p>	
<p>Threshold c) Be located on a geologic unit or soil that is unstable, or that would become unstable as a result of the project, and potentially result in on- or off-site landslide, lateral spreading, subsidence, liquefaction or collapse?</p> <p>Threshold d) Be located on expansive soil, as defined in Table 18-1-B of the Uniform Building Code (1994), creating substantial direct or indirect risks to life or property?</p>			
<p>Based on the Project's topography and relatively flat nature of the Project site, the risk of landslides is considered remote. However, unstable soils could result in subsidence, expansive soil, liquefaction and lateral spreading. Therefore, site-specific potential for these instabilities shall be evaluated with data from the soil borings during the geotechnical investigation phase. Implementation of Mitigation Measures GEO-1 and GEO-2, as well as the considerations provided in the Geohazard Evaluation Report, would ensure that construction of the Proposed Project would not result in significant impacts</p>	<p>Less than Significant</p>	<p>GEO-1: A complete geotechnical engineering investigation shall be completed, with a Final Geotechnical Report to be prepared prior to submittal of a grading permit. The Final Geotechnical Report shall be prepared by a qualified consultant and be submitted to the County for review and approval. The investigation will include soil test borings; specific and detailed recommendations; soil and sediment analysis; detailed analysis and design standards; geotechnical design criteria; and detailed design recommendations.</p> <p>GEO-2: All grading operations and construction shall be conducted in conformance with the recommendations included</p>	<p>Less than Significant</p>

Table ES-1: Summary of Significant Impacts and Mitigation Measures

Project Impacts	Level of Significance before Mitigation	Mitigation	Level of Significance After Mitigation
<p>due to subsidence, expansive soil, liquefaction and lateral spreading.. Impacts would be less than significant with mitigation incorporated.</p>		<p>in the Geohazard Evaluation Report prepared on August 17, 2022, and Final Geotechnical Report on the Project site. Design, grading, and construction shall be performed in accordance with the recommendations of the project geotechnical consultant and corrosion engineer, subject to review by the County, prior to commencement of grading activities.</p>	
<p>Threshold e) Have soils incapable of adequately supporting the use of septic tanks or alternative waste water disposal systems where sewers are not available for the disposal of waste water?</p>			
<p>The Proposed Project would include a septic system that would be constructed to handle wastewater generated during Project operation. The Geohazard Evaluation Report notes that based on the anticipated soil types, Project site soils are expected to be moderately to severely corrosive to ferrous metals in contact. Therefore, the Proposed Project's soils shall be evaluated with data from the soil borings during the geotechnical investigation phase and will include consultation with a corrosion engineer to identify the appropriate protective measures based on the soils samples. Therefore, impacts would be less than significant with mitigation measures GEO-1 and GEO-2 incorporated.</p>	<p>Potentially Significant</p>	<p>GEO-1: A complete geotechnical engineering investigation shall be completed, with a Final Geotechnical Report to be prepared prior to submittal of a grading permit. The Final Geotechnical Report shall be prepared by a qualified consultant and be submitted to the County for review and approval. The investigation will include soil test borings; specific and detailed recommendations; soil and sediment analysis; detailed analysis and design standards; geotechnical design criteria; and detailed design recommendations.</p> <p>GEO-2: All grading operations and construction shall be conducted in conformance with the recommendations included in the Geohazard Evaluation Report prepared on August 17, 2022, and Final Geotechnical Report on the Project site. Design, grading, and construction shall be performed in accordance with the recommendations of the project geotechnical consultant and corrosion engineer, subject to review by the County, prior to commencement of grading activities.</p>	<p>Less than Significant</p>
<p>Threshold f) Directly or indirectly destroy a unique paleontological resource or site or unique geological feature?</p>			
<p>Based on information in the Geohazards Evaluation Report, sensitive Late Pleistocene- to Holocene-age Lake Cahuilla Beds exist within the Proposed Project area, and subsurface ground-disturbing activities have the potential</p>	<p>Potentially Significant</p>	<p>PALEO-1: The Applicant shall retain the services of a Qualified Paleontologist and require that all initial ground-disturbing work be monitored by someone trained in fossil identification in monitoring contexts. The Qualified</p>	<p>Less than Significant</p>

Table ES-1: Summary of Significant Impacts and Mitigation Measures

Project Impacts	Level of Significance before Mitigation	Mitigation	Level of Significance After Mitigation
<p>to impact sensitive paleontological resources. Therefore, Mitigation Measures PALEO-1 through PALEO-5 would be implemented to reduce impacts to a less than significant level.</p>		<p>Paleontologist shall prepare a Paleontological Resource Mitigation Plan to be implemented during ground-disturbing activity for the proposed Project. This program should outline the procedures for paleontological monitoring, including extent and duration; protocols for salvage and preparation of fossils; and the requirements for a final mitigation and monitoring report. The Qualified Paleontologist and a paleontological monitor shall be present at the Project construction-phase kickoff meeting.</p> <p>PALEO-2: Prior to commencing construction activities and, thus, prior to any ground disturbance in the Proposed Project site, the Qualified Paleontologist and paleontological monitor shall conduct initial Worker Environmental Awareness Program (WEAP) training to all construction personnel, including supervisors, present at the start of the Project construction work phase, for which the Applicant, or their designated Contractor, and all subcontractors shall make their personnel available. This WEAP training will educate construction personnel on how to work with the monitor(s) to identify and minimize impacts to paleontological resources and maintain environmental compliance, and it shall be performed periodically for new personnel coming on to the Project as needed.</p> <p>PALEO-3: The Applicant, or their designated Contractor, shall provide the Qualified Paleontologist with a schedule of initial potential ground-disturbing activities. A minimum of 48 hours will be provided to the consultant prior to the commencement of any initial ground-disturbing activities, such as vegetation grubbing or clearing, grading, trenching, or mass excavation.</p>	

Table ES-1: Summary of Significant Impacts and Mitigation Measures

Project Impacts	Level of Significance before Mitigation	Mitigation	Level of Significance After Mitigation
		<p>As detailed in the schedule provided, a paleontological monitor shall be present on-site at the commencement of ground-disturbing activities related to the Project. The monitor, in consultation with the Qualified Paleontologist, shall observe initial ground-disturbing activities and, as they proceed, make adjustments to the number of monitors as needed to provide adequate observation and oversight. All monitors will have stop-work authority to allow for recordation and evaluation of finds during construction. The monitor will maintain a daily record of observations as an ongoing reference resource and to provide a resource for final reporting upon completion of the Project.</p> <p>The Qualified Paleontologist, paleontological monitor, and the Applicant, or their designated Contractor, and subcontractors shall maintain a line of communication regarding schedule and activity such that the monitor is aware of all ground-disturbing activities in advance to provide appropriate oversight.</p> <p>PALEO-4: If paleontological resources are discovered, construction shall be halted within 50 feet of any paleontological finds and shall not resume until the Qualified Paleontologist can determine the significance of the find and/or the find has been fully investigated, documented, and cleared.</p> <p>PALEO-5: At the completion of all ground-disturbing activities, the Qualified Paleontologist shall prepare a Paleontological Resources Monitoring Report summarizing all monitoring efforts and observations, as performed, and any and all paleontological finds and shall provide follow-up reports of any finds to the preferred paleontological repository, as required.</p>	
Greenhouse Gases			

Table ES-1: Summary of Significant Impacts and Mitigation Measures

Project Impacts	Level of Significance before Mitigation	Mitigation	Level of Significance After Mitigation
Threshold a) Generate greenhouse gas emissions, either directly or indirectly, that may have a significant impact on the environment?			
<p>The GHG emissions are based on the proposed design detailed in the Project Description as well as IID's adherence to the State's Renewable Portfolio Standards (RPS) that require 60 percent of electricity provided by IID to be from zero-carbon emissions sources by the year 2030. Table 4.7 3 shows that the operational GHG emissions do not exceed either the USEPA's 25,000 MTCO2e emissions threshold or ICAPCD Rule 903 – 20,000 MTCO2e emissions threshold, where exceedance of either threshold would require the Project to perform additional GHG emissions recordkeeping and reporting. Therefore, the Project would offset greenhouse gas emissions. and a less than significant impact would occur.</p>	<p>Less than Significant</p>	<p>No Mitigation Required.</p>	<p>Less than Significant</p>
Threshold b) Conflict with an applicable plan, policy, or regulation adopted for the purpose of reducing the emissions of greenhouse gases?			
<p>with implementation of the Project Design Features committed to by the Project applicant and Statewide regulatory requirements including the CALGreen building standards, the Proposed Project would be consistent with all feasible mitigation measure for individual projects provided in the CARB's 2017 Scoping Plan. Therefore, implementation of the Proposed Project would not conflict with any applicable plan that reduces GHG emissions. Impacts would be less than significant.</p>	<p>Less than Significant</p>	<p>No Mitigation Required.</p>	<p>Less than Significant</p>
Hazards and Hazardous Materials			
Threshold a) Create a significant hazard to the public or the environment through the routine transport, use, or disposal of hazardous materials?			
<p>During construction and operations of the Project, hazardous materials would be transported to and from the Project site. Traffic barriers would protect piping and</p>	<p>Less than Significant</p>	<p>No Mitigation Required.</p>	<p>Less than Significant</p>

Table ES-1: Summary of Significant Impacts and Mitigation Measures

Project Impacts	Level of Significance before Mitigation	Mitigation	Level of Significance After Mitigation
<p>tanks on the site from potential traffic hazards. The Project Applicant would be required to follow all applicable federal, State, and local laws and regulations. Further, transportation would be subject to licensing and inspection by the CHP. With adherence to the regulatory measures and requirements for hazardous materials, impacts would be less than significant.</p>			
<p>Threshold b) Create a significant hazard to the public or the environment through reasonably foreseeable upset and accident conditions involving the release of hazardous materials into the environment?</p>			
<p>Based on the assessment conducted at the Project site, further investigations may be required if the areas containing RECs cannot be avoided by future development. Therefore, for the Project to not have a significant impact to the public and environment, the Project shall comply with local, State and federal guidelines and to the Mitigation Measures HAZ-1 and HAZ-2 to ensure the any accidental releases would be mitigated to a less than significant impact.</p>	<p>Less than Significant</p>	<p>MM HAZ-1: To avoid health risks to construction workers, the Applicant shall require the contractor to prepare and implement a site Health and Safety Plan (HSP) if areas containing hazardous materials are to be disturbed. This plan will outline measures that will be employed to protect construction workers and the public from exposure to hazardous materials during construction activities. This plan shall be prepared prior to any ground-disturbing activities and shall be reviewed and approved by the Project Applicant. Workers shall review and sign the site HSP prior to proceeding with the assigned work.</p> <p>MM HAZ-2: For any gen-tie structures or other areas of project ground disturbance that are close to a REC, a Phase 2 limited soil sampling shall be conducted to determine if there are any hazardous materials present on-site. The soil sampling shall be conducted during final design and prior to construction. Soil sampling will determine the California Human Health Screening Levels (CHHSL) of the testing protocol (CAM 17 metals, a list of 17 metals found typically in hazardous materials and mining sites). The CHHSLs are a list of 54 hazardous chemicals in soil or soil gas that the California Environmental</p>	<p>Less than Significant</p>

Table ES-1: Summary of Significant Impacts and Mitigation Measures

Project Impacts	Level of Significance before Mitigation	Mitigation	Level of Significance After Mitigation
		Protection Agency (CalEPA) considers to be below thresholds for risks to human health. The Imperial County Public Health Department, Division of Environmental Health (DEH) shall review the soil sampling results. If the results are above the CHHSLs, then the DEH would refer the project to the California Department of Toxic Substances Control for proper soil handling and removal procedures.	
Threshold g) Expose people or structures, either directly or indirectly, to a significant risk of loss, injury or death involving wildland fires?			
During operations, a brush control program would be prepared and implemented on those portions of the Project site that will not be developed. The Imperial County Fire District would be consulted to review and approve all proposed fire equipment, apparatus, and related fire prevention plans. Due to compliance with the measures identified above, and the distance from an identified area of high fire hazard risk, the Project would result in a less than significant impact associated with wildfires.	Less than Significant	No Mitigation Required.	Less than Significant
Hydrology and Water Quality			
Threshold a) Violate any water quality standards or waste discharge requirements, or otherwise substantially degrade surface or ground water quality?			
Due to the size of the Project, Postconstruction Standards from the Phase II Small MS4 Permit will be applied to the Project. The proposed Project will implement site-design BMPs, source-control measures, low-impact development (LID) BMPs, and hydromodification-management BMPs to meet the permit criteria. The Project owner will maintain all on-site site-design BMPs, source-control measures, postconstruction BMPs, and retention basins during the lifetime of the Project. A full list of postconstruction BMPs is provided in Appendix I.	Less than Significant	HWQ-1 Prepare SWPPP and Implement BMPs Prior to Construction and Site Restoration. The Project applicant or its contractor shall prepare a Storm Water Pollution Prevention Plan (SWPPP) specific to the Project and be responsible for securing coverage under the State Water Resources Control Board's National Pollution Discharge Elimination System stormwater permit for general construction activity (Order 2009-0009-DWQ). The SWPPP shall identify specific actions and best management practices (BMPs) related to the prevention of stormwater pollution from Project-related construction sources	Less than Significant

Table ES-1: Summary of Significant Impacts and Mitigation Measures

Project Impacts	Level of Significance before Mitigation	Mitigation	Level of Significance After Mitigation
<p>With implementation of Mitigation Measures HWQ-1 and HWQ-2 impacts to water quality standards and waste discharge requirements would be less than significant.</p>		<p>by identifying a practical sequence for site restoration, BMP implementation, contingency measures, responsible parties, and agency contacts. The SWPPP shall reflect localized surface hydrological conditions and shall be reviewed and approved by the appropriate agency prior to commencement of work and shall be made conditions of the contract with the contractor selected to build and decommission the Project. The SWPPP shall incorporate control measures in the following categories:</p> <ul style="list-style-type: none"> - Soil stabilization and erosion control practices - Sediment control practices - Temporary and postconstruction on- and off-site runoff controls - Special considerations and BMPs for water crossings and drainages - Monitoring protocols for discharge(s) and receiving waters, with emphasis place on the following water quality objectives: dissolved oxygen, floating material, oil and grease, potential of hydrogen (pH), and turbidity - Waste management, handling, and disposal control practices - Corrective action and spill contingency measures - Agency and responsible party contact information - Training procedures that shall be used to ensure that workers are aware of permit requirements and proper installation methods for BMPs specified in the SWPPP <p>The SWPPP shall be prepared by a Qualified SWPPP Practitioner and/or Qualified SWPPP Developer, with BMPs selected to achieve maximum pollutant removal and representative of the best available technology that is economically achievable. Emphasis for BMPs shall be placed on controlling discharges of</p>	

Table ES-1: Summary of Significant Impacts and Mitigation Measures

Project Impacts	Level of Significance before Mitigation	Mitigation	Level of Significance After Mitigation
		<p>oxygen-depleting substances; floating material; oil and grease; acidic or caustic substances or compounds; and turbidity. BMPs for soil-stabilization, erosion-control, and sediment-control practices will also be required. Performance and effectiveness of these BMPs shall be determined either by visual means where applicable (i.e., observation of above-normal sediment release), or by actual water sampling in cases where verification of contaminant reduction or elimination, (inadvertent petroleum release) is required to determine adequacy of the measure.</p> <p>HWQ-2 Incorporate Postconstruction Runoff BMPs into Project Drainage Plan. The Project Drainage Plan shall adhere to the County's Engineering Guidelines Manual, IID Draft Hydrology Manual or other recognized source with approval by the County Engineer to control and manage the on- and off-site discharge of stormwater to existing drainage systems. Infiltration basins will be integrated into the Drainage Plan to the maximum extent practical. The Drainage Plan shall provide both short and long-term drainage solutions to ensure the proper sequencing of drainage facilities and management of runoff generated from Project-related impervious surfaces as necessary.</p>	
Noise			
Threshold a)	Result in generation of a substantial temporary or permanent increase in ambient noise levels in the vicinity of the project in excess of standards established in the local general plan or noise ordinance, or applicable standards of other agencies?		
Implementation of the Project would not result in a substantial increase in ambient noise levels at off-site noise-sensitive receptors or exceed the County of Imperial Property Line Noise Standards (70 dBA anytime	Less than Significant	No Mitigation Required.	Less than Significant

Table ES-1: Summary of Significant Impacts and Mitigation Measures

Project Impacts	Level of Significance before Mitigation	Mitigation	Level of Significance After Mitigation
for Light Industrial/Industrial Park Zones) and the applicable Noise/Land Use Compatibility criteria. Based on reported noise levels from similar operations, it is anticipated that noise levels would not exceed the County property line noise limits at the closest sensitive receptors. Therefore, operational noise impacts would be less than significant.			
Transportation			
Threshold a)	Conflict with a program, plan, ordinance or policy addressing the circulation system, including transit, roadways, bicycle and pedestrian facilities?		
Threshold b)	Conflict or be inconsistent with CEQA Guidelines section 15064.3, subdivision (b)?		
The Project's traffic analysis zone (TAZ 5600) has an estimated VMT per employee of 20.84, which is approximately 82.5% of the Countywide average of 25.25 and falls below the 85% threshold of 21.46. Therefore, based on the VMT analysis presented above, the Proposed Project represents a less than significant transportation impact and no further VMT analysis is required.	Less than Significant	No Mitigation Required.	Less than Significant
Tribal Cultural Resources			
Threshold a)	Cause a substantial adverse change in the significance of a tribal cultural resource, defined in Public Resources Code Section 21074 as either a site, feature, place, cultural landscape that is geographically defined in terms of the size and scope of the landscape, sacred place or object with cultural value to a California Native American tribe, and that is:		
	Listed or eligible for listing in the California Register of Historical Resources, or in a local register of historical resources as defined in Public Resources Code Section 5020.1(k), or		

Table ES-1: Summary of Significant Impacts and Mitigation Measures

Project Impacts	Level of Significance before Mitigation	Mitigation	Level of Significance After Mitigation
<p>A resource determined by the lead agency, in its discretion and supported by substantial evidence, to be significant pursuant to criteria set forth in subdivision (c) of Public Resources Code Section 5024.1. In applying the criteria set forth is subdivision (c) of Public Resource Code Section 5024.1, the lead agency shall consider the significance of the resource to a California Native American Tribe.</p>			
<p>Based on the results of the Cultural Resources Survey and in consultation with the tribes, the County has determined there are no known tribal cultural resources within the Project site. However, the potential remains for the Project's ground-disturbing activity to impact undiscovered resources. These resources could include but not be limited to lithic materials, faunal, pottery, ceramics, building materials, or glassware. Impacts would be considered less than significant with implementation of the mitigation measures outlined in Section 4.4.</p>	<p>Less than Significant</p>	<p>CUL-1 The Applicant shall retain the services of a Qualified Archaeologist meeting the Secretary of the Interior Standards or County standards, whichever is greater, and require that all initial ground-disturbing work be monitored by archaeological specialist (monitor) proficient in artifact and feature identification in monitoring contexts. The Consultant (Qualified Archaeologist and/or monitor) shall be present at the Project construction phase kickoff meeting.</p> <p>CUL-2 Prior to commencing construction activities and thus prior to any ground disturbance in the Proposed Project site, the Consultant shall conduct initial Worker Environmental Awareness Program (WEAP) training to all construction personnel, including supervisors, present at the outset of the Project construction work phase, for which the Lead Contractor and all subcontractors shall make their personnel available. A tribal monitor shall be provided an opportunity to attend the preconstruction briefing, if requested. This WEAP training will educate construction personnel on how to work with the monitor(s) to identify and minimize impacts to archaeological resources and maintain environmental compliance. This WEAP training will educate the monitor(s) of construction procedures to avoid construction-related injury or harm. This training may be performed periodically, such as for new personnel coming on to the Project as needed.</p> <p>CUL-3 The Contractor shall provide the Consultant with a schedule of initial potential ground-disturbing activities. A</p>	<p>Less than Significant</p>

Table ES-1: Summary of Significant Impacts and Mitigation Measures

Project Impacts	Level of Significance before Mitigation	Mitigation	Level of Significance After Mitigation
		<p>minimum of 48 hours will be provided to the Consultant of commencement of any initial ground-disturbing activities, such as vegetation grubbing or clearing, grading, trenching, or mass excavation.</p> <p>A monitor shall be present on-site at the commencement of ground-disturbing activities related to the Project. The monitor, in consultation with the Qualified Archaeologist, shall observe initial ground-disturbing activities and, as they proceed, adjust the number of monitors as needed to provide adequate observation and oversight. All monitors will have stop-work authority to allow for recordation and evaluation of finds during construction. The monitor will maintain a daily record of observations to serve as an ongoing reference resource and to provide a resource for final reporting upon completion of the Project.</p> <p>The Consultant and the Lead Contractor and subcontractors shall maintain a line of communication regarding schedule and activity such that the monitor is aware of all ground-disturbing activities in advance to provide appropriate oversight.</p> <p>CUL-4 In the event of the discovery of previously unidentified archaeological materials, the Contractor shall immediately cease all work activities within an area of no less than 100 feet of the discovery. After cessation of excavation, the Contractor shall immediately contact the County. Except in the case of cultural items that fall within the scope of the Native American Grave Protection and Repatriation Act (NAGPRA), the California Health and Safety Code 7050.5, CEQA Section 15064.5, or California Public Resources Code Section 5097.98, the discovery of any cultural resource within the Project area shall not be grounds for a Project-wide “stop work” notice or otherwise interfere with the Project’s continuation except as set forth in</p>	

Table ES-1: Summary of Significant Impacts and Mitigation Measures

Project Impacts	Level of Significance before Mitigation	Mitigation	Level of Significance After Mitigation
		<p>this paragraph. Additionally, all consulting Native American tribal groups that requested notification of any unanticipated discovery of archaeological resources on the Project shall be notified appropriately. If a discovery results in the identification of cultural items that fall within the scope of NAGPRA, the Contractor shall immediately cease all work activities within an area of no less than 100 feet (30 meters) of the discovery. In the event of an unanticipated discovery of archaeological materials during construction, the Applicant-retained Qualified Professional Archaeologist shall be contacted to evaluate the significance of the materials prior to resuming any construction-related activities in the vicinity of the find. If the Qualified Archaeologist determines that the discovery constitutes a significant resource under CEQA and it cannot be avoided, the Applicant shall implement an archaeological data recovery program.</p> <p>CUL-5 At the completion of all ground-disturbing activities, the Consultant shall prepare an Archaeological Resources Monitoring Report summarizing all monitoring efforts and observations, as performed, and any and all prehistoric or historic archaeological finds as well as providing follow-up reports of any finds to the SCCIC, as required.</p> <p>In the event unanticipated, buried prehistoric archaeological resources (lithic material, faunal, pottery, etc.) or historical archaeological resources (ceramics, building materials, glassware, etc.) are unearthed during construction or any ground disturbing activities within the Project area, additional resource treatments would become necessary. Once a potential resource has been identified, all work within 100 feet must be halted until the find can be assessed by a qualified archaeologist.</p>	

Table ES-1: Summary of Significant Impacts and Mitigation Measures

Project Impacts	Level of Significance before Mitigation	Mitigation	Level of Significance After Mitigation
Utilities and Service Systems			
Threshold a) Require or result in the relocation or construction of new or expanded water, wastewater treatment or stormwater drainage, electric power, natural gas, or telecommunications facilities, the construction of which could cause significant environmental effects?			
New facilities would be constructed for the purpose of water, wastewater treatment, stormwater drainage, electric power, natural gas, and telecommunications. Expansion of these facilities would utilize existing infrastructure no limited to existing irrigation canals and power/telephone lines which would minimize damage to existing facilities. Therefore, no significant environmental effects are expected to result. Impacts would be less than significant.	Less than Significant	No Mitigation Required.	Less than Significant
Threshold b) Have sufficient water supplies available to serve the project from existing and reasonably foreseeable future development during normal, dry and multiple dry years?			
When drought conditions exist within the IID water service area, as has been the case for the past decade or so, the water supply available to meet agricultural and nonagricultural water demands remains the same as normal year water supply because IID continues to rely on its entitlement for Colorado River water. Due to the priority of water rights and other agreements, drought affecting Colorado River water supplies causes shortages for Arizona, Nevada, and Mexico, but not California or IID.	Potentially Significant	UTIL-1: If the IID does not receive its annual 3.1 maf water apportionment according to the QSA obligations of Colorado River water during the Project's 30-year lifespan, the Applicant shall work with IID to ensure any reduction in water availability can be managed by the Project.	Less than Significant

Table ES-1: Summary of Significant Impacts and Mitigation Measures

Project Impacts	Level of Significance before Mitigation	Mitigation	Level of Significance After Mitigation
<p>Therefore, the likelihood that IID will not receive its annual 3.1 million AF apportionment under the QSA obligations of Colorado River water is low due to the high priority of the IID entitlement relative to other Colorado River contractors (see Appendix J for further details on the IID's water rights). If such reductions were to come into effect within the life of the 30-year Project, a significant impact would occur. If such reductions do occur, Mitigation Measure (MM) UTIL-1 would be implemented, requiring the Applicant to work with IID to ensure any reduction in water availability during the life of the Project can be managed. Therefore, with implementation of MM UTIL-1, impacts would remain less than significant.</p>			
<p>Threshold d) Generate solid waste in excess of State or local standards, or in excess of the capacity of local infrastructure, or otherwise impair the attainment of solid waste reduction goals?</p>			
<p>it is estimated that 90 percent of filter cakes would fall below California thresholds for soluble threshold limit concentration (STLC) and total threshold limit concentration (TTLC). The remaining 10 percent, or approximately 4,178 cy, would exceed these standards and would be trucked to the Copper Mountain Landfill located at 34853 County 12th Street in Wellton, Arizona, approximately 96 miles southeast of the Project site. This landfill has a design capacity for 2.5 million megagrams. Although the remaining landfill capacity is not available, the amount of solid waste sent to this facility would be minimal. If the filter cakes were to exceed Arizona's toxicity standards which is not expected to occur, the Applicant will arrange for hazardous materials to be trucked to Idaho or Nevada.</p>	<p>Less than Significant</p>	<p>No Mitigation Required.</p>	<p>Less than Significant</p>

Table ES-1: Summary of Significant Impacts and Mitigation Measures

Project Impacts	Level of Significance before Mitigation	Mitigation	Level of Significance After Mitigation
<p>As mentioned in Chapter 2: Project Description, approximately every three years the Project facilities will be shut down for about three weeks to complete a facility cleaning. This process would remove mineral scale from Project plant piping. The scale removed during this process has the potential to exceed STLC and TTLC standards for Arizona, in which case solid waste would be required to be trucked to Nevada. However, this is an extremely rare occurrence, and in the past 10 years only two truckloads have needed to be transported to Nevada. The implementation of the Proposed Project would not increase the amount of solid waste needing to go out of state.</p> <p>Therefore, solid waste facilities have adequate permitted capacity for solid waste materials generated by the Project. Impacts would be less than significant.</p>			
<p>Threshold e) Comply with federal, state, and local management and reduction statutes and regulations related to solid waste?</p>			
<p>Disposal of solid/hazardous wastes generated during Project construction and operations would be in compliance with local federal, State, and County regulations and disposed of at authorized facilities. Therefore, a less than significant impact would occur.</p>	<p>Less than Significant</p>	<p>No Mitigation Required.</p>	<p>Less than Significant</p>

SECTION 1.0 – PROJECT OVERVIEW

1.1 INTRODUCTION

1.2 PROJECT SUMMARY

The Final Environmental Impact Report for the Hell's Kitchen PowerCo1 and Lithium Co Project (Proposed Project) has been prepared by the County of Imperial, in accordance with the California Environmental Quality Act (CEQA) Guidelines §15086: Consultation Concerning the Draft EIR, §15088: Evaluation of and Response to Comments, and §15132: Contents of Final Environmental Impact Report. This Final FEIR consists of the following information:

- a. The Draft EIR, which was circulated for more than the mandatory 45-day public comment period beginning August 30, 2023 and ending October 23, 2023; and
- b. A list of all commenters during the public comment period, including copies of written comment letters; and
- c. Responses to all comments;
- d. Revisions to the Draft EIR.

None of the revisions of the Draft EIR characterize a substantial increase in the severity of an identified impact, identification of a new significant impact, mitigation measure, of alternative different from those already considered in preparing the Draft EIR. The Draft EIR, and Final EIR, and administrative record are available for review upon request at:

801 Main St. El Centro, CA 92243 during normal working hours of 7:00 a.m. to 5:00 p.m., Monday through Friday.

1.3 PROJECT DESCRIPTION SUMMARY

Controlled Thermal Resources (US) Inc. via its subsidiary Hell's Kitchen Geothermal, LLC is proposing the Hell's Kitchen PowerCo 1 (HKP1), and Hell's Kitchen LithiumCo 1 LLC is proposing the Hell's Kitchen LithiumCo 1 (HKL1) in Imperial County, California. HKP1 involves the development of a geothermal power plant that will produce up to 49.9 megawatts (MW) net of geothermal green energy. HKL1 involves development of mineral extraction and processing facilities capable of producing lithium hydroxide, silica and polymetallic products, and possibly boron compounds, for commercial sale. HKP1 and HKL1 (together referred to as the Proposed Project) will be constructed by Hell's Kitchen PowerCo 1 LLC and Hell's Kitchen LithiumCo 1 LLC respectively, both subsidiaries of Controlled Thermal Resources (US) Inc. (CTR) and will have shared facilities. Hell's Kitchen Operating Services LLC, also a subsidiary of Controlled Thermal Resources (US) Inc. will operate and maintain these facilities.

Refer to Chapter 2 of the Draft EIR for a complete description of the project.

1.4 ADEQUACY OF THE FINAL FEIR

Under CEQA, the responses to comments on a Draft EIR must include good faith, well-reasoned responses to all comments received on the Draft EIR that raise significant environmental issues related to the project under review. If a comment does not relate to the Draft EIR or does not raise a significant environmental issue related to the project, there is no need for a response under CEQA.

CEQA does not require the EIR authors to conduct every test or perform all research or study suggested by commenters in responding to comments. The EIR need only to respond to significant environmental issues and need not provide all of the information requested by reviewers, as long as a good faith effort at full disclosure is made in the EIR (CEQA Guidelines Sections 15088, 15132, and 15204).

1.5 COMMENTS ON THE DRAFT EIR

The Lead Agency, under the CEQA Guidelines §15086: Consultation Concerning Draft EIR, and §15088: Evaluation of and Response to Comments, is required to consult with and obtain comments from other public agencies who have jurisdiction or are included in the decision-making process of the project, and to provide the public an opportunity to comment on the project. The Lead Agency is required to respond in writing to substantive environmental comments.

Comments received during the public review period were submitted in the following formats: email, hand written comment cards, and letters between August 30, 2023 and October 23, 2023; however, the County in a good faith effort has accepted comments on the DEIR until November 30, 2023.

1.6 LIST OF COMMENTERS

This section provides responses to written comments received during the 45-day public review period, and period following public review up until November 30, 2023. The following tables provides a list of agencies, individuals, and organizations that submitted comments on the Draft EIR during the public review period.

Comment Letter No.	Commenting Agency	Date of Comment
1	U.S. Fish and Wildlife Service	10.20.2023
2	California Department of Conservation	10.21.2023
3	California State Lands Commission	10.23.2023
4	California Department of Fish and Wildlife	10.23.2023
5	Imperial County Air Pollution Control District	10.27.2023
6	Imperial Irrigation District	11.22.2023

Comment Letter No.	Individual Comments	Date of Comment
7	Performance Mechanical Contractors	10.5.2023
8	Energy Source Minerals	10.22.2023
9	CYRQ – Hudson Ranch	10.23.2023
10	Law Offices of Jordan R. Sisson	10.23.2023
11	Courtney Ann Coyle Attorney at Law	10.23.2023

Comment Letter No.	Organizations	Date of Comment
12	State Building and Construction Trades Council of California	10.4.2023

SECTION 2.0 – RESPONSES TO COMMENTS

2.1 AGENCY COMMENTS

Comment Letter #1:



United States Department of the Interior

U.S. FISH AND WILDLIFE SERVICE
Ecological Services
Palm Springs Fish and Wildlife Office
777 East Tahquitz Canyon Way, Suite 208
Palm Springs, California 92262



In Reply Refer to:
2023-0096639-TA-COM-IMP

October 20, 2023
Sent Electronically

David Black
Senior Planner
Imperial County Planning and Development Services
801 Main Street
El Centro, California 92243

Subject: Draft Environmental Impact Report for the Hell's Kitchen PowerCo 1 and LithiumCo 1 Project, Imperial County, California

Dear David Black:

We have reviewed the above-referenced draft Environmental Impact Report (EIR; Chambers Group 2023) received September 8, 2023, for the proposed development of Controlled Thermal Resources (CTR), Hell's Kitchen PowerCo 1 and LithiumCo 1 Project (Project) in unincorporated Imperial County, California. The Project proposes to construct, operate, and maintain a 49.9 megawatt (MW) geothermal power plant; well pads with geothermal production and injection wells; a mineral extraction facility; pipelines between the power plant and mineral extraction facilities; mineral handling and packaging facilities; shared administrative facilities; a 2-mile long, 230 kilovolt (kV), generation intertie (gen-tie) line and co-located power lines; and the paving of Davis Road from MacDonald Road to Noffsinger Road including ingress and egress to the Project site from Davis Road.

Based on information in the EIR, the Project area includes a 74-acre Project site located southeast of the Salton Sea within undeveloped land owned by Imperial Irrigation District (IID). The main vegetation communities and land cover types on the Project site include Southern cattail (*Typha domingensis*) marsh and similar emergent wetlands, tamarisk (*Tamarix* spp.) thickets, iodine bush (*Allenrolfea occidentalis*), dry playa, IID irrigation drains, open water, and bare ground.

We offer the following comments as they relate to potential impacts on public trust resources. The primary concern and mandate of the U.S. Fish and Wildlife Service (Service) is the conservation, protection, and enhancement of fish and wildlife resources and their habitats for the continuing benefit of the American people. The Service has legal responsibility for the welfare of migratory birds and threatened and endangered animals and plants occurring in the United States. The Service is also responsible for administering the Federal Endangered Species Act (Act) of 1973, as amended (16 U.S.C. 1531 *et seq.*).

David Black (2023-0096639-TA-COM-IMP)

2

We preface our comments by recognizing the need for development of renewable energy and the challenge of balancing renewable energy development with conserving natural resources in the Salton Sea Basin. We are working with the agencies involved in this effort and offer our assistance to ensure all proposed projects are evaluated consistent with the various State and Federal renewable energy and environmental goals and policies.

Over the past 5 years, the Service has coordinated with CTR on several associated projects in the vicinity. These include the Geothermal Exploration and Monitoring Well Pad 1 (Service 2018), Hell's Kitchen Geothermal S-Berm Access Road and Minerals Test Project (Service 2019), and the IID drain extensions that are currently being restored to their original drain outlet locations. Based on this coordination, we have a current understanding of the vegetation dynamics of the area and have knowledge of the occurrences of federally listed species that are in, or adjacent to, the Project site. The two federally endangered species that may be adversely affected by Project activities are Yuma Ridgway's rail (*Rallus obsoletus yumanensis*) and desert pupfish (*Cyprinodon macularius*).

To effectivity evaluate the impacts of the proposed Project on the federally listed species in the action area, we recommend that information be provided on potential Project impacts that occur within, and adjacent to, the Project area, including total acres of habitat removed/disturbed (including any associated with the excavation of fill material); activities that may adversely impact listed species feeding, breeding, and sheltering activities, such as loss of water quality (e.g., increases in water temperature, salinity, or selenium) or dewatering activities, duration of impacts, and associated avoidance and minimization measures. Additionally, CTR is in the process of restoring IID irrigation drains to their original outlet locations. Once the drains are restored, water from these drains will likely drain into some Project areas. We recommend the EIR evaluate how water from the restored drain outlets will affect Project construction areas and how that water could be more effectively managed to avoid ponding and establishment of wetlands in some Project areas.

Migratory Birds

The Project is located southeast of the Salton Sea, on dry playa. The Salton Sea and adjacent areas occur within the Pacific Flyway and provide permanent habitat and seasonal refuge to hundreds of species of resident and migratory birds (Shuford *et al.* 2002, Patten *et al.* 2003), and large populations of shorebirds, wading birds, waterfowl, raptors, upland gamebirds, neotropical migrants, and other passerines. To date, limited published information exists on bird collisions at renewable energy facilities within the Salton Sea Basin due to a lack of systematic, statistically rigorous monitoring. However, projects in the vicinity are reporting avian mortalities and injuries resulting from collisions with electrical distribution lines onsite, and gen-tie lines to regional substations on the grid. Therefore, it is likely the Project will contribute to an increase in avian fatalities through collision with newly installed fencing, onsite electrical distribution lines, and gen-tie lines.

The draft EIR includes a requirement for development of a Nesting Bird Plan but does not provide details of the content included in this plan. To help reduce adverse impacts to migratory

David Black (2023-0096639-TA-COM-IMP)

3

birds we recommend the project applicant develop an Avian Protection Plan (APP) that would further the conservation of avian species. The APP should include, at a minimum, a nesting bird management plan and systematic post-construction mortality monitoring along the newly installed distribution and gen-tie lines to ensure the measures to reduce collisions with these lines are adequate. The Service is available to work with the project applicant to develop an effective APP. See the enclosure (Enclosure) for specific information on developing an APP.

Also, to further avoid or reduce adverse effects to migratory birds, we recommend the following measures be considered:

1. Undergrounding of on-site distribution lines.
2. Using monopoles for any above-ground distribution lines and gen-tie lines.
3. Marking fences to reduce avian collisions.
4. Avoiding the use of lattice-type structures or placing external ladders and platforms on Project infrastructure to minimize perching and nesting opportunities for birds on site.
5. Avoiding the use of guy wires, or where this is not feasible, placing markers on the guy wires to increase visibility of these hazards to birds.

Cumulative Effects

The draft EIR concludes the proposed mitigation measures will ensure the Project does not cumulatively affect migratory birds. This conclusion is based only on five related projects near the proposed Project, listed in Figure 3.0-1, in the draft EIS. However, several other renewable energy projects are near the proposed Project (e.g., Midway Solar Farm IV, Lindsey Solar Farm, Wilkinson Solar Farm, Morton Bay Geothermal, Elmore North Geothermal, and Black Rock Geothermal) and are within the Pacific Flyway in the region that could have adverse effects on migratory birds. A more accurate analysis of the impacts of cumulative habitat loss and the potential for bird fatalities would include all renewable energy projects in the Imperial Valley that cover about 24,000 acres of converted agricultural fields within the Pacific Flyway and all the associated new electrical gen-tie lines. Therefore, we recommend the EIR incorporate all the renewable energy projects and associated infrastructure in Imperial County in the cumulative effects analysis.

Yuma Ridgway's Rail

In the U.S., the Yuma Ridgway's rail is currently restricted to wetlands along the Salton Sea and lower Colorado River, as well as several small temporary marshes along the Gila River in Arizona from Phoenix west to the Colorado River (Service 2009). Based on recent research, Yuma Ridgway's rails in the Salton Sea Basin are for the most part non-migratory, however, localized movements and some long-distance migrations occur within the range of the species (Harrity and Conway 2021). Radar studies conducted in the 1980s at the south end of the Salton

David Black (2023-0096639-TA-COM-IMP)

4

Sea along the Alamo and New Rivers documented Yuma Ridgway's rails departing marsh habitats flying at relative low altitudes, 165 to 330 feet (McKernan 2018, pers. comm.). This dispersal behavior and low elevation flight patterns make all age classes of Yuma Ridgway's rails susceptible to collisions with many structures, including power lines, towers, and fences. We are aware of two Yuma Ridgway's rail fatalities that have occurred at nearby solar project sites near the Project area resulting from collision. Therefore, we recommend the Project incorporate measures to reduce this potential adverse effect with installation of fence and electrical line markers or undergrounding electrical facilities. See the enclosure for more information.

Desert Pupfish

We appreciate the addition of BIO-8, Desert Pupfish Protection and Relocation Plan, to avoid or minimize adverse impacts to desert pupfish. We have provided some revisions to this measure (see Enclosure) for consistency with previous project reviews in the Project area.

We appreciate the opportunity to provide comments on the draft EIR. We have enclosed specific recommendations to assist in avoidance and minimization of impacts to public trust resources. Should you have any questions regarding these comments, please contact [Felicia Sirchia](mailto:Felicia_Sirchia@fws.gov)¹ of my staff by email or at 760-322-2070.

Sincerely,

VINCENT JAMES

Digitally signed by
VINCENT JAMES
Date: 2023.10.20
09:12:25 -07'00'

for Rollie White
Assistant Field Supervisor

Enclosure

cc:

Charley Land, California Department of Fish and Wildlife

¹ felicia_sirchia@fws.gov.

David Black (2023-0096639-TA-COM-IMP)

5

LITERATURE CITED

- [APLIC] Avian Power Line Interaction Committee. 2006. Suggested practices for avian protection on power lines, the state of the art in 2006. Edison Electric Institute, Avian Power Line Interaction Committee, and California Energy Commission. Washington, D.C. and Sacramento, California.
- [APLIC] Avian Power Line Interaction Committee. 2012. Reducing Avian Collisions with Power Lines: The State of the Art in 2012. Edison Electric Institute and APLIC. Washington, D.C.
- Chambers Group. 2023. Draft Environmental Impact Report for the Hell's Kitchen PowerCo 1 and LithiumCo 1 Project Imperial County, California. San Diego, California
- Harrity, E.J., and C.J. Conway. 2021. Dispersal and Migration Behavior of Yuma Ridgway's Rails: 2021 Annual Report. Wildlife Research Report #2021-01. Idaho Cooperative Fish and Wildlife Research Unit, Moscow, ID.
- Patten, M.A., G. McCaskie, and P. Unitt. 2003. Birds of the Salton Sea. Status, Biogeography, and Ecology. University of California Press. Berkeley, California.
- Shuford W.D., N. Warnock, K.C. Molina, and K.K. Sturm. 2002. The Salton Sea as critical habitat to migratory and resident waterbirds. *Hydrobiologia* 473:255-274.
- [Service] U.S. Fish and Wildlife Service. 2009. Yuma clapper rail (*Rallus longirostris yumanensis*) recovery plan. Draft first revision. U.S. Fish and Wildlife Service, Southwest Region. Albuquerque, New Mexico. 73 pp.
- [Service] U.S. Fish and Wildlife Service. 2018. Concurrence letter for the Hell's Kitchen Geothermal Exploration and Monitoring Well (FWS-ERIV-16B0314-16I0625), Imperial County, California, May 8, 2018. Palm Springs Fish and Wildlife Office, Palm Springs, California.
- [Service] U.S. Fish and Wildlife Service. 2019. Biological Opinion on the Hell's Kitchen Geothermal S-Berm Access Road and Minerals Test Project (FWS-IMP-16B0314-19F0715), Imperial County, California, July 12, 2019. Carlsbad Fish and Wildlife Office, Carlsbad, California.

PERSONAL COMMUNICATION

- McKernan, R. 2018. Ornithologist, Oasis Bird Observatory and Director Emeritus San Bernardino County Museum. Email correspondence to Felicia Sirchia, USFWS, Palm Springs Fish and Wildlife Office, Palm Springs, California. Dated 10/09/2018. Subject: Yuma Ridgway's Rail flying altitudes.

ENCLOSURE

**U.S. Fish and Wildlife Service
Avoidance and Minimization Recommendations on the
Draft EIR for the Hell's Kitchen PowerCo 1 and LithiumCo 1 Project**

Avian Recommendations

1. Prepare and implement an Avian Protection Plan (APP) in consultation with Imperial County, the California Department of Fish and Wildlife (CDFW), and the U.S. Fish and Wildlife Service (Service) for review and comment. The APP will include the following:
 - a. A description and assessment of the existing habitat, risk characterization, and avian risk minimization measures.
 - b. An adaptive management and decision-making framework for reviewing, characterizing, and responding to monitoring results.
 - c. Specific conservation measures and/or programs to minimize and reduce avian injury or mortality over time and evaluation of the applicability and effectiveness of those measures using results from the monitoring program.
 - d. Water storage and brine pond management
2. Avoid using lattice-type structures and placing external ladders and platforms on towers to minimize perching and nesting.
3. Minimize use of outdoor lighting. If lighting is necessary, it should be focused downward to reduce skyward illumination. Lights should be equipped with motion detectors to reduce continuous illumination.
4. Where feasible, install transmission and distribution lines underground or on the surface as insulated, shielded wire to avoid avian collision and electrocution hazards. Use the most recent recommendations of the Avian Power Line Interaction Committee (APLIC 2006, 2012) for any required above-ground lines, transformers, or conductors to reduce collisions and electrocutions. When transmission lines must be above-ground, avoid placing lines within wetlands and over canyons.
5. Install and replace flight diverters, as needed on the proposed transmission line to render the line more visible to resident listed and migratory birds, including night-migrating birds.
6. Install fence markers or other devices on perimeter fences to render the fence more visible (both day and night) to resident listed and migratory birds to reduce collision risk.

David Black (2023-0096639-TA-COM-IMP)

7

Desert Pupfish Recommendation

We recommend revising BIO-8, Desert Pupfish Protection and Relocation Plan, using the language below:

Prepare and implement a desert pupfish protection and relocation plan. This plan will be submitted to the Service and the CDFW for review and approval prior to any ground-disturbing activities that have a water component. This plan will provide:

1. Protocols for pre-construction or pre-maintenance surveys to assess species presence and spawning within or immediately adjacent to work areas (e.g., in, or at the end of, the irrigation drains/drain canals, open water areas, and around the open water margins). The protocols will also outline the qualifications required for biologists to conduct desert pupfish survey, capture, and relocation activities and the process for biologist approval.
2. Capture (e.g., trapping in the irrigation drains for construction and maintenance; or trapping, dip netting, and seining in open water areas that are drained or if the water level is dropped) and transport methods to minimize handling and stress as well as exposure to heat, low dissolved oxygen (DO), and crowding.
3. Identification of locations for release of captured desert pupfish.
4. Timing windows when construction or maintenance in open water areas and in the irrigation drain mouths/canals may be conducted with minimal effects on desert pupfish spawning.
5. Adaptive management procedures that include assessment of mitigation measure effectiveness, development of revised measures to improve effectiveness, and similar assessment of revised measures to verify effectiveness.

Response to Comment Letter #1

Both Yuma Ridgway's rail and desert pupfish are addressed in the Draft EIR. The dynamic vegetation conditions are also described in the DEIR and associated technical studies and the DEIR noted the change in vegetation conditions from 2021 to 2022. The conditions are dynamic and are likely to continue to change prior to development of the project. The EIR describes a full range of impacts on those communities and is conservative in its analysis of effects.

The Draft EIR describes the range of impacts that could occur on federally listed species in the area. All of the suitable habitat for Yuma Ridgway's rail and desert pupfish within the Project development area is assumed to be impacted and developed by Project construction. Actual impacts on habitat for federally listed species would reflect the full extent of suitable habitat on the site at the time of construction. As noted in the prior comment and response, the habitat conditions on the Project site are dynamic and the EIR discloses the range of impacts that are likely to occur on the site including impacts on federally listed species. Impacts on habitat for Yuma Ridgway's rail are addressed through Mitigation Measures BIO-13 in the EIR, which was designed to be adaptive to the changing habitat conditions and allow for quantification of impacts and approaches to offset those impacts at the time of construction. In addition, Mitigation Measure BIO-19 includes creation of wetland and open water habitat that would include suitable habitats for Yuma Ridgway's rail and desert pupfish. The project could result in potential impacts on water quality as a result of sedimentation during construction and changes in post-project run off conditions. The site design measures to protect water quality are addressed in Section 4.9.5 of the DEIR and Mitigation Measure HWQ-1: Prepare SWPPP and Implement BMPs Prior to Construction and Site Restoration, HWQ-2: Incorporate Postconstruction Runoff BMPs into Project Drainage Plan, and BIO6: Sediment and Erosion Control. The impacts of temporary construction dewatering in desert pupfish habitat are addressed through Mitigation Measure BIO-8: Desert Pupfish Protection and Relocation Plan.

The Project design includes import of substantial fill material to create a raised development pad and retention basins for construction of stormwater runoff. The raised development pad would not be subject to routine flooding from the irrigation drains because it would be several feet higher in elevation than the surrounding areas.

The impact of avian collisions with power lines is documented in Reducing Avian Interactions with Power Lines: the State of the Art in 2012. The project would install a 1-mile long gen-tie line within Imperial Irrigation District (IID) right-of-way and adjacent to existing IID overhead power lines to the IID Substation. The impacts from the new segment of transmission line adjacent to the existing power lines are addressed through design of the gen-tie line in accordance with Avian Power Line Interaction Committee (APLIC Guidelines) and installation of bird flight diverters on the gen-tie line per Mitigation Measure BIO-17: Bird Flight Diverters. Implementation of APLIC Guidelines and use of bird flight diverters are best practices for reducing avian collisions with power lines. Geothermal power plants are not known to cause direct bird mortality. While other renewable energy facilities, such as photovoltaic solar facilities, can cause a lake effect and take up large swaths of land where avian impacts are known to occur from solar development, the geothermal and lithium power plant buildings/structures would not introduce elements to the environment that would be expected to cause bird mortality or collisions.

Mitigation Measure BIO-16: Nesting Bird Plan is intended to provide protection for nesting birds during Project construction. The mitigation measure does include specifics including scheduling construction to

start outside the nesting season (February 1 through August 31), having a qualified biologist conduct surveys of the development area if construction starts during the nesting season and employee procedures to avoid active nests until all nesting has ceased and the young have fledged the nest. Additional details have been added to Mitigation Measure BIO-16 as indicated below. Mitigation Measure BIO-16 was not intended to address operational impacts of the Project. As described above, the impact of the gen-tie line are addressed through implementation of APLIC guidelines in the gen-tie design and use of bird flight diverters (MM BIO-17).

The revised text of Mitigation Measure BIO-16 is as follows:

Mitigation Measure BIO-16. Nesting Bird Plan. Construction activities shall take place outside the general bird breeding season (February 15 to September 30), to the maximum extent practicable. Regardless of the time of year, prior to ground-disturbing activities, a qualified biologist shall conduct a nesting bird survey to comply with CDFW Code 3503 and 3503.5 and the Migratory Bird Treaty Act. The survey shall occur no more than three (3) days prior to initiation of proposed Project activities and shall include any potential habitat (including trees, shrubs, the ground, or nearby structures). Any occupied passerine and/or raptor nests occurring within the proposed Project area or the Project's zone of influence (generally 100-300 feet) shall be delineated and a no-disturbance buffer zone (as determined by the avian biologist) shall be established and maintained during Project activities. Additional follow-up surveys may be required by the resource agencies and Imperial County. The buffer zone shall be sufficient in size to prevent impacts to the nest. A qualified biologist shall monitor active nests to determine whether construction activities are disturbing nesting birds or nestlings. If the qualified biologist determines that construction activities pose a disturbance to nesting, construction work shall be stopped in the area of the nest and the no disturbance buffer shall be expanded. Once nesting has ceased and the fledglings are no longer using the nest area as confirmed by a qualified biologist, the buffer may be removed. A nesting bird survey report shall be provided to Imperial County and CDFW. If an active nest is encountered during construction, construction shall stop immediately until a qualified biologist can determine the status of the nest and when work can proceed without risking violation to state or federal laws.

The measures proposed in the comment were previously incorporated into the Project design as follows:

1. The Project will not have any on-site distribution lines.
2. The Project includes use of monopole structures for the gen-tie lines.
3. The fences for the facility will be standard chain link security fences employed at other geothermal power plants in the region.
4. No lattice-type structures are proposed as part of the Project. As mentioned in item 2, the poles will be monopole structures.
5. No guy wires are proposed as part of the Project

FWS' comment addresses the potential for cumulative effects on migratory birds from implementation of renewable energy projects throughout the Imperial Valley region. While it is noteworthy that all proposed renewable energy projects would convert approximately 24,000 acres of agricultural fields to renewable energy uses and there may be a regional impact from conversion of 24,000 acres of agricultural land to industrial use, the fact remains that the project's impact on that conversion of agricultural land to

renewable energy uses would be less than significant. The project is not located in an agricultural field and the 74 acres of direct project disturbance would be offset by the habitat mitigation included in the EIR. The mitigation would effectively reduce the projects contribution to any cumulative impact on migratory birds from habitat loss to less than considerable. Changing the geographic scale of the cumulative impact analysis does not change the conclusion that the projects contribution to a cumulative impact is less than significant with incorporation of the project specific mitigation measures.

The impact from avian collisions with power lines is a well known occurrence as noted in responses to comments above. The project includes specific measures to reduce potential for avian interactions with power lines including Mitigation Measure BIO-17 which requires bird flight diverters and design of the transmission lines in accordance with APLIC Guidelines.

The language of Mitigation Measure BIO-8 has been revised per FWS comments as follows:

A desert pupfish protection and relocation plan will be prepared prior to construction activities in any suitable habitat for desert pupfish. Its implementation will ensure construction in any suitable habitat for desert pupfish will be conducted with minimal effects on desert pupfish. This plan will be submitted to the Service and the CDFW for review and approval prior to any ground-disturbing activities that have a water component. This plan will provide:

- 1. Protocols for pre-construction or pre-maintenance surveys to assess species presence and spawning within or immediately adjacent to work areas (e.g., in, or at the end of, the irrigation drains/drain canals, open water areas, and around the open water margins). The protocols will also outline the qualifications required for biologists to conduct desert pupfish survey, capture, and relocation activities and the process for biologist approval.*
- 2. Capture (e.g., trapping in the irrigation drains for construction and maintenance; or trapping, dip netting, and seining in open water areas that are drained or if the water level is dropped) and transport methods to minimize handling and stress as well as exposure to heat, low dissolved oxygen (DO), and crowding.*
- 3. Identification of locations for release of captured desert pupfish.*
- 4. Timing windows when construction or maintenance in open water areas and in the irrigation drain mouths/canals may be conducted with minimal effects on desert pupfish spawning.*
- 5. Adaptive management procedures that include assessment of mitigation measure effectiveness, development of revised measures to improve effectiveness, and similar assessment of revised measures to verify effectiveness.*

Comment Letter #2:

DocuSign Envelope ID: 3FC21542-4576-4E17-821F-B38B168882A7



Gavin Newsom, Governor
David Shabazian, Director

September 21, 2023

David Black, Planner
DavidBlack@co.imperial.ca.us
County of Imperial PDS
801 Main Street
El Centro, CA 92243

Subject: SCH Number 2022030704
Hell's Kitchen PowerCo1 and LithiumCo 1 Project

Dear Mr. Black:

The California Geologic Energy Management Division (CalGEM) regulates the drilling, operation, maintenance and ultimate plugging and abandonment of geothermal production and injection wells located on private and state lands in California. Public Resources Code (PRC), Division 3, Chapter 4, Sections 3700 to 3776, and California Code of Regulations (CCR) Title 14 Sections 1900 to 1997.5 delineate the statewide geothermal statutes and regulations for geothermal wells and associated projects.

The Draft Environmental Impact Report analyzes Controlled Thermal Resources (US) Inc's proposed geothermal project Hell's Kitchen PowerCo 1 that includes exploration wells authorized under Conditional Use Permit #16-0001 issued June 14, 2017. Two of those 6 wells are already drilled and will be used for this project. Additional wells will be drilled to bring the total to seven for production and injection, including one well for injection of aerated fluids.

CalGEM will require a Notice of Intention (NOI) to be submitted for each new well to be drilled as required by the regulations. Subsequent well rework and eventual plugging and abandonment will also require an NOI. Wells that are proposed for injection require additional data to be submitted after the well is drilled including detailed geology, brine chemistry from the proposed injection zone and an area of review analysis that reviews other wells within one-quarter-mile radius of the proposed injection well(s) including abandoned wells. A Project Approval Letter (PAL) is issued authorizing injection and includes a set of conditions specific to injection operations.

A portion of the project area lies within the Imperial Carbon Dioxide Gas Field and there are carbon dioxide (CO₂) wells located within and adjacent to the project area. The Imperial Carbon Dioxide Gas Field wells are found in Sections 1, 2, 3, 11, 12, 13, and 14 of Township 11 South, Range 13 East, SB B&M. If any wells, including any plugged,

DocuSign Envelope ID: 3FC21542-4576-4E17-821F-B38B168882A7

abandoned, or unrecorded wells are damaged or uncovered during the construction of the well pads, pipelines, and access roads, remedial plugging operations may be required. If such damage or discovery occurs, CalGEM must be contacted to obtain information on the requirements to address the wells, and to receive approval to perform any remedial operations. This CO₂ zone also affects drilling conditions and well construction, hence, the installation of blowout prevention equipment is required prior to setting the surface casing and the use of a CO₂ resistant cement during well construction. This is to ensure the integrity of the well for its life.

CalGEM's regulations section 1971 requires subsidence monitoring specifically in Imperial County to address concerns that geothermal fluid withdrawal could affect the surrounding area of a geothermal project. This requirement is to address concerns associated with Geology and Soils and is required for the life of the project.

Geothermal projects often occur in areas that are tectonically active. The Salton Sea Geothermal Field is located at the southern end of the San Andrea fault, at the north end of the Brawley Seismic Zone, and is also located near geologically young volcanoes. Earthquakes induced by geothermal activity are known to occur in The Geysers field because it is a steam dominated system. The Salton Sea geothermal system is a liquid dominated system that has not historically had this cause and effect. However, due to concerns about induced seismicity CalGEM requests that a seismic monitoring system be installed inclusive to the project boundary and that the system be connected to the USGS Southern California network to collect real time data.

If you have any questions regarding CalGEM's comments on this Draft EIR please contact us at CalGEMGeothermal@conservation.ca.gov or 916-203-7785.

Sincerely,

Charlene L Wardlow

Charlene L Wardlow
Geothermal Program Manager

cc: CalGEMCEQA@conservation.ca.gov

Response to Comment Letter #2

Comment is noted. A Notice of Intent will be submitted to CalGEM for each new well. The Proposed Project will adhere to all existing regulations, including CalGEMs required subsidence monitoring. Also, the seismic risk associated with Project site is well documented throughout the EIR and the use of a seismic monitoring station will be considered. The comment does not identify any deficiencies with the DEIR; therefore, no further comment is required.

Comment Letter #3:

STATE OF CALIFORNIA

GAVIN NEWSOM, Governor

**CALIFORNIA STATE LANDS
COMMISSION**

100 Howe Avenue, Suite 100-South
Sacramento, CA 95825-8202



Established in 1938

JENNIFER LUCCHESI, Executive Officer

916.574.1800

TTY CA Relay Service: 711 or Phone **800.735.2922**

from Voice Phone **800.735.2929**

or for Spanish **800.855.3000**

Contact Phone: 916.574.1900

October 23, 2023

File Ref: SCH #2022030704

David Black, Planner
Imperial County Planning & Development
801 Main Street
El Centro, CA 92243

RECEIVED

By Imperial County Planning & Development Services at 7:56 am, Oct 23, 2023

**Subject: Draft Environmental Impact Report for the Hell's Kitchen Powerco 1 and
Lithiumco 1 Project, Imperial County, California**

Sent via email only: ICPDSCommentLetters@co.imperial.ca.us

Dear Mr. Black:

The California State Lands Commission (Commission) staff has reviewed the subject Draft Environmental Impact Report (Draft EIR) for the Hell's Kitchen Powerco 1 and Lithiumco 1 Project (Project), which is being prepared by Imperial County (County). The County, as the public agency with direct approval over the Project, is the lead agency under the California Environmental Quality Act (CEQA) (Pub. Resources Code, § 21000 et seq.).

Project Description

Controlled Thermal Resources, Inc. (CRT) via its subsidiary Hell's Kitchen Geothermal, LLC is proposing the Hell's Kitchen PowerCo 1 (HKP1), and Hell's Kitchen LithiumCo 1 LLC is proposing the Hell's Kitchen LithiumCo 1 (HKL1) in Imperial County, California. HKP1 involves the development of a geothermal power plant that will produce up to 49.9 megawatts (MW) net of geothermal green energy. HKL1 involves development of mineral extraction and processing facilities capable of producing lithium hydroxide, silica and polymetallic products, and possibly boron compounds, for commercial sale.

The Draft EIR identifies the No Project Alternative as the Environmentally Superior Alternative.

Environmental Review

Commission staff requests that the County consider the following comments on the Project's Draft EIR.

General Comment

The Commission received and is currently processing applications from the Project proponent for a geothermal resources lease and a mineral extraction lease for subsurface use of State lands that are adjacent to the Project area (as identified in the Draft EIR). The Project proponent is seeking leases from the Commission to allow it to directionally drill from the Project area into the subsurface of adjacent State lands, most of which are owned in fee by the California Department of Fish and Wildlife (CDFW), and some of which the State holds a reserved mineral interest (RMI) in. For the lands owned by CDFW, the Commission would issue and manage a lease on behalf of CDFW, with CDFW's written consent, pursuant to Public Resources Code section 6924. The Draft EIR does not include any State lands in the designated Project area and neither the Project Description nor the Draft EIR analysis evaluate the potential impacts from any wells that would be drilled from the Project area into State lands.¹

If considered part of the Project, the EIR must disclose that CRT plans to access subsurface geothermal reservoirs outside of the designated Project area through directional drilling from the proposed Project site. As part of this disclosure, the document should identify the parcels, prepare a separate figure showing the surface and subsurface locations, describe the directional drilling construction methods and timing, and include any other information that would contribute to the environmental impact analysis. Unless this information and analysis is included in the Final EIR, the Commission, as a CEQA Responsible Agency (identified in Section 2.2.2.2), will need to conduct further environmental review to evaluate new or increased levels of impacts. This review could include a supplemental or subsequent CEQA document and would be conducted prior to any Commission action. If the County is considering a subsequent document to evaluate off-site drilling locations, please consider that action may be interpreted as piecemealing under CEQA, as noted in the letter from the

¹ The State lands that are the subject of the two applications to the Commission include APN 020-010-042, owned by CDFW. A portion of this parcel is included in the Project area for the Gen-Tie and Power Line, however it appears from the information provided in the Draft EIR that the Gen-Tie and Power Line will be constructed within existing rights-of-way, and thus would not require a Lease from CDFW or the Commission.

Imperial Irrigation District on the Project's Notice of Preparation, dated May 10, 2022.

The Draft EIR also lacks clarity and consistency regarding the number of wells to be drilled as part of the Project. Section 2.6.1 provides that the Project will include a total of seven wells for production and injection, including one well for injection of aerated fluids, and states that the two previously drilled exploration wells will be used as commercial production wells. Elsewhere, the Draft EIR notes that the Project site currently contains "four geothermal exploratory well pads and six separate geothermal exploratory wells." (See section 4.13.4.) It is not clear in the Draft EIR where the existing wells are located, how many there are, and into which lands the "total of seven wells" will be drilled (e.g., whether the seven total wells would be drilled directionally into State lands). In addition, the EIR must disclose whether drilling into State lands is necessary to meet the Project's objectives.

Groundwater Resources

The Draft EIR determined that the Project construction, development, and operation would not result in potentially significant impacts to groundwater supplies because the Project would not use any groundwater (See section 6.1.5). However, the Draft EIR does not identify off site directional drilling that may require groundwater during construction. Therefore, Commission staff request that the EIR clarify whether the directional drilling would require groundwater or otherwise impede groundwater basin management. If so, then the EIR must analyze those reasonably foreseeable impacts to groundwater resources.

Tribal Cultural Resources

Section 4.12 of the Draft EIR does not mention whether the County contacted the Native American Heritage Commission (NAHC) to obtain a list of all tribes that are traditionally and culturally affiliated with the geographic area of the Project for notification purposes and to assure a more thorough tribal consultation effort. Commission staff recommends that the County contact the NAHC to ensure that all traditionally and culturally affiliated tribes are aware of the Project and provided the opportunity to consult with the County.

Appendix L of the Draft EIR indicates that the County sent letters to the Fort Yuma Quechan Indian Tribe and the Torres-Martinez Desert Cahuilla Indians on March 21, 2022, in compliance with AB 52. Per page 4.12-4 of the Draft EIR, both tribes responded to the initial notification letter, with one tribe, the Quechan Indian Tribe, requesting consultation on April 5, 2022. During the County's consultation with the Fort Yuma Quechan Indian Tribe, the Tribe requested

changes to the cultural resources report. The Draft EIR states that "...these changes were made, and the updated cultural report was sent to the tribe." Commission staff request that the County elaborate on their effort to ensure the Tribe consented to the requested changes made to the Cultural Report. In addition, the Draft EIR does not provide the response from the Torres-Martinez Desert Cahuilla Tribe; therefore, Commission staff also request that the response from the Torres-Martinez Desert Cahuilla Indians be clarified in the Draft EIR.

Environmental Justice

In 2018, the Commission adopted an [Environmental Justice Policy](#). In this policy the Commission envisions a future in which environmental justice (EJ) communities are no longer disproportionately impacted by pollution or environmental hazards. The Draft EIR does not contain a separate EJ Discussion; however, EJ is discussed as part of the County's general plan policies in Table 4.5-1, specifically objective 3.7, which requires the County to evaluate environmental justice issues associated with job creation and displacement when considering the approval of renewable energy projects. The table indicates "No sensitive receptors are within 2 miles of the Project site. No impacts to disadvantaged communities would occur from implementation, and no Health Risk Assessment is required." According to [CalEnviroScreen](#) 4.0, the Project is located within a disadvantaged community as identified under Senate Bill (SB) 535 (De León, 2012). In addition, public concerns have been raised about the unknown public health impacts of lithium extraction and associated pollution burdens to nearby disadvantaged communities, including the impacts of chemicals used to separate lithium from the geothermal brine, and the potential link between geothermal activities at the Salton Sea and recent earthquakes. In light of these public concerns, Commission staff respectfully request more information be included in the document regarding impacts to adjacent disadvantaged communities due to Project implementation.

Thank you for the opportunity to comment on the Draft EIR for the Project. As a Trustee Agency, and as a Responsible Agency with respect to the activities contemplated by the applications currently under Commission review, the Commission may need to rely on the Final EIR for the issuance of any lease associated with the project that occurs on or in state lands; therefore, we request that you consider our comments prior to certification of the EIR. To the extent the State lands and wells are not included in the EIR, a further CEQA document will need to be prepared to address the Project-related development planned for State lands.

Please send copies of future Project-related documents, including electronic copies of the Final EIR, Mitigation Monitoring and Reporting Program, Notice of

Response to Comment Letter #3

The application currently in review by the State Lands Commission is unrelated to the Proposed Project and any future required environmental review and compliance with CEQA will occur in coordination with State Lands Commission. Any impacts associated with directional drilling into State Lands will be accounted for and analyzed in a separate CEQA document.

With regard to the injection wells, HKP1 will include construction of the following structures: three production wells, four injection wells and associated well pads; geothermal fluid production and injection pipelines. The exploratory wells identified in the text are part of the exploratory portion of the project and do not represent project features. The Project Proponent will only develop the wells that show good potential for geothermal resources.

The County conducted and closed AB 52 Tribal Consultation in compliance with the regulation. All Tribes that have requested consultation on County projects were contacted and a request for consultation was made. Requests from consulting Tribes were considered and responded to as appropriate. The AB 52 Tribal Consultation process closed, and the Tribes input was incorporated into the DEIR.

The Town of Niland is approximately 3.6 miles east of the project site. The nearest residence is approximately 0.5 mile east of the project site, along Pound Road and over 0.75 miles from the main operations of the proposed facility. The closest school is Grace Smith Elementary School, which is located approximately 3.6 miles to the east. Primary highway access to the proposed project site will be via State Highway 111, then west on McDonald Road, then north on Davis Road until turning west into the driveway at or near the plant site. The nearby residence on Pound Road as well as Grace Smity Elementary School is not located along the project access route. The project site is in a rural environment. The properties bordering the project site are designated for agricultural land use to the north, east, and south, with government/special public land use also to the east. No land use is to the west of the project site as that area is the Salton Sea.

Generally, air districts do not require a health risk assessment for construction activities given the short-term duration (i.e., HKP1 project construction is anticipated to take place over a 10-month period and HKL1 project construction is anticipated to take place over a 23-month period). Secondly, air districts do not require a health risk assessment where sensitive receptors are located beyond 1,000 feet to 0.25 miles from the project site.

Construction of the project may result in temporary increases in emissions of air toxics, mainly diesel particulate matter (DPM) from offroad equipment and vehicle trips. PM exhaust from diesel-fueled engines was identified as a toxic air contaminant by CARB in 1998. Due to the limited intensity of construction and the distance to the nearest sensitive receptor, DPM generated by project construction activities is not expected to create conditions where the incremental cancer risk exceeds the ICAPCD's ten in one million significance threshold or non-cancer hazard index thresholds. Therefore, project construction would not expose sensitive receptors to substantial pollutant concentrations and impacts would be less than significant.

Nevertheless, a construction health risk assessment and operation (haul trucks, offroad equipment, generators, fire pumps) health risk assessment will be part of the application for the Authority to Construct /Operate permit as per APCD requirements.

Within the HKL1, potential process exhaust points (resulting in air toxics emissions) include, but not limited to, off-gas scrubber stack, hydrogen stack, steam rock muffler, HCL burner scrubber stack, LHM package stack, poly precip buffer tank, and deaerator water tank emit small quantities of non-condensable gases, water vapor, and other air emissions. It is anticipated that more detailed design and information on specific operational emissions will be available at the time of air permitting and more detailed quantification of operational emissions would be included in the air permit process with APCD.

Comment Letter #4:

DocuSign Envelope ID: 0FB7F9A6-5243-40EE-AC58-8166FE67C948



State of California – Natural Resources Agency
DEPARTMENT OF FISH AND WILDLIFE
Inland Deserts Region
3602 Inland Empire Boulevard, Suite C-220
Ontario, CA 91764
www.wildlife.ca.gov

GAVIN NEWSOM, Governor
CHARLTON H. BONHAM, Director



October 23, 2023
Sent via email

Governor's Office of Planning & Research

October 24 2023

David Black, Planner
Imperial County
801 Main Street
El Centro, CA 92243
DavidBlack@co.imperial.ca.us

STATE CLEARINGHOUSE

Subject: Draft Environmental Impact Report
Hell's Kitchen PowerCo1 and LithiumCo1 (Project)
State Clearinghouse No. 2022030704

Dear Mr. Black:

The California Department of Fish and Wildlife (CDFW) received a Draft Environmental Impact Report (DEIR) from Imperial County (Lead Agency) for the Project pursuant to the California Environmental Quality Act (CEQA) and CEQA Guidelines.¹

Thank you for the opportunity to provide comments and recommendations regarding those activities involved in the Project that may affect California fish and wildlife. Likewise, we appreciate the opportunity to provide comments regarding those aspects of the Project that CDFW, by law, may be required to carry out or approve through the exercise of its own regulatory authority under the Fish and Game Code.

CDFW ROLE

CDFW is California's **Trustee Agency** for fish and wildlife resources and holds those resources in trust by statute for all the people of the State (Fish & G. Code, §§ 711.7, subd. (a) & 1802; Pub. Resources Code, § 21070; CEQA Guidelines § 15386, subd. (a).) CDFW, in its trustee capacity, has jurisdiction over the conservation, protection, and management of fish, wildlife, native plants, and habitat necessary for biologically sustainable populations of those species. (*Id.*, § 1802.) Similarly for purposes of CEQA, CDFW is charged by law to provide, as available, biological expertise during public agency environmental review efforts, focusing specifically on projects and related activities that have the potential to adversely affect fish and wildlife resources.

CDFW is also submitting comments as a **Responsible Agency** under CEQA (Pub. Resources Code, § 21069; CEQA Guidelines, § 15381). CDFW expects that it may need to exercise regulatory authority as provided by the Fish and Game Code. As proposed, for example, the Project may be subject to CDFW's lake and streambed alteration regulatory authority. (Fish & G. Code, § 1600 et seq.) Likewise, to the extent implementation of the Project as proposed may result in "take" as defined by State law of any species protected under the California Endangered Species Act (CESA) (Fish & G. Code, § 2050 et seq.), the Project proponent may seek related take authorization as provided by the Fish and Game Code.

PROJECT DESCRIPTION SUMMARY

Proponent: Controlled Thermal Resources Inc. (CTR), via its subsidiary Hell's Kitchen Geothermal, LLC (Applicant)

Objective: The objective of the Project is to produce 49.9 megawatts (MW) of geothermal power and to extract and produce lithium hydroxide, silica, bulk sulfide, and poly metallic products for commercial sale from the geothermal brine from within CTR's geothermal lease area. The development area for the Project would be approximately 64 acres and would consist of the following activities:

¹ CEQA is codified in the California Public Resources Code in section 21000 et seq. The "CEQA Guidelines" are found in Title 14 of the California Code of Regulations, commencing with section 15000.

DocuSign Envelope ID: 0FB7F9A6-5243-40EE-AC58-8166FE67C948

David Black
Imperial County
October 23, 2023
Page 2

- Construction and operation of a 49.9 MW geothermal power plant;
- Construction of well pads with geothermal production and injection wells;
- Construction of pipelines between HKP1 and HKL1 to facilitate the movement of brine between the facilities;
- Construction and operation of a mineral-extraction facility to extract lithium hydroxide, silica, bulk sulfide, and polymetallic products from the geothermal brine;
- Construction and operation of mineral handling and packaging facilities;
- Construction of ingress and egress to the Project site from Davis Road;
- Paving of Davis Road from McDonald Road to Noffsinger Road (approximately 2 miles);
- Construction and operation of a 230 kV gen-tie line and collocated power line; and
- Construction of shared administrative facilities, offices, repair facilities, shipping and receiving facilities, and other infrastructure components.

Location: The proposed Project would be located within Imperial County, California, approximately 3.6 miles west of the town of Niland near the eastern shore of the Salton Sea. The Project would be adjacent to Davis Road and south of Noffsinger Road, within the CTR geothermal lease area and on lands owned by Imperial Irrigation District (IID). The gen-tie line will run from Noffsinger Road approximately 2 miles south to McDonald Road and then run approximately 0.3 miles east to Hudson Ranch. The gen-tie line will be located east of Davis Road and north of McDonald Road within IID's transmission right-of-way and within new right-of-way. The geothermal development area and lithium facilities would be within Sections 11 and 12 of Township 11 South, Range 13 East, San Bernardino Base Meridian, and the gen-tie/power line ROW corridor is located within Sections 12, 13, and 14 of Township 11 South, Range 13 East.

Timeframe: The construction phase of the Project is anticipated to last 24 months in total.

COMMENTS AND RECOMMENDATIONS

CDFW offers the comments and recommendations below to assist the Lead Agency in adequately identifying and/or mitigating the Project's significant, or potentially significant, direct and indirect impacts on fish and wildlife (biological) resources. Editorial comments or other suggestions may also be included to improve the document.

Assessment of Impacts to Biological Resources

Executive Summary Biological Resources Threshold (a) (p. ES-10) states that the Project construction activities may impact the Yuma hispid cotton rat (*Sigmodon hispidus eremicus*), but omits other species identified in the DEIR that may be impacted. While the Yuma hispid cotton rat is a Species of Special Concern and impacts to it should be considered, this section of the Executive Summary should also acknowledge the other species listed under the California Endangered Species Act (CESA) that may be impacted by the Project, specifically Yuma Ridgway's rail (*Rallus obsoletus yumanensis*; CESA Threatened and Fully Protected), California black rail (*Laterallus jamaicensis coturniculus*; CESA Threatened and Fully Protected), and desert pupfish (*Cyprinodon macularius*; CESA Endangered).

Existing Environmental Setting

Compliance with CEQA is predicated on a complete and accurate description of the environmental setting that may be affected by the proposed Project. CDFW is concerned that the assessment of the existing environmental setting has not been adequately analyzed in the DEIR. CDFW is concerned that without a complete and accurate description of the existing environmental setting, the DEIR may provide an incomplete analysis of Project-related environmental impacts.

As described in Section 4.3, page 9, multiple studies and delineations have been conducted for the Project over the last several years. However, the shapes and acreages of the study areas differ between reference reports. The DEIR notes that vegetation mapping was updated during Great Ecology's 2022 delineation efforts and uses the results of that study to produce the current vegetation mapping. This differs from the mapping that was conducted by Panorama Environmental and depicted in the 2021 Biological Resources Technical Report. CDFW would like to note that the difference between the

DocuSign Envelope ID: 0FB7F9A6-5243-40EE-AC58-8166FE67C948

David Black
Imperial County
October 23, 2023
Page 3

conditions in 2021 vs 2022 could be best attributed to changes in hydrology that were made in which areas were dewatered by the applicant without permits and have since been required to be corrected. Once the correction is completed it could be expected that the conditions would return to a similar state as 2021 where the entirety of the area is wetted and suitable marsh (i.e. the 2022 surveys were conducted during a window of time which may not accurately reflect the conditions).

Fully Protected Species

The DEIR identifies Yuma Ridgway's rail (*Rallus obsoletus yumanensis*) and California black rail (*Laterallus jamaicensis coturniculus*) as being present within the study area during field surveys. Both species are Fully Protected under Fish and Game Code section 3511 and may not be taken or possessed at any time, and no permit may be issued to authorize their take.

CDFW is concerned that Section 4.3.5 Project Impact Analysis (p.4.3-36) does not accurately characterize the potential impacts to marsh birds, including Yuma Ridgway's rail and California black rail. CDFW recommends the following impacts be further considered in the Final EIR:

- It should be noted that tamarisk stands in water or adjacent to cattail marshes may also provide suitable habitat, in addition to the existing native marsh vegetation communities.
- Ongoing continuous noise would have an impact on breeding birds calling for and locating mates and may impact the movement of birds throughout the marsh that surrounds the Project site.
- Construction activities involving any vegetation removal within cattail marsh or riparian scrub during the breeding season (February 1-September 30) may have the potential to adversely affect nesting marsh birds; as such vegetation removal activities within 500 feet of suitable habitat should be timed to occur outside that time period.
- Due to the secretive nature of these species, protocol presence absence surveys should be conducted to confirm that they are not there, otherwise all suitable habitat areas should be presumed to be occupied due to positive past detections. A full breeding season of call back surveys without detecting a single individual would be required to determine a suitable area unoccupied.

CDFW is also concerned that the DEIR does not provide an adequate explanation as to how Project elements or identified mitigation measures for these species will avoid or reduce Project-related impacts to a less than significant level. Mitigation Measure BIO-10 requires pre-construction surveys and construction monitoring within all Project development areas within suitable habitat and a 500-foot buffer. Note that CDFW does not support Project activities continuing within the buffer of known occupancy, and would instead recommend that all work stay outside of the 500-foot buffer of all suitable habitat that is adjacent to the survey point that was found to be occupied, as the birds are known to move throughout dense marsh patches and could be impacted directly by Project activities in the area and by the ongoing noise of construction.

Nesting Birds

It is the Project proponent's responsibility to comply with all applicable laws related to nesting birds and birds of prey. Migratory non-game bird species are protected by international treaty under the federal Migratory Bird Treaty Act (MBTA) of 1918, as amended (16 U.S.C. 703 et. seq.). In addition, sections 3503, 3503.5, and 3513 of the Fish and Game Code also afford protective measures as follows: Section 3503 states that it is unlawful to take, possess, or needlessly destroy the nest or eggs of any bird, except as otherwise provided by Fish and Game Code or any regulation made pursuant thereto; Section 3503.5 states that it is unlawful to take, possess, or destroy any birds in the orders Falconiformes or Strigiformes (birds-of-prey) or to take, possess, or destroy the nest or eggs of any such bird except as otherwise provided by Fish and Game Code or any regulation adopted pursuant thereto; and Section 3513 states that it is unlawful to take or possess any migratory nongame bird as designated in the MBTA or any part of such migratory nongame bird except as provided by rules and regulations adopted by the Secretary of the Interior under provisions of the MBTA.

DocuSign Envelope ID: 0FB7F9A6-5243-40EE-AC58-8166FE67C948

David Black
Imperial County
October 23, 2023
Page 5

any areas containing suitable habitat for desert pupfish, and states that the impact on desert pupfish would be less than significant due to compliance with the ITP; however, the Applicant has not indicated that they intend to apply for a CESA ITP for pupfish. Furthermore, the formulation of mitigation measures may not be deferred to other agencies, even where a subsequent permit may be necessary.

Lake and Streambed Alteration Program

Fish and Game Code section 1602 requires an entity to notify CDFW prior to commencing any activity that may do one or more of the following: Substantially divert or obstruct the natural flow of any river, stream or lake; Substantially change or use any material from the bed, channel or bank of any river, stream, or lake; or Deposit debris, waste or other materials that could pass into any river, stream or lake. Please note that "any river, stream or lake" includes those that are episodic (i.e., those that are dry for periods of time) as well as those that are perennial (i.e., those that flow year-round). This includes ephemeral streams, desert washes, and watercourses with a subsurface flow. It may also apply to work undertaken within the flood plain of a body of water.

Upon receipt of a complete notification, CDFW determines if the proposed Project activities may substantially adversely affect existing fish and wildlife resources and whether a Lake and Streambed Alteration (LSA) Agreement is required. An LSA Agreement includes measures necessary to protect existing fish and wildlife resources. CDFW may suggest ways to modify your Project that would eliminate or reduce harmful impacts to fish and wildlife resources.

CDFW's issuance of an LSA Agreement is a "project" subject to CEQA (see Pub. Resources Code § 21065). To facilitate issuance of an LSA Agreement, if necessary, the DEIR should fully identify the potential impacts to the lake, stream, or riparian resources, and provide adequate avoidance, mitigation, and monitoring and reporting commitments. Early consultation with CDFW is recommended, since modification of the proposed Project may be required to avoid or reduce impacts to fish and wildlife resources. To obtain a Lake or Streambed Alteration notification package, please go to <https://www.wildlife.ca.gov/Conservation/LSA/Forms>.

The Applicant has been coordinating with CDFW to obtain an LSA Agreement for impacts to 1602 resources. The Applicant submitted a notification to CDFW on March 2, 2023, which CDFW subsequently deemed incomplete on March 30, 2023 due to deficiencies in the Project description as it relates to 1602 resources. The Applicant has since been working on revising the notification, but as of this time has not yet resubmitted it.

CDFW appreciates the inclusion of Mitigation Measure BIO-19 Wetland and Riparian Area Restoration/Compensation. Note that the final mitigation ratio for impacts will be determined through the LSA Agreement process and may be greater than 1:1 as proposed. Additionally, the final mitigation plan should provide some form of guarantee that a sufficient and reliable supply of water will be available for the purposes of supporting the proposed mitigation site in perpetuity.

ENVIRONMENTAL DATA

CEQA requires that information developed in environmental impact reports and negative declarations be incorporated into a database which may be used to make subsequent or supplemental environmental determinations. (Pub. Resources Code, § 21003, subd. (e).) Accordingly, please report any special status species and natural communities detected during Project surveys to the California Natural Diversity Database (CNDDDB). The CNDDDB field survey form can be found at the following link: http://www.dfg.ca.gov/biogeodata/cnddb/pdfs/CNDDDB_FieldSurveyForm.pdf. The completed form can be mailed electronically to CNDDDB at the following email address: CNDDDB@wildlife.ca.gov. The types of information reported to CNDDDB can be found at the following link: http://www.dfg.ca.gov/biogeodata/cnddb/plants_and_animals.asp.

DocuSign Envelope ID: 0FB7F9A6-5243-40EE-AC58-8166FE67C948

David Black
Imperial County
October 23, 2023
Page 6

FILING FEES

The Project, as proposed, would have an impact on fish and/or wildlife, and assessment of filing fees is necessary. Fees are payable upon filing of the Notice of Determination by the Lead Agency and serve to help defray the cost of environmental review by CDFW. Payment of the fee is required in order for the underlying Project approval to be operative, vested, and final. (Cal. Code Regs, tit. 14, § 753.5; Fish & G. Code, § 711.4; Pub. Resources Code, § 21089.)

CONCLUSION

CDFW appreciates the opportunity to comment on the DEIR to assist Imperial County in identifying and mitigating Project impacts on biological resources. CDFW recommends that the Applicant coordinate further on the issues identified in the letter, particularly those that pertain to avoiding and minimizing impacts to desert pupfish, Yuma Ridgway's rail, and California black rail.

Questions regarding this letter or further coordination should be directed to Rose Banks, Senior Environmental Scientist (Specialist) at (760) 218-0022 or Rose.Banks@wildlife.ca.gov.

Sincerely,

DocuSigned by:

84FB8273E4C480...

Alisa Ellsworth
Environmental Program Manager

ec: Office of Planning and Research
State Clearinghouse, Sacramento
State.Clearinghouse@opr.ca.gov

Response to Comment Letter #4:

The Executive Summary inadvertently limited the discussion of impacts on biological resources to only discuss Yuma hispid cotton rat. As noted by the comment, the EIR biological resources analysis more broadly addresses effects on burrowing owl, western snowy plover, Yuma Ridgway's rail, California black rail, least bittern, wood stork, white-faced ibis, and desert pupfish, in addition to Yuma hispid cotton rat. The discussion of impacts on special-status species in the ES has been expanded to include these species in the final EIR and errata.

The setting provided in the EIR reflected multiple years of biological study and various surveys performed on the Project site and surroundings. The setting is dynamic due to the changing limits of the Salton Sea. The multiple years of study and multiple studies incorporated in the record provide a broad context for the biological resource conditions on the site. The biological resource conditions are well documented in the EIR.

The maps and analysis of habitats included in the EIR reflect wide-spread open water and cattail marsh/emergent marsh vegetation within the area of analysis, particularly south of the R Drain and north of the Q Drain (see Figures 4.3-1 and 4.3-2 of the EIR). Analysis of aerial imagery of the Project area over the last decade has indicated a gradual reduction in the extent of open water habitats as those areas fill in with sediment from the irrigation drains and transition of the open water areas to emergent marsh. This transition has been occurring for many years prior to any modifications to the irrigation drains. Because the majority of the project area, with the exception of the unvegetated higher areas immediately adjacent to Davis Road, were mapped as open water or emergent wetlands, restoration of the drains would not change the limits of wetland or open water habitat beyond the limits described in the EIR.

The fully protected status of both Yuma Ridgway's rail and California black rail is noted.

It is noted that tamarisk stands adjacent to cattail marsh or in water could provide habitat for Yuma Ridgway's rail. Construction of infrastructure in tamarisk stands would comply with the same requirements for protection of Yuma Ridgway's rail and black rail as infrastructure in other habitat areas including Mitigation Measure BIO-9: Construction Timing, Mitigation Measure BIO-10: Pre-Construction Surveys and Construction Monitoring for Yuma Ridgway's Rail and Black Rail; Mitigation Measure BIO-11: Reduced Vehicle Speeds Adjacent to Rail Habitat, and Mitigation Measure BIO-12: Noise Attenuation. The proposed mitigation for protection of Yuma Ridgway's rail and black rail addresses the timing of construction consistent with the comment and the EIR has presume that all suitable habitat are occupied given the recent records of Yuma Ridgway's rail and California black rail in the Project area (as documented in the EIR).

The Draft EIR relies on not a single measure, but a suite of mitigation measures to reduce the impacts on Yuma Ridgway's rail. Mitigation Measure BIO-9 requires scheduling of construction activities within habitat for Yuma Ridgway's rail and pile driving adjacent to habitat to avoid the nesting and molting flightless season (February 15 - September 15). The construction timing measure would avoid impacts on any nests of Yuma Ridgway's rail by ensuring the construction occurs in habitat during periods when nesting activity would not be occurring. Noise would not affect individual birds outside of the nesting season. Mitigation Measure BIO-10 pre-construction surveys require halting work if Yuma Ridgway's rail or black rail are observed within 500 feet of construction. It is not feasible to avoid all suitable habitat for Yuma Ridgway's rail and California black rail as the entire project area is within 500 feet of suitable habitat

for both species. By avoiding construction in any habitat areas during the nesting season and employing intensive biological monitoring, it is feasible to avoid direct "take" as defined in Fish and Game Code of any Yuma Ridgway's rail or California black rail. The need to avoid take is recognized.

The regulatory standards of MBTA and Fish and Game Code are noted. It is understood that the Project proponent must comply with both MBTA and Fish and Game Code.

The text of Mitigation Measure BIO-16 has been revised as indicated in response to FWS comment above. Additional details on the contents of the Nesting Bird Plan and procedures for avoidance of nesting birds are now included in the measure. The mitigation measures in the EIR already included several measures for monitoring and reduction of noise including Mitigation Measure BIO-12: Noise Reduction. Mitigation Measure BIO-16 previously included restrictions on timing for the start of construction.

The DEIR assumes areas of open water are occupied by desert pupfish. While the recent findings of desert pupfish were not included in the EIR, the recent findings are consistent with the presumption that the drains and open water areas are occupied by desert pupfish. The recent survey results are incorporated into the EIR on Page 4.3-28 under the discussion of more recent surveys. It is noted that over 400 pupfish were captured and relocated from the extended area of the S Dran in 2023.

The need for an ITP for desert pupfish prior to Project implementation is noted, an ITP for desert pupfish has been obtained for Well Pad 4 and the S-Berm access road area (No.2081-2018-076-06). The remaining project area work is not proposed to occur in the drains and the bridge that would be installed would be designed to not require placement of any material in the drains. Therefore, no additional ITP for desert pupfish species are anticipated.

It is noted that handling and translocation of desert pupfish constitutes a form of a take under Fish and Game Code and requires an ITP. The mitigation for desert pupfish is not deferred to the ITP. Rather, the EIR includes Mitigation Measure BIO-8 Desert Pupfish Protection and Relocation Plan and Mitigation Measure BIO-19 Wetland and Riparian Area Restoration/Compensation, which address impacts on desert pupfish through proper handling of pupfish to minimize impacts and creation of open water habitats which would provide suitable habitat for desert pupfish.

The requirements of Section 1600 of Fish and Game Code are noted. CDFW's authority to define measures to protect fish and wildlife resources including modification of the Project through the Lake and Streambed Alteration Agreement is noted. The need for the EIR to fully define potential impacts to lake, stream or riparian resources and provide adequate avoidance, mitigation and monitoring and reporting commitments is noted.

The status of the existing 1602 application is noted. The applicant has been coordinating with IID and USACE and will inform CDFW of future meetings regarding water rights for the Wetland and Riparian Area.

Comment Letter #5:

150 SOUTH NINTH STREET
EL CENTRO, CA 92243-2850

TELEPHONE: (442) 265-1800
FAX: (442) 265-1799

AIR POLLUTION CONTROL DISTRICT



October 27, 2023

RECEIVED

By Imperial County Planning & Development Services at 11:32 am, Oct 27, 2023

Mr. Jim Minnick
Planning Director
801 Main Street
El Centro, CA 92243

SUBJECT: Draft Environmental Impact Report Hell's Kitchen PowerCo1 and LithiumCo1 Project

Dear Mr. Minnick,

The Imperial County Air Pollution Control District (Air District) thanks you for the opportunity to review and comment on the Draft Environmental Impact (EIR) report for the Hell's Kitchen PowerCo1 (HKP1) and LithiumCo1 Project (HKP2) (Project). The Project proposes the development and operation of a geothermal power plant that will produce up to 49.9 megawatts (MW) net of energy and mineral extraction and processing facilities capable of producing lithium hydroxide, silica and polymetallic products, and possibly boron compounds, for commercial sale. The Project will be located approximately 3.6 miles West of Niland within Sections 11 and 12, Township 11 South, Range 13 East in Imperial County.

Air District staff reviews all Air Quality Analyses to ensure enforceability and consistency of air analysis methodology to the Imperial County Air Pollution Control District CEQA Air Quality Handbook (Handbook), Air District Rules & Regulations, and Air District guidelines.

In previous comments provided by the Air District and dated June 20, 2023, one of the primary comments regarding the Administrative Draft EIR was that the document was missing a memo, adequately explaining any changes to default values of the CalEEMod Analysis. Typically, the Air District requests that any changes to Default CalEEMod values be discussed with the Air District and/or explaining the changes in a manner that addresses consistency with Air District guidelines and enforceability. This ensures the analysis is consistent with the Handbook and representative of the projects air quality impacts. The Air District finds that the Draft EIR is still missing any memo explaining CalEEMod default value changes.

Draft EIR HELLS KITCHEN POWERCO1 & LITHIUM CO1

AN EQUAL OPPORTUNITY / AFFIRMATIVE ACTION EMPLOYER

Page 1 of 3

Reviewing the CalEEMod analysis various changes to default values were identified which can call the validity of the analysis into question as it is not consistent with the Handbook; the following three changes are of key concern to the Air District:

1. Changes to usage hours of Off-Road Equipment (various)

The changes to Off-Road Equipment hours from the CalEEMod analysis are, in large part, reducing the usage hours of equipment from 7-8 hours to 4 hours. This reduction of almost half from default values is quite significant and should be adequately explained.

2. Changes to On Road Dust for %pave for hauling, vendor, and worker trips (50 to 100)

Changes for On Road Dust %pave defaults were changed for all trip types from 50% to 100%, this is an unrealistic depiction of project impacts. The document mentions unpaved portions of McDonald Rd. and Davis Rd. that will serve as access to the project site and the Air District historically has allowed for a maximum of 85% due to high amounts of re-entrained dust in the area.

3. Changes to Trip Numbers for hauling, vendor, and trip number (various)

Various changes to the number of trips in the analysis, however, examples of large changes which bring the analysis in to question include a vendor trip change from 194 to 10 and a worker trip change from 497 to 100.

Given that the CalEEMod default value changes will largely impact the construction portion of the project and the Handbook allows for the approach to the Construction impacts to be qualitative in nature: the Air District finds that MM-AQ1 and MM-AQ2 are consistent with mitigation measures employed that typically maintain the construction of this level of project at less than significant. However, due to the combination of default value changes with a lack of prior discussion or inclusion of the previously requested memo adequately explaining the changes, the **Air District is unable to concur** with the CalEEMod analysis as performed. In order to assure the Project remains less than significant an Enhanced Construction Plan, that includes mobile and area sources mitigation measures is required.

The Greenhouse Gas (GHG) portion of the analysis uses the Sacramento Metropolitan Air Quality Management District's (SMAQMD) thresholds for analysis and also references the Air District Rules 900 and 903 as adopted by reference to federal regulation. The Air District generally recommends that GHG analyses employ the Mojave Desert Air Quality Management District's (MDAQMD) thresholds, as the geography and climate are more accurately representative of Imperial County. However, the MDAQMD thresholds are not more restrictive and therefore will not require a re-analysis. Informationally, the Air District would like to emphasize that the preferred modeling software for CEQA purposes is the most current CalEEMod software available at www.caleemod.com.

Air District rules and regulations can be found on our website at www.co.imperial.ca.us/AirPollution under the planning section. If you would like to set up a discussion appointment or have any questions, please feel free to contact our office at (442) 265-1800.

Sincerely,

A handwritten signature in blue ink, appearing to read "Immanuel Garcia".

Immanuel Garcia
Environmental Coordinator II

Reviewed by,
Monica N. Soucier
APC Division Manager

Response to Comment Letter #5:

CalEEMod defaults are meant to provide reasonable default estimates; however, project specific activity may differ considerably. Site conditions, construction specifications, and other factors will result in project specific construction activities that differ from the default values. Notably, CAPCOA is currently reviewing CalEEMod construction default values (CalEEMod Construction Default Updates, June 2023). The review's associated memorandum describes the (i) process by which data was gathered to inform new defaults (via estimator survey), (ii) incorporation into the analysis of construction survey data previously gathered by the South Coast Air Quality Management District (SCAQMD), (iii) the methodologies used to analyze estimator survey data, and (iv) new CalEEMod defaults for select inputs. Based on the memorandum, in many instances, the equipment usage within survey data is lower than default values for the reasons stated previously.

CalEEMod is based on several land use types including educational, commercial, industrial, recreational, and retail. Furthermore, the industrial category is subdivided into warehouses, manufacturing, light industrial, and heavy industrial. For the proposed project, heavy industrial was chosen. However, given the unique characteristics of the proposed project such as process equipment, piping installation, and structure steel installation phases and not as much of the more typical building construction, the CalEEMod default values for the construction activities associated with the proposed project do not necessarily apply directly.

For the Proposed Project, the construction equipment schedule, construction start/end dates, construction phases, equipment types, equipment usage, and vehicle trips (where appropriate) were adjusted from the defaults based on construction engineering design and information available for the proposed project given that applicant teams extensive knowledge and understanding of construction of similar geothermal projects in the region and actual equipment usage hours during that construction. The schedule was non-default with regard to CalEEMod for the reasons stated previously. The final construction equipment schedule used for the proposed project is fully documented within the Air Quality Technical Report (Section 8: Construction Emissions Inventory).

Primary highway access to the proposed project site will be via State Highway 111, then west on McDonald Road, then north on Davis Road until turning west into the driveway at or near the plant site. The two-mile section of the unpaved Davis Road adjacent to the site (from its intersection with McDonald Road to its intersection with Noffsinger Road) will be coated with an asphaltic dust palliative (ARAM or equivalent) and/or treated with a 12-18" thick engineered Class II base section at the beginning of construction. The project would be required to maintain daily dust suppression at the two-mile section of Davis Road adjacent to the site using a water truck operating continuously while vehicles are using it. As this treatment was determined to be an equivalent fugitive dust control measure to actual asphalt paving, for the air quality analysis, all of Davis Road was considered "paved," whether coated with an asphaltic dust palliative and/or treated with a 12-18" thick engineered Class II base section and inclusion of a dedicated water truck (during construction). The road would be immediately paved after construction prior to operations of the plant to avoid damaging a new asphalt section.

As previously stated, CalEEMod defaults are meant to provide reasonable default estimates; however, project specific activity may differ considerably. The vendor trips were adjusted to reflect the number of vendors that are anticipated for this project based on construction of similar projects in the region and is

in line with the analysis for similar projects that have been completed in the region. The worker trip change is based on the number of workers that would be on site daily and the applicant's commitment to carpooling and shared transport of workers.

The Air Quality Technical Report (Section 7: Environmental Protection Measures) provides a description of Environmental Protection Measures that the proposed project will incorporate into its construction to avoid or minimize air quality impacts from fugitive dust and combustion exhaust. The Environmental Protection Measures specifically include the completion of a Fugitive Dust Suppression Plan and Exhaust Emissions Control Plan as well as emission reduction measures associated with project operations.

The Mojave Desert Air Quality Management District's (MDAQMD's) GHG significance thresholds are 548,000 pounds of CO₂e per day and 100,000 tons of CO₂e per year. As stated in the Draft EIR, the proposed project's GHG emissions were compared to the 10,000 metric tons of CO₂e per year quantitative threshold. The substantial evidence for this GHG emissions threshold is based on the expert opinion of various California air districts, which have applied the 10,000 metric tons of CO₂e per year threshold in numerous CEQA documents where those air districts were the lead agency. The MDAQMD thresholds are less restrictive than the thresholds used in the proposed project's analysis.

As stated in the Draft EIR, the operational GHG emissions would not exceed 10,000 metric tons of CO₂e per year threshold and ICAPCD Rule 903 20,000 metric tons of CO₂e emissions threshold, where exceedance of either threshold would require the proposed project to perform additional GHG emissions recordkeeping and reporting. Under the condition where the annual electrical demand (HKL1) is equal to the electrical generation (HKP1), there would be a net zero of electrical-related GHG emissions. The annual operational GHG emissions associated with other aspects of the proposed project (i.e., employee vehicles, delivery trucks, onsite equipment, generators, fire pumps) would be 2,890 metric tons of CO₂e, which would not exceed 10,000 metric tons of CO₂e per year threshold.

California Air Pollution Officers Association CalEEMod (California Emissions Estimator Model Version 2020.4.0) land use emissions model estimates emissions due to demolition and construction activities and operations for land use development and was used in the proposed project's analysis. This model version was available at the time of the project's Notice of Preparation and initiation/completion of the air quality analysis. Subsequent model versions for CalEEMod and other air quality models used in the analysis would be expected to yield similar results and conclusions.

Comment Letter #6:



www.iid.com

Since 1911

November 22, 2023

RECEIVED

NOV 29 2023

IMPERIAL COUNTY
PLANNING DEVELOPMENT SERVICES

Mr. Jim Minnick
Director
Planning & Development Services Department
County of Imperial
801 Main Street
El Centro, CA 92243

SUBJECT: Hell's Kitchen Power Co. Geothermal & Lithium Project Draft EIR

Dear Mr. Minnick:

On May 10, 2022 and June 19, 2023, the Imperial Irrigation District provided comments to the Imperial County Planning & Development Services Department on the Notice of Preparation of an Environmental Impact Report and on the Administrative Draft Environmental Impact Report for the Hell's Kitchen Power Co. Geothermal & Lithium Project (See attached letters). We are disappointed that our concerns were not addressed in the subsequent Draft EIR. As a responsible agency for this project, and for the purpose of supporting the project to allow for additional approvals to carry out the project and to avoid foreseeable setbacks in its implementation by not addressing the aspects of the project affecting IID facilities and resources in the Draft EIR, including impacts and mitigation, the district submits the following comments:

1. **General Comment:** The proposed project should be depicted in more detail on figures. The project footprint is shown at a high-level on the figures in Section 2.0, but there is not specificity of locations of project components in sections of analysis. There are no figures that locate the project components relative to other existing or planned facilities on the site, such as drain and transmission line right of ways. Without a project footprint and site plan, the project description is uncertain and unclear regarding how the project impacts the resources on the project site and IID's facilities and rights of way. Unless the project is depicted on figures to correspond with analysis, it will be difficult for responsible agencies to use the final EIR.
2. **Page iii, LIST OF APPENDICES - APPENDIX M Water Supply Assessment:** Should be identified as a draft. The Water Supply Assessment is incomplete and contains inaccurate data. See enclosed WSA Hell's Kitchen Comments June 2023 for detailed review findings of Appendix M.
3. **Page ES-2, ES-4 INTENDED USES OF THIS EIR:** Should identify Imperial Irrigation District's use of the EIR for proposed actions as a responsible agency: "Imperial Irrigation District – Encroachment Permit(s) and Imperial Irrigation District Water Supply Agreement, and other approvals not yet known for water and/or energy needs."
4. **Page ES-4, Table ES-1:** Should be updated based on the related comments received herein for the following resources, but not limited to air quality, utilities and service systems and hydrology.

IMPERIAL IRRIGATION DISTRICT • P.O. BOX 937 • IMPERIAL, CA 92251

Jim Minnick
November 22, 2023
Page 2

5. **Page ES-10, Table ES-1:** Summary of Significant Impacts and Mitigation Measures: Bio-19 should be listed as “Potentially Significant” under “Level of Significance before Mitigation” column.
6. **Page ES-40 Table ES-1 Utilities and Service Systems:** Should be updated as IID water facilities that may be impacted include the L, M, O, P, Q, R, S and Vail 3 Drains; Alamo River; the L, M, O, P, Q, R, S Laterals; as well as any additional IID facilities that may be impacted by alignment changes.
7. **Page 1.0-6 - APPENDIX M:** Water Supply Assessment should be identified as a draft. The Water Supply Assessment is incomplete and contains inaccurate data. See enclosed WSA Hell's Kitchen Comments June 2023 – for detailed review findings of Appendix M.
8. **Page 2.0-1 Section 2.2 Project Location:** The Draft EIR is still indicating that the project's interconnection to the electrical grid will be via a 2-mile gen-tie to the Hudson Ranch facility substation, which is incorrect. The project's point of interconnection will be the new, not yet built, IID Davis Switching Station. The project will be loping in and out of the IID 230kV MB transmission line into the proposed Davis Switching Station. The MB line cut-in will be just outside the Hudson Ranch facility.
9. **Page 2.0-7 Section 2.5 Project Summary:** The project description/summary should include a sentence stating that the project does not include any work within the P, Q, R and S Drains and that any such work in the future will require a separate approval and environmental review. IID and Hell's Kitchen Geothermal LLC (“HKG”) are entering into a series of agreements, pursuant to which HKG will be (i) extending the Q, R and S Drains from where they currently terminate on Section 11 to the Salton Sea or the westernmost edge of Section 10 in the event the Salton Sea is no longer on Section 10, and (ii) interconnecting one or more of the Q, R and S Drains within Section 10 or 11. The extension of the Q, R and S Drains are subject to a number of existing regulatory requirements and mitigation measures, with which HKG will be required to comply. It appears the current project excludes any drain extension or interconnection work or any other construction work within the Drains. It should be clear that the DEIR is not an environmental document for future drain extension or interconnection work, as well as any other work within the drains.

If the project approvals will encompass work within the P, Q, R and S Drains or the future extension and interconnection of these Drains (“Drain Work”), the DEIR must address the desert pupfish impacts associated with the Drain Work and incorporate the following regulatory mitigation measures that currently apply to the Drain Work and implementation must be consistent with the referenced conditions:

A. U.S. Fish and Wildlife Service Final Biological Opinion dated December 18, 2002 (“BO”):

- a. Pupfish Conservation Measure 1: Connectivity Impacts of the BO: IID is developing a joint pupfish drain connectivity and extension plan with the U.S. Bureau of Reclamation, the U.S. Fish and Wildlife Service and the California Department of Fish and Wildlife. Drain Work shall be consistent and in compliance with any final plan jointly

Jim Minnick
November 22, 2023
Page 3

developed. If no final plan exists at the time the design of the Drain Work commences, the design, configuration, and management of the work will be developed jointly with the U.S. Bureau of Reclamation, the U.S. Fish and Wildlife Service and the California Department of Fish and Wildlife staff, and will be developed in consideration of the specific physical characteristics of pupfish habitat (e.g., water depth and velocity, and channel width) and water quality (e.g., turbidity and selenium concentration).

b. Reasonable and Prudent Measure 1, Terms and Conditions No. 1.1. Work within the Drains shall be configured to maximize pupfish habitat and achieve no net loss of pupfish habitat in terms of drain length and width dimensions (i.e., areal extent) as the Salton Sea recedes.

c. Reasonable and Prudent Measure 3, Terms and Conditions No. 3.1. The Drain Work shall be designed to minimize the maintenance requirements that could result in take of pupfish to the extent possible without significantly reducing their habitat value.

d. Reasonable and Prudent Measure 3, Terms and Conditions No. 3.2. Where dewatering is required for construction within the Drains, the project shall implement gradual dewatering of the construction sites within potential pupfish Drains to allow pupfish to move out of the area such that they are not stranded by dewatering. A qualified biologist approved by U.S. Fish and Wildlife Service and California Department of Fish and Wildlife shall be present to relocate pupfish to a safe location if necessary to prevent stranding as a result of the physical structure of the drain. The biologist shall maintain a complete record of all pupfish moved from hazardous areas during the Drain Work. At a minimum, the information shall include: location (written description and map), date and time of observation, along with details of the relocation site; basic life history information (i.e., length and sex); and general condition and health, including any apparent injuries/state of healing.

e. Reasonable and Prudent Measure 3, Terms and Conditions No. 3.5. In the event emergency repairs are needed on the Drains and/or Drain Work, prior to the completion of the work, the Project proponent shall immediately notify IID, the U.S. Fish and Wildlife Service and California Department of Fish and Wildlife regarding any needed emergency repairs that may result in disturbance of or impacts to the listed species so that the U.S. Fish and Wildlife Service and the California Department of Fish and Wildlife can provide technical assistance to minimize the impacts associated with implementing the repairs.

B. Conservation Agreement Among the Bureau of Reclamation, Imperial Irrigation District, Coachella Valley Water District, and San Diego County Water Authority ("Conservation Agreement"):

a. Article 2, Species Conservation Measures, Reasonable Prudent Measures, and Terms and Conditions, Section 2.3, Connectivity Impacts—Drains. The project shall implement the provisions of Pupfish Conservation Measure 1 of the BO and the BO

Jim Minnick
November 22, 2023
Page 4

Incidental Take Statement Terms and Conditions Nos. 1.1, 3.1, 3.2, and 3.5, as applicable to the Drain Work.

C. California Endangered Species Act, Incidental Take Permit No. 2081-2003-024-006 ("ITP"):

a. Conditions of Approval, No. 2. The Project proponent shall comply with the ITP and Mitigation Monitoring and Reporting Program attached to the ITP as Attachment 1, as applicable to the Drain Work.

b. Conditions of Approval, No. 4(j)(i). IID is developing a joint pupfish drain connectivity and extension plan with the U.S. Bureau of Reclamation, the U.S. Fish and Wildlife Service and the California Department of Fish and Wildlife. The Drain Work shall be consistent and in compliance with any final plan jointly developed. If no final plan exists at the time the design of the Drain Work commences, the Drain Work shall be designed and configured in coordination with Seller, the U.S. Bureau of Reclamation, the U.S. Fish and Wildlife Service and the California Department of Fish and Wildlife to ensure the genetic interchange among the pupfish populations in the Drains. The design of the Drain Work shall minimize the maintenance requirements that could result in take of pupfish to the extent possible without significantly reducing their habitat value.

c. Conditions of Approval, No. 4(j)(ii). The Project proponent shall seek credit from the U.S. Fish and Wildlife Service and the California Department of Fish and Wildlife, for the linear channel distance of the Drain Work to qualify as linear channel distance of pupfish drain habitat required by the ITP. IID is developing a joint pupfish drain connectivity and extension plan with the U.S. Bureau of Reclamation, the U.S. Fish and Wildlife Service and the California Department of Fish and Wildlife. The Drain Work shall be consistent and in compliance with any final plan jointly developed. If no final plan exists at the time the design of the Drain Work commences, the design, configuration, and management of the Drain Work will be developed jointly with the U.S. Bureau of Reclamation, the U.S. Fish and Wildlife Service and the California Department of Fish and Wildlife (formerly CDFG) staff, and will be developed in consideration of the specific physical characteristics of pupfish habitat (e.g., water depth and velocity, and channel width) and water quality (e.g., turbidity and selenium concentration).

d. Conditions of Approval, No. 4(j)(xi). Where dewatering is required for construction of the Drain Work, the Project proponent shall implement gradual dewatering of the construction sites within potential pupfish drains to allow pupfish to move out of the area such that they are not stranded by dewatering. A qualified biologist shall be present to relocate pupfish to a safe location if necessary to prevent stranding as a result of the physical structure of the drain. The biologist shall maintain a complete record of all pupfish moved from hazardous areas during project construction. At a minimum, the information shall include: location (written description and map), date and time of observation, along with details of the relocation site; basic life history information (i.e., length and sex); and general condition of health, including any apparent injuries/state of healing.

Jim Minnick
November 22, 2023
Page 5

e. Permit Mitigation Measure No. 11. The Project proponent shall notify IID and the California Department of Fish and Wildlife within three working days if a pupfish is found dead or injured and the death or injury is reasonably attributable to activities by the applicants. A written notification will be made within five calendar days and will include the date, time, and location of the discovered pupfish, the expected cause of injury or death and any other pertinent information. The injured pupfish will be transported to a veterinarian or certified wildlife care facility and the Department informed of the final disposition of any surviving pupfish. All dead pupfish shall be submitted to educational/research institutions possessing the appropriate state and federal permits. If deposition to an institution is not possible, the pupfish will be marked, photographed, and left in the field.

f. Permit Mitigation Measure No. 12. The Project proponent shall immediately notify (i) IID of any emergency situation potentially impacting the Drains and/or pupfish habitat and/or pupfish, and (ii) shall notify the California Department of Fish and Wildlife and U.S. Fish and Wildlife Service within 24 hours of initiating emergency activities. In notifying the Department and Service, the project applicants shall describe the nature of the emergency and the actions necessary to correct the problem. Where multiple actions need to be taken, the IID Implementation Biologist will work with repair crews to prioritize repairs based on the risk to pupfish and habitats for pupfish provided under the Permit and threats to human health and safety and property. The Implementation Biologist will visit sites where emergency activities are being implemented as soon as possible. The biologist will take pictures of the damaged areas and note the general extent and species composition of any vegetation impacted by the emergency response activities. The project applicants will use this information to restore or create replacement habitat in accordance with Condition of Approval 4(j)(iv). Within one month of completing emergency actions, the project applicants will meet with the Department and Service to review the measures the project applicants will implement to mitigate any impacts resulting from the emergency actions. Following agreement with the Department and Service regarding appropriate mitigation, Seller will prepare a Post Incident Report for submittal to these agencies. This report will document: (a) the nature of the emergency, (b) the actions taken to address the emergency, (c) the impacts to pupfish and/or their habitats (e.g., area of drain habitat impacted), (d) the mitigation measures to be implemented to address the impacts, and (e) monitoring and reporting requirements (if any) for the mitigation measures. To facilitate effective and appropriate responses to emergencies, the Implementation Team may refine and further specify these general procedures to address specific types of emergencies that could arise.

g. Permit Mitigation Measure No. 79. IID is developing a joint pupfish drain connectivity and extension plan with the U.S. Bureau of Reclamation, the U.S. Fish and Wildlife Service and the California Department of Fish and Wildlife. The Drain Work shall be consistent and in compliance with any final plan jointly developed. If no final plan exists at the time the design of the Drain Work commences, the design, configuration, and

Jim Minnick
November 22, 2023
Page 6

management of the Drain Work will be developed jointly with the U.S. Bureau of Reclamation, the U.S. Fish and Wildlife Service and the California Department of Fish and Wildlife staff, to ensure that an appropriate level of connectivity between pupfish populations within individual drains that are connected to the Salton Sea either directly or indirectly and that are below the first check will be maintained in the event that conditions in the Salton Sea become unsuitable for pupfish. The Drain Work shall be designed to minimize the maintenance requirements that could result in take of pupfish to the extent possible without significantly reducing their habitat value.

h. Permit Mitigation Measure No. 80. IID is developing a joint pupfish drain connectivity and extension plan with the U.S. Bureau of Reclamation, the U.S. Fish and Wildlife Service and the California Department of Fish and Wildlife. The Drain Work shall be consistent and in compliance with any final plan jointly developed. If no final plan exists at the time the design of the Drain Work commences, the design, configuration, and management of the Drain Work will be developed jointly with the U.S. Bureau of Reclamation, the U.S. Fish and Wildlife Service and the California Department of Fish and Wildlife staff, to ensure that the specific physical characteristics of pupfish habitat (e.g., water depth and velocity, and channel width) and water quality (e.g., turbidity and selenium concentration). The project applicants will monitor the drains for pupfish use as the drain habitat is extended or created. Monitoring will occur for five years after creation, to allow pupfish to begin using the habitat. If pupfish use of these areas cannot be established after the initial five years, the Project proponent will work with IID, the Service and Department to identify potential causes for pupfish absence. If pupfish do not use the habitat, IID, in coordination with the Service and Department, will implement actions in the management, operation or maintenance of the extended or modified drains that are appropriate to correct conditions that may be causing the absence of pupfish. These actions may entail adjustments to channel configuration (channel and pool depths, flow velocity, connectivity, and turbidity), vegetation management and timing of scheduled maintenance. If IID determines that those actions require channel configuration of the Drains, the project applicants shall cooperate with and will not impede or take any measures to impede IID's implementation of any adjustments to channel configuration. Until such time as pupfish use is established, the Project proponent shall continue working with IID, the Service and Department to correct the conditions that may be causing the absence of pupfish.

i. Permit Mitigation Measure No. 89. For any construction activities (i.e., in-channel modifications) that directly affect the Drains, 1 the Project proponent shall implement gradual dewatering of the construction site to allow desert pupfish to move out of the area such that they are not stranded by dewatering. A qualified biologist shall be present to relocate pupfish to a safe location if necessary to prevent stranding as a result of the physical structure of the Drains. The biologist shall maintain a complete record of all pupfish moved from hazardous areas during project construction. At a minimum, the information shall include: location (written description and map), date and time of

Jim Minnick
November 22, 2023
Page 7

observation, along with details of the relocation site; basic life history information (i.e., length and sex); and general condition and health, including any apparent injuries/state of healing.

D. Imperial Irrigation District Water Conservation and Transfer Project, Habitat Conservation Plan, Final Environmental Impact Report/Environmental Impact Statement (State Clearinghouse number 1999091142) Mitigation, Monitoring and Reporting Program, September 2003 ("EIR/EIS MMRP"):

a. Impact BR-51; Mitigation Measure Salton Sea-2. IID is developing a joint pupfish drain connectivity and extension plan with the U.S. Bureau of Reclamation, the U.S. Fish and Wildlife Service and the California Department of Fish and Wildlife. The Drain Work shall be consistent and in compliance with any final plan jointly developed. If no final plan exists at the time the design of the Drain Work commences, the design, configuration, and management of the Drain Work will be developed jointly with the U.S. Bureau of Reclamation, the U.S. Fish and Wildlife Service and the California Department of Fish and Wildlife staff, to ensure an appropriate level of connectivity between pupfish populations within the Drains.

b. Impact BR-24, 26; Mitigation Measure Pupfish 3. The Project proponent shall increase the amount of potential pupfish drain habitat.

c. HCP Measure Pupfish-6. For any construction activities (i.e., in-channel modifications) that directly affect the Drains, the Project proponent shall gradually dewater the affected drain segment in a manner that will encourage the downstream movement of pupfish out of the affected area before construction activities commence. The Project proponent will ensure that a person qualified to capture and handle pupfish and that meets the approval of the USFWS and CDFW will be present during the dewatering process to salvage and transport any pupfish stranded in the affected portion of the drain. Prior to conducting construction activities that could result in the stranding of pupfish, Grantee shall work with the Habitat Conservation Plan Implementation Team to develop guidelines for relocating fish. Salvaged fish will be transported to a safe location downstream of the construction site or to a location determined by the HCP Implementation Team.

E. California State Water Resources Control Board Revised Order WRO 2002-0013 ("Order"):

a. Conditions No. 10 and 11. The Project proponent shall implement the Desert Pupfish Conservation Strategy found on pages A3-155 to A3-165 of the Habitat Conservation Plan for the IID water Conservation and Transfer Project, dated June 2002.

10. **Page 2.0-8, Section 2.5.1:** This section states that Hell's Kitchen LithiumCo1 (HKL1) will include construction of a 13.8kV power transmission cable from Hell's Kitchen PowerCo 1 (HKP1). IID is the sole load serving entity in its service area, thus the developer cannot carry this out because it would make them a de facto transmission provider. HKL1 can only be served directly from IID facilities, for that to happen IID needs to perform a System Impact Study (SIS) to determine the electrical infrastructure improvements required to

Jim Minnick
November 22, 2023
Page 8

serve the project. To initiate the SIS the developer must formally apply, which hasn't occurred. Consequently, the environmental factor "XIX. UTILITIES AND SERVICE SYSTEMS" was not appropriately assessed for potential impacts. To determine if the project would require or result in the relocation or construction of new or expanded electric power facilities, the construction or relocation of which could cause significant environmental effects, system impact study should have been performed. Additional analysis must be performed to identify the electric power facilities needed for the project, to fully analyze the environmental effects of the project and any needed electric power facilities, to identify any mitigation needed, and to identify approvals needed from IID for the project related to energy and IID's electrical system.

11. **Page 2.0-8 Section 2.61 Production and Injection Wells:** The components of the project are unclear and need to be further described with corresponding figures. Is Well Pad 4 and the S Berm or portions of the S Berm part of this project? If so the impacts to construction of the well pad and berm must be analyzed, including impacts to IID's S Drain. How will Well Pad 4 be accessed from the S Berm Road on the north side of IID's S Drain?
12. **Page 2.0-10, Table 2.0-2 Expected Brine Composition:** Clarification should be provided on the matter of what values are proposed to be reinjected into the ground.
13. **Page 2.0-23, fourth bullet, Transportation Plan:** Access to the site from Hwy. 111 to English Road along McDonald Road is an unpaved county road. IID's Managed Marsh Complex is located to the north (Phase 1) and south (Phase 2) of McDonald Road in this area. The traffic plan should note that the use of the Managed Marsh Complex berms is prohibited for commuting to the project site as these are not roads and are on private property.
14. **Page 2.0-14 Water Storage:** The capacity of the storage pond proposed is not identified. Impacts of the project cannot be analyzed adequately without this information.
15. **Page 2.0-18 Operational Water Supply Requirements:** Should be modified for consistency. The Draft EIR states "400 AFY of fresh water will be needed for normal operation." However, the Water Supply Assessment under Appendix M states the project "will require approximately 200 AFY of fresh water under normal operations" (WSA page 19, these volumes are in addition to the proposed 6,100 AFY to be used for cooling and processing).
16. **Page 2.0-19 Operational Water Supply Requirements:** Should be modified for consistency. The Draft EIR states the "S" Lateral may be a water source for the water supply needed, however, the "S" Lateral is not mentioned in the Water Supply Assessment under Appendix M as a potential water source.
17. **Page 2.0-24, Section 2.11.2 Responsible Agencies:** Imperial Irrigation District should be identified as a Responsible Agency. Other than an IID Encroachment Permit, the Project will require discretionary approvals over the project, including a Water Supply Agreement from IID and other agreements for energy purposes.

Jim Minnick
November 22, 2023
Page 9

18. **Page 3.0-4, Table 3.0-1 Related Projects:** The Quantification Settlement Agreement Water Transfer and Conservation Project, and associated environmental mitigation requirements including the Salton Sea Air Quality Mitigation Program should be included. The Salton Sea Management Program 10-Year Plan and Salton Sea Management Program Long Range Plan should be included. The cumulative impacts analysis should include these projects.
19. **Page 3.0-4, Table 3.0-1 Related Projects:** Related and similar project within close proximity to Hell's Kitchen should consider the three BHE Renewable projects currently under the permitting process: Morton Bay Geothermal, Black Rock Geothermal, and Elmore North Geothermal. These projects are closer and more related and similar in nature than some of the solar projects noted that are also pending approval.
20. **Page 4.1-11 Section 4.2:** In general, IID's comments under hydrology and utility systems (as it relates to water supply) are both directly and indirectly tied to air quality. A reduction of drainage flow into IID drains and the Salton Sea may affect the level of drainage vegetation and exposed playa which in turn could result in increased dust emissions without proper mitigation. A full assessment of the project and/or cumulative impacts to the Salton Sea is essential including the consideration of mitigation measures on how this project can contribute independently or to the Salton Sea Conservancy for Operation and Maintenance or apply other means of mitigation.
21. **Page 4.3-6, Habitat Conservation Plan:** A Draft Habitat Conservation Plan/Natural Communities Conservation Plan for the QSA Water Transfers covers the proposed project area and can be found <https://www.iid.com/water/library/qs-water-transfer>.
22. **Page 4.3-37, Section 4.3.5, Project Impact Analysis, Fish, and page 4.3-42 Bio-8 Mitigation Measure:** The desert pupfish impact discussion in Section 4.3.5 on page 4.3-37 and the Bio-8 mitigation measure on page 4.3-42 do not mesh. The Bio-8 mitigation measure calls for a desert pupfish protection and relocation plan, which the impact discussion states should include approaches to dewatering to avoid or minimize species take, and requirements for habitat compensation. However, the desert pupfish impact discussion states, "The open water area adjacent to the Q Drain could provide suitable habitat for desert pupfish. Construction within the open water area could result in "take" of desert pupfish. A CDFW incidental take permit and USFWS authorization for take of desert pupfish would be required prior to construction in any areas containing suitable habitat for desert pupfish. The CDFW and USFWS take permits will include requirements for avoidance and mitigation of impacts on desert pupfish, including restrictions on the timing of construction activities, approaches to dewatering to avoid or minimize species take, and requirements for habitat compensation to support the species. The impact on desert pupfish would be less than significant due to compliance with the CDFW and USFWS incidental take permits and authorizations." The Bio-8 mitigation should include approaches to dewatering to avoid or minimize species take, and requirements for habitat compensation to support the species, which are discussed at page 4.3-37.

Jim Minnick
November 22, 2023
Page 10

23. **Page 4.9-5, Imperial Integrated Water Resources Management Plan:** The Imperial IWRMP is outdated and is no longer compliant with State standards and requirements and, therefore, no longer serves as the “governing document” for regional water planning.
24. **Page 4.9-6 , Imperial Irrigation District, bulleted items:** Please update this section regarding policy documents that govern IID operations as follows: i) remove “The Definite Plan” and replace with “Rules and Regulations governing the Distribution and Use of Water”, ii) Correct this sentence: “The Equitable Distribution Plan, which defines how IID will prevent overruns and stay within the cap on the Colorado River water rights” as follows: “The Equitable Distribution Plan manages the District’s available water supply, distributing it equitably as determined by the IID Board of Directors,” iii) Delete “Existing IID standards and guidelines for evaluation of new development and defining IID’s role as a responsible agency and wholesaler of water” as this is not referencing any specific policy document.
25. **Page 4.9-6, Imperial Irrigation District last paragraph:** The IWSP was adopted in 2009. Replace “from which water supplies can be contracted to serve new developments within IID’s water service area” with “under which water supplies, up to 25,000 acre-feet annually, have been assessed for new non-agricultural development and may be contracted for conservation at the discretion of the IID Board.”
26. **Page 4.9-7, Table 4.9-1, Conservation and Open Space Element Goal 1, Environmental resources shall be conserved for future generations by minimizing environmental impacts . . . :** Project should not be found consistent with this Goal without further analysis and mitigation. A net reduction of drainage flow to the Salton Sea will result in impacts associated with a permanent higher concentration of salinity levels and lower drainage flow, impacting environmental resources at the Salton Sea. The project analysis should include a discussion on these impacts and address possible mitigation (i.e. fund the proposed new Salton Sea Conservancy for O&M).
27. **Page 4.9-7, Table 4.9-1, Conservation and Open Space Element Goal 6, The County will conserve protect, and enhance water resources in the County. . . :** Project should not be found consistent with this Goal without further analysis and mitigation. A net reduction of drainage flow to the Salton Sea will result in impacts to this water resource and open space around it. The project analysis should include a discussion on this impact and possible mitigation (i.e. fund the proposed new Salton Sea Conservancy for O&M).
28. **Page 4.9-7, Table 4.9-1, Conservation and Open Space Element Goal 6.3, Protect and improve water quality and quantity for all water bodies in Imperial County. . . :** Project should not be found consistent with this Goal without further analysis and mitigation. A net reduction of drainage flow to the Salton Sea will contribute to water quality impacts via higher concentration of salinity levels and permanent reduction of water to the Salton Sea. The project analysis should include a discussion on this impact and possible mitigation (i.e. fund the proposed new Salton Sea Conservancy for O&M).
29. **Page 4.9-8, Table 4.9-1, first Program listed under Water Element calls for limiting the degradation of surface water resources:** Project should not be found consistent with this Program without further analysis and mitigation. As noted above decreased drainage flows contribute to increased salinity at the Salton Sea and degradation of water

Jim Minnick
November 22, 2023
Page 11

quality. The project analysis should include a discussion on this impact and possible mitigation (i.e. fund the proposed new Salton Sea Conservancy for O&M).

30. **Page 4.9-8, Table 4.9-1, last Program listed under Water Element calls for all development proposal brought before the County of Imperial be reviewed and be required to implement appropriate mitigation measures for significant impacts to water quality and quantity:** Project should not be found consistent with this Program without further analysis and mitigation. As noted above decreased drainage flows contribute to increased salinity at the Salton Sea and contributes to the degradation of water quality. The project analysis should include a discussion on this impact and possible mitigation (i.e. fund the proposed new Salton Sea Conservancy for O&M). The Water Supply Assessment (appendix M) does not adequately assess impacts to water quantity.
31. **Page 4.9-9, Project Impact Analysis:** This narrative should address the fact that the proposed project will result in a net annual reduction of drainage flow to the Salton Sea thus contributing to the degradation of the water quality at the Salton Sea. The discussion should determine the net anticipated reduction in drainage flow after taking into consideration that none of the project's 6,500 AFY of water supply will be discharged into the drains that support the Salton Sea.
32. **Page 4.9-10, 4.9.5 Impact Analysis, Operations:** Needs to address surface water quality impacts to drains and to the Salton Sea due to the net reduction flows during operation. See Prior comments.
33. **Page 4.9-13, 4.9.6 Cumulative Impacts:** Need to address surface water quality impacts to drains and to the Salton Sea due to the net reduction flows that will result from urbanization and planned non-agricultural development. Projects under the entitlement process through the County are implemented and cumulative result in permanent flow reductions to the Salton Sea, contributing to even higher salinity concentration and affecting water quality. This analysis needs to be incorporated.
34. **Page 4.9-13, Mitigation Measures:** Update this section to incorporate mitigation that may result from the requested analysis stated above.
35. **Page 4.13-1, Section 4.13 paragraph one references "Information in this section is based on information obtained from the WSA for the Project (Chambers Group 2023) included in Appendix M of this EIR":** The Water Supply Assessment in the appendices should be labeled as draft as it contains inaccurate and incomplete data. IID has not completed the technical review of this document.
36. **Page 4.13-1 Existing Environmental Setting, Regional Setting, Water and Sewer Service paragraph 3, second to last sentence:** Generally speaking, IID does not provide water to the West Mesa Unit. The Elder Canal serves the Imperial County and not the West Mesa Unit. Please delete this reference.
37. **Page 4.13-1 Existing Environmental Setting, Regional Setting, Water and Sewer Service:** Should be updated as IID water facilities that may be impacted include the L, M, O, P, Q, R, S and Vail 3 Drains; Alamo River; the L, M, O, P, Q, R, S Laterals; as well as any additional IID facilities that may be impacted by alignment changes.

Jim Minnick
November 22, 2023
Page 12

38. **Page 4.13-1 Existing Environmental Setting, Regional Setting, Colorado River Water Rights, paragraph 1:** The QSA is not the set of agreements that grant California the most senior water rights. The QSA, among other things, set an annual consumptive use cap for IID of 3.1 million acre-feet. For information regarding IID's water rights, please refer to the *Quantification Settlement Agreement Cases*, 201 Cal. App. 4th 758 (2011), cert. denied 133 S. Ct. 312 (2012), and *Arizona v. California*, 99 S. Ct. 995 (1979).
39. **Page 4.13-8 Imperial Integrated Water Resources Management Plan:** This narrative incorrectly states that the Imperial IWRMP meets the basic requirement of California Department of Water Resources for an IRWMP. The Imperial IWRMP is outdated and no longer meets the State requirements. It is also not the governing document for regional water planning. Update this entire section.
40. **Page 4.13-8 Imperial Irrigation District bulleted items under first paragraph:** Update this section regarding policy documents that govern IID operations as follows: i) remove "The Definite Plan" and replace with "Rules and Regulations governing the Distribution and Use of Water", ii) Correct this sentence: "The Equitable Distribution Plan, which defines how IID will prevent overruns and stay within the cap on the Colorado River water rights" as follows: "The Equitable Distribution Plan manages the District's available water supply, distributing it equitably as determined by the IID Board of Directors," iii) Delete "Existing IID standards and guidelines for evaluation of new development and defining IID's role as a responsible agency and wholesaler of water" as this is not referencing any specific policy document.
41. **Page 4.13-8 Imperial Irrigation District last paragraph:** The IWSP was adopted in 2009. Replace "from which water supplies can be contracted to serve new developments within IID's water service area." With "under which water supplies, up to 25,000 acre-feet annually, have been assessed for new non-agricultural development and may be contracted for conservation at the discretion of the IID Board."
42. **Page 4.13-10, Table 4.13-2 Preservation of Water Resources , Objective 6.3 Protect Water Quantity, Analysis column 3:** The analysis needs to be modified. The percentage of project demand to "IWSP water demand" is not related to an available "unallocated supply" but rather to an "unallocated water supply that may be created and set aside for new non-agricultural projects." The project's water supply needs to be conserved and is not readily available. This analysis shall address the Colorado River System's existing conditions and IID's ability to conserve the Project's anticipated water supply demand in addition to existing water supply demands and potential new water conservation commitments up to 250,000 acre-feet per year through 2026. The percentage needs to be updated to reflect the current IWSP balance.
43. **Page 4.13-10, Table 4.13-2 Preservation of Water Resources , Objective 6.10 Encourage Water Conservation, Analysis column 3:** See prior comment regarding water supply and delete "unallocated supply set aside" as there is no water supply set aside. The water needs to be conserved subject to the terms and conditions of a Water Supply Agreement. Additionally, the analysis must include Best Management Practices that the project incorporates for water conservation and must further address what measures the project plans to take if there is future water supply curtailment of the 6,500 AFY requested. Please see IID/IC WSA Template 2023. Appendix M is incomplete as it

Jim Minnick
November 22, 2023
Page 13

relates to incorporation and identification of best management practices for water conservation.

44. **Page 4.13-11 & 4.13.4, Methodology:** Incorrectly references a WSA dated April 2023 (Appendix J). This draft EIR incorporates an incomplete WSA and as Appendix M.
45. **Page 4.13-11, Regional Water Demand, Section 4.13.4, last paragraph:** Please replace “kilo” with “thousand” (as in KAF).
46. **Page 4.13-11, Table 4.13-4, Table 4.13-5:** All tables taken from IID’s WSA Template must recognize and date the source as Imperial Irrigation District. Table 4.13-5 also incorrectly states that Salton Sea mitigation is included in the nonagricultural delivery. That mitigation ended in 2017 and this information needs to be corrected. The data year is inaccurately labeled on title of Table 4.13-4.
47. **Page 4.13-13 Water:** IID water facilities that may be impacted include the L, M, O, P, Q, R, S and Vail 3 Drains; Alamo River; the L, M, O, P, Q, R, S Laterals. Expanded capacity, including new and modified facilities, needs to be analyzed.
48. **Page 4.13-15, Threshold b) narrative:** This section needs to be updated. The water supply assessment can’t extend beyond 30 years (through 2053) because the Water Supply Assessment template created by IID and Imperial County does not extend beyond 2055. Therefore, there is no 50-year water supply assessment that can be applied to this project. Additionally, the IWSP does not dedicate or set aside 25,000 AFY of IID’s annual water supply to serve new projects. Refer to prior comments regarding ability to “conserve” up to 25,000 acre-feet under the IWSP. The remaining IWSP balance is not 23,020, please refer to updated WSA template as this amount is under 19,620 AFY.
49. **Page 4.13-15 Table 4.13-6 Project Water Uses (AFY):** The table notes a total operational use of 299,000 AFY which is inaccurate. Change table to AF and not AFY.
50. **Page 4.13-16 Table 4.13-7 Project Water Uses (AFY):** The table notes a total water use summary of 299,000 AFY which is inaccurate. Change table to AF and not AFY.
51. **Page 4.13-16 Table 4.13-8 Amortized Project Water Uses (as percent of IWSP):** The table denotes the incorrect IWSP balance and thus this information is incorrect as the balance is under 19,620 AFY. Refer to an updated Water Supply Assessment.
52. **Page 4.13-16 Paragraph two:** The entire paragraph needs to be deleted as the statements are all inaccurate. The existing and near-term On-Farm Efficiency conservation and System Efficiency conservation undertaken by IID and its customers under the QSA and other near-term agreements **do not ensure** that the project’s water needs will be met over the next 50 years. Hell’s Kitchen, in coordination with IID, will need to implement a conservation program or project to generate the 6,500 AFY of water supply that it will need for its operations. Please refer to the IWSP: <https://www.iid.com/home/showpublisheddocument/IWSP>
53. **Page 4.13-16 Paragraph three:** The drought is entering its third decade (not for the past decade or so). This paragraph incorrectly references and Appendix J. Utility Mitigation Measures UTIL-1 as a blanket statement that the Applicant will work with IID to ensure

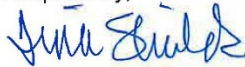
Jim Minnick
November 22, 2023
Page 14

reductions of water are managed is not an acceptable mitigation. As per the WSA Template approved by Imperial County and IID, the project proponent must identify specific measures of how a proportional percentage of water will be curtailed if water supply reductions were ordered by an agency having jurisdictional authority.

54. **Page 4.13-4 (error in renumbering, page 291 of pdf), paragraph two:** The entire paragraph needs to be deleted as the statements are inaccurate. The existing and near-term On-Farm Efficiency conservation and System Efficiency conservation undertaken by IID and its customers under the QSA and other near-term agreements **do not ensure** that the project's in addition to other cumulative water demand needs will be met over the next 50 years. Each independent new non-agricultural project, in coordination with IID, must implement a conservation program or project to generate their respective water supply demand. Please refer to the IWSP: <https://www.iid.com/home/showpublisheddocument/IWSP>
55. **Page 4.13-3, 4.13.7 Mitigation Measures (error in renumbering, page 292 of pdf):** Mitigation Measure UTIL-1 is not acceptable. As per the WSA Template approved by Imperial County and IID, the project proponent must identify specific measures of how a proportional percentage of water will be curtailed if water supply reductions were ordered by an agency having jurisdictional authority.
56. **Page 6.0-4, 6.1.5 Hydrology and Water Quality:** Hydrology and Water Quality should not be listed under "EFFECTS NOT FOUND TO BE SIGNIFICANT" unless an assessment/analysis is completed as previously noted above, and there is sufficient analysis and data to make such a finding.
57. **Page 6.0-10, 6.1.13 Utilities:** Utilities should not be listed under "EFFECTS NOT FOUND TO BE SIGNIFICANT" unless an assessment/analysis is completed as previously noted above, and there is sufficient analysis and data to make such a finding.

Thank you for the continued coordination with IID. Should you have any questions, please do not hesitate to contact Donald Vargas at (760) 482-3609 or via email at dvargas@iid.com.

Respectfully,



Tina Anderholt Shields, PE
Water Manager

Enclosure

Jamie Asbury – General Manager
Mike Pacheco – Manager, Water Dept.
Matthew H Smelser – Manager, Energy Dept.
Geoffrey Holbrook – General Counsel
Joanna Smith Hoff – Deputy General Counsel
Michael P. Kemp – Superintendent General, Fleet Services and Reg. & Environ. Compliance
Donald Vargas, - Compliance Administrator I
Laura Cervantes. – Supervisor, Real Estate
Jessica Humes – Environmental Project Mgr. Sr., Water Dept.
Justina Gamboa-Arce-Senior Water Resources Planner

Enclosure 1

**SB610 WSA Hell's Kitchen PowerCo1 and LithiumCo 1 Project
Water Supply Assessment Review Comments**

See tracked PDF for comprehensive and detailed edits.

- Title Page** – Label Draft. Document circulates as draft until it is reviewed for technical compliance from IID and accepted by Imperial County.
- Page 9, last ¶, third sentence:** This amount does not match the water supply demand in the draft EIR of 6,500 AFY or the water supply request submitted to IID of 6,500 AFY. This document will need to explain the difference of 626 AFY.
- Page 9, last ¶, third sentence:** This percentage needs to be updated once the correct IWSP balance is factored.
- Page 10, first ¶, first sentence:** adjust remaining AFY accordingly
- Page 10, last ¶, third sentence:** insert after 250,000 AFY (through 2026)
- Page 12, subtitle HKP1 Facilities:** Please describe the phasing time between HKP1 and HKL1 facilities.
- Page 19, fifth ¶, second sentence:** IID does not sell potable water. Please incorporate the treatment process.
- Page 23, first sentence:** This important information noted in the template that has been omitted and needs to be incorporated. See page 10 of template.
- Page 23, first ¶, first sentence:** IID is not a potable water service provider. The Project will need to have its own treatment system or purchase it from a qualified provider. Please correct this first statement.
- Page 23, second ¶, first sentence:** IID will not contract over the projected water supply demand. The Project and this document needs to reconcile these two figures.
- Page 23, before third ¶: Insert subheading:** Water Use Efficiency Best Management Practices Incorporated Into Project" This information needs to be specific. Use of recycled water? How much?; cooling system not a single press system? how many cycles? Condenser recovery system? Water Monitoring? Please elaborate as this will be part of mitigation measures incorporated.
- Page 23, before fourth ¶, Insert subheading:** "Additional Project Measures Under Potential Curtailment" List what operational changes will be implemented if a reduction in water supply volume is implemented by an authorized regulatory agency post Project operations. Narrative must be specific as this will be a part of project mitigation.
- Page 25, map, bottom left corner:** Please differentiate between leased land and land owned by Hell's Kitchen Geothermal LLC
- Page 35, first ¶, second sentence:** update to June 2023, two water supply agreements totaling 5,380 AFY leaving a balance of 19,620
- Page 45, Figure 6 Lake Mead Water Elevation Levels January 2022:** Please see template most current update or replace with version in link.
- Page 50, last row (2022), column 7 (IID Underrun/Overrun):** Update to -6,470
- Page 54, first ¶, first sentence:** Please revisit this. Will you be purchasing potable water or will the Project incorporate a treatment facility for potable level needs? Or both? Please be specific.

- Page 54, second ¶, third sentence, highlighted text:** What needs to be identified here is entitlements for the proposed geothermal operation and lithium extraction operation: CUP, Zoning Variance, etc.
- Page 54, third ¶, end of sentence:** Include a sentence that states, "This Project is not subject to the TLCFP."
- Page 55, third ¶, second sentence, highlighted text:** Update stats per previous comment.
- Page 57, first ¶, eleventh sentence, highlighted text:** The table indicates that the current land use is receiving water. Please update this narrative for consistency with Table 15.
- Page 57, Table 14, row one, column two, highlighted text:** This is per year not in total. You can keep the total demand but please update table to insert the per year totals which is what is assessed.
- Page 57, Table 14, row two, column one:** As noted in the template Dust Control category is required. Please reinsert that row and identify the amount projected to be needed for dust control.
- Page 57, Table 14, row six, column one:** Add a row for fire suppression. This is per year and not in total.
- Page 57, second ¶, highlighted text:** Are there agricultural uses? Previously indicated as just wells and undeveloped land? Please make sure there is consistency
- Page 59:** These values in red need updated and all font converted to black font: "Losses" is 38.3 and Total System Operational Use is 80.3
- Page 60:** Please update all table figures per PDF redlines.
- Page 61, first sentence:** This template/table does not extend out for 50-years. We would not project over 30 years. Please correct this statement.
- Page 67, third ¶, first sentence:** This number needs to be consistent with EIR and vice versa.
- Page 67, fifth ¶, last sentence:** assessment period is not 50 years; 30 years would be the maximum and it would need to be consistent throughout.
- Page 68, first ¶, first sentence:** Imperial County to determine this recommended finding prior to circulation.
- Page 68, first ¶, second sentence:** change sentence to read "may dedicate" "up to" 25,000 AF of IID's annual "conserved" water supply
- Page 68, first ¶, fourth sentence:** This is a cumulative number to come from Imperial County and not just HKP1 and HKL1 project
- Page 68, second ¶, last sentence:** via the means identified herein or other equivalent measures.
- Page 68, fourth ¶, first sentence:** sentence should read supply "that may be set aside under" the IWSP
- Page 70, number 12:** 2022 Report is available in 2023, please update
- Page 72, Attachment B:** EDP was updated in July 2023, please use the 2023 version in your submission.

Response to Comment Letter #6:

Figure 2.0-1, included in the Draft EIR, shows the Project features related to HKL1 and HKP1, and their shared facilities. The features are inclusive of infrastructure associated with the Project site. As stated in the DEIR and reiterated in responses to comments above, the entire project site and a buffer from the project were analyzed for biological resources to address both impacts from land disturbance as well as potential indirect impacts. The analysis includes evaluation of indirect impacts such as noise and water quality impacts on adjacent areas.

Please note, an updated WSA was submitted to IID for review. All comments regarding water supply, water quality associated with water supply, project water use, water demand, specific measures for water conservation, and updated water availability will be addressed in the draft of the WSA submitted to IID 11/27/2023. Please also note that the revised WSA will also address the issues revolving around IWSP water supply.

The EIR has been revised to reflect IID's involvement with issuance of encroachment permit(s), issuing a water supply agreement, and additional yet unknown approvals.

Table ES-1 has been updated to reflect revisions to mitigation language and update impact findings, as necessary.

The Project Applicant will work with IID to establish IID Davis Switching Station as the Project's point of interconnection. If further environmental analysis is required due to the alternative interconnection point, then the Project Applicant will be required to do so.

The EIR has been revised to reflect that the Project does not include any work within the P, Q, R, and S Drains. Any such future work will require a separate approval and environmental review.

As stated in the comment, the extension of the P, Q, R and S Drains are subject to a number of existing regulatory requirements and mitigation measures, with which Project will be required to comply. The Project does not currently propose extensions to the drains; however, if in the future the Project extends or interconnects the drains, the action will incorporate the necessary regulatory mitigation measures. It should also be noted that mitigation measure BIO-8 has been revised to provide adequate protection to desert pupfish.

The Project Proponent will work with IID to perform the required System Impact Study. Should additional environmental review be required due to the results of the study, then the Project Proponent will work with IID to resolve any analysis gaps.

S Berm Road and Well Pad 4 were analyzed under the exploratory portion of this Project and it should be noted that Managed Marsh Complex berms are not proposed for commuting to the Project site.

As stated in Section 4.13, the proposed water storage pond has a capacity of 18 acre-feet of water. Section 2 of the EIR will also be revised to reflect the storage capacity.

The Imperial Integrated Water Resources Management Plan has been eliminated from the regulatory framework of the EIR and the discussion of Imperial Irrigation District has been updated in Section 4.9.

Project Proponent will work with IID to establish best management practices and protocols to ensure the Project does not result in impacts to inflow to the Salton Sea and is in compliance with the Salton Sea Conservancy for Operations and Maintenance. No impact has been established and impacts are theoretical; however, the Project Proponent will work with IID to ensure the Project is in compliance with all regulations and requirements regarding drainage flow into the Salton Sea.

Reference to West Mesa unit has been deleted from the EIR.

2.2 INDIVIDUAL COMMENTS

Comment Letter #7:



PERFORMANCE MECHANICAL CONTRACTORS

IMPERIAL VALLEY
401 WEST 5TH ST
HOLTVILLE, CALIFORNIA 92250
760.356.4185 TEL
www.pmc-us.com

October 5, 2023

Jim Minnick
Planning & Development Services Director, County of Imperial PDS
801 Main Street
El Centro, CA. 92243
(442) 265-1736
JimMinnick@co.imperial.ca.us

RECEIVED

By Imperial County Planning & Development Services at 1:14 pm, Oct 10, 2023

Subject: SCH Number 2022030704
Hell's Kitchen PowerCo1 and LithiumCo1 Project

Dear Director Minnick,

I am writing on behalf of Performance Mechanical Contractors (PMC) in support of the Hell's Kitchen PowerCo1 and LithiumCo1 Project (the "Project") with SCH Number 2022030704, whereby Controlled Thermal Resources (US) Inc. via its subsidiary Hell's Kitchen HoldingCo 1, LLC is proposing the Project in Imperial County, California. The Project involves the development of a geothermal power plant that will produce up to 49.9 megawatts (MW) net of geothermal green energy, and development of mineral extraction and processing facilities capable of producing lithium hydroxide, silica, and polymetallic products, and possibly boron compounds, for commercial sale.

PMC was founded here in the Imperial Valley, with its home office in Holtville. We are a general contractor that builds and maintains geothermal and now, lithium facilities. PMC is the selected General Contractor for all Hell's Kitchen projects.

CTR leadership has proactively engaged with the State Building and Trades Council of California to develop a Project Labor Agreement (PLA), and we recognize the opportunity for significant union jobs as the project is constructed over the next several years. Furthermore, we recognize the positive impact the project will have on Imperial County by way of job creation and tax revenue for the community.

Please consider this letter as an indication of dedicated support for the Hell's Kitchen Project on behalf of PMC.

Sincerely,

A handwritten signature in black ink, appearing to read "JT", is written over a light gray background.

Jason Turner
President/Founder



Response to Comment Letter #7:

Comment communicates support for the Proposed Project. The comment does not identify any issues with the DEIR; therefore, no further response is necessary.

Comment Letter #8:



October 22, 2023

David Black, Senior Planner
County of Imperial
Planning & Development Services
801 Main Street
El Centro, CA 92243

RECEIVED

By Imperial County Planning & Development Services at 10:19 am, Oct 23, 2023

RE: Response to the Draft Environmental Impact Report for the Hell's Kitchen PowerCo1 and LithiumCo 1 Project, Imperial County, California [SCH Number 2022030704]

Dear Mr. Black:

On behalf of EnergySource Minerals LLC, we respectfully submit the following comments on the Draft Environmental Impact Report ("EIR") prepared by the County of Imperial ("County") for the proposed Hell's Kitchen Powerco1 and Lithiumco 1 Project ("Project").¹

The Project has the potential to be a significant source of renewable energy and domestic lithium, with the stated goal to create jobs while "minimizing and mitigating" adverse environmental impacts. (Draft EIR, pp. ES-2, 1.0-1, 2.0-7.) EnergySource Minerals LLC supports this vision. We are concerned, however, that to date, the County's review of the proposed Project fails to account for the need to analyze and mitigate the Project's environmental impacts pursuant to the California Environmental Quality Act ("CEQA").

On May 10, 2022, we provided comments in response to the County's Notice of Preparation ("NOP") of an EIR for the proposed Project, concerning a number of environmental issues.² These comments focused on transportation and circulation, traffic safety and the need for an operational assessment of impacts to Caltrans facilities, as well as interconnection to the Imperial Irrigation District ("IID") grid. Having reviewed the Draft EIR for the Project and its treatment of these issues, we are concerned that the County plans to rely on an EIR that fails to inform the public and decision makers regarding the environmental impacts of the proposed Project. The County cannot lawfully certify the EIR and approve the Project without first complying with its duties under CEQA to adequately address the reasonably foreseeable direct, indirect, and cumulative impacts of constructing and operating the Project. (*Vineyard*

¹ / These comments are informed by, among other things, our extensive experience as experts in the energy and planning industries, particularly in Imperial County. A brief summary of our qualifications is attached hereto as **Exhibit A**.

² / EnergySource Minerals LLC incorporates its NOP comments herein by reference and attaches them hereto for the County's convenience as **Exhibit B**.



Area Citizens for Responsible Growth v. City of Rancho Cordova (2007) 40 Cal.4th 412, 434.)

EnergySource Minerals LLC is not opposed to the Project and seeks only to ensure that it will be constructed and operated in a sustainable and environmentally sensitive manner. To that end, we provide the following detailed comments for the County's consideration.

I. Project Description

Section 2.2 of the Draft EIR states that "[t]he Project is located within undeveloped land and a right-of-way [ROW] corridor for the gen-tie transmission line to the [Imperial Irrigation District (IID)] interconnect station near Hudson Ranch (HR1)." (Draft EIR, p. 2.0-1; see also *id.* at p. 2.0-13 ["[t]he high voltage side of the main step-up transformer will be connected to a new gen-tie line located within IID's transmission ROW to the IID interconnect station at HR1"].) According to the Draft EIR, "[t]he gen-tie line will be constructed as part of the power plant construction but turned over to IID for ownership and operation." (Draft EIR, p. 2.0-13.) The HR1 substation is jointly owned by IID and CYRQ Energy, however, and the Project's proposal is not workable because the substation cannot accommodate both the HR1 interconnection and the connection to the ATLiS project.³

Section 2.6.9 of the Draft EIR states that the proposed 230KV line will be installed within the IID ROW to the HR 1 substation. (Draft EIR, p. 2.0-13.) To our knowledge, however, the IID ROW is located on the south side of McDonald Road, while the Draft EIR describes the location of the line to be on the north side of McDonald Road. (See, e.g., Draft EIR, pp. 2.0-14, 3.0-1, 4.8-1.) To comply with CEQA, the Draft EIR's Project Description must be clear and consistent in its identification of basic Project components. (CEQA Guidelines, § 15124; see, e.g., *County of Inyo v. City of Los Angeles* (1977) 71 Cal.App.3d 185; *Washoe Meadows Community v. Department of Parks & Recreation* (2017) 17 Cal.App.5th 277, 287.) This information concerning the location of the proposed 230KV line must be accurate and complete to allow meaningful analysis, because placing the line on the south side of McDonald Road will significantly interfere with planned infrastructure work being constructed as part of the ATLiS project, which includes a transmission connection between the substation and the ATLiS project, as well as several entrances to the HR1 and ATLiS project. (See footnote 3, *supra*.)

Section 2.9.1 of the Draft EIR is internally inconsistent in its description of the anticipated construction workforce and schedule, variously describing the expectation to

³ / The 40-acre ATLiS project is under development in Imperial County and will deliver the world's most sustainable Lithium, operating a fraction of the carbon, water and land footprints of other production facilities. (<https://www.esminerals.com/timeline>;



be "a maximum of approximately 450 workers per day during peak construction" and also "[u]p to 500 workers will travel to the site per day at the peak of construction." (Draft EIR, p. 2.0-16.)⁴

II. Impact Analysis

a. Transportation and Circulation

The Draft EIR's evaluation of the proposed Project's effects on transportation and circulation in the vicinity, including but not limited to safety impacts as well as the Project's relationship to the County's General Plan, fails to comply with CEQA. (Draft EIR, pp. 4.11-1 – 4.11-7, 4.11-2 – 4.11-5.)⁵ A transportation impact study is required to assess the transportation conditions associated with implementation of the proposed Project, particularly in the cumulative scenario.

While transportation impacts under CEQA generally are based on VMT (CEQA Guidelines section 15064.3), the Project also requires analysis of intersection and roadway segment operating conditions to determine the Project's relationship to the County's General Plan policies regulating transportation and circulation. The County has established LOS C as the standard for acceptable operating conditions. (Draft EIR, p. 4.11-4.) The qualitative and cursory evaluation of the proposed Project's consistency with the County's General Plan policies fails to discuss, much less show, whether transportation conditions expected with implementation of the Project would conflict with those policies. (Draft EIR, p. 4.11-5.) Section 4.11-4 of the Draft EIR states that, during construction alone, 54,000 trucks (approximately 25 trucks per day, and up to 250 trucks per day during grading) would travel to and from the Project site. Yet there is no mobility assessment in the Draft EIR that shows how this volume of traffic would enter

⁴ / Section 2.9.2 of the Draft EIR states the operational workforce of HKL1 to be 90 full-time, with 44 per shift, which equates to several hundred round trips per day for employees (in fact Table 4.11-2 shows it to be 432 estimated daily trips and 113 trucks per day). (Draft EIR, pp. 2.0-18, 4.11-2 (the second one – see fn. 5, *infra*.) Impacts to McDonald Road would be significant; they require evaluation in a transportation impact study as discussed in further detail in Section II.a of this letter.

⁵ / The Draft EIR is improperly and confusingly paginated. For example, the Draft EIR begins its discussion of "Transportation" on page 4.11-1, which continues through page 4.11-7. The page that should be numbered 4.11-8 is incorrectly numbered as another page 4.11-2; page numbers 4.11-3 through 4.11-5 also are repeated, which concludes the chapter. The Draft EIR overall contains numerous typographical and referencing errors, such as its statement on page 4.11-4 (the first one) that "Table 4.10-4 analyzes the consistency of the Project with specific policies contained in the Imperial County General Plan associated with transportation and traffic." The correct reference is to Table 4.11-1 on page 4.11-5 (the first one).



Highway 111 or what transportation conditions would result at that intersection, on McDonald Road, and on English Road.

The County (as well as other agencies and the public) cannot determine, for example, whether the proposed Project is consistent with County requirements for "the safe and efficient movement of people and goods within and through the County of Imperial with minimum disruption to the environment" (see Draft EIR, p. 4.11-5) without a meaningful analysis of transportation conditions with implementation of the Project. The proposed Project requires a roadway and intersection traffic study, including but not limited to study of roundabouts at Highway 111 and study of the intersection of Davis and McDonald Roads, to determine whether improvements (such as a signalized intersection at McDonald and Highway 111 to address traffic safety issues resulting from the proposed Project as well as traffic volumes) or other mitigation measures are warranted.

The Draft EIR further fails to include in its transportation discussion consideration of the proposed Project's impacts on the existing road and highway network and its status as a beneficiary of County-required improvements already made in connection with other projects. (See, e.g., Draft EIR, p. 4.11-5.) As you know, EnergySource LLC and EnergySource Minerals LLC were required to pave McDonald Road from Davis Road to Highway 111, which exceeded the constitutional limits of nexus and rough proportionality for conditions on its permits. Accordingly, the County could only require such improvements in connection with those permits by including provisions requiring reimbursement from any other development that impacts McDonald Road and/or the intersection of Highway 111. The Draft EIR fails to address this important constitutional concern. (See *Nollan v. California Coastal Commission* (1987) 483 U.S. 825; *Dolan v. City of Tigard* (1994) 512 U.S. 374.) The proposed Project must contribute its fair share to required (past and future) improvements and conditions of Project approval must require reimbursement.

Moreover, the "Transportation Plan" identified in the Draft EIR as a "project design feature" (Draft EIR, p. 2.0-23) is a mitigation measure that must be described in the EIR; impacts of the proposed Project must be disclosed prior to implementation of mitigation, and identification of the performance standards or criteria to be achieved by the mitigation plan cannot be deferred. (CEQA Guidelines, § 15126.4(a)(1); *Lotus v. Department of Transportation* (2014) 223 Cal.App.4th 645, 656-658.) Proper analysis of transportation impacts and identification of enforceable mitigation measures is crucial, particularly since construction traffic from multiple large-scale projects is likely to occur at the same time. This will substantially increase hazards and pose significant safety issues, particularly during the periods that McDonald Road is being temporarily, and subsequently permanently, constructed. The County can readily foresee there will be a significant amount of time that McDonald Road and its intersection with Highway 111 will not be open to traffic, which will require the use of other roads such as Shrimp, Pound or



English, none of which are even mentioned in the Draft EIR. The “Transportation Plan” is necessary to mitigate significant safety and circulation impacts of the proposed Project and must be included in the EIR.

Section 5.41. of the Draft EIR is internally inconsistent and misleading in its comparison of the “No Project Alternative” to the “Transportation” effects of the proposed Project, and neither the “Alternatives” discussion nor the “Transportation” discussions in the Draft EIR provide the necessary discussion of impacts and mitigation in relation to existing environmental conditions. (See, e.g., Draft EIR, p. 5.0-5; see also CEQA Guidelines, §15125.) The “Conclusion” paragraph concerning the “No Project Alternative” states, in part:

The No Project Alternative would not change existing conditions at the Project site. The No Project Alternative would result in mostly reduced environmental effects compared to the Proposed Project's less than significant impacts. However, under the No Project Alternative, impacts to transportation would be considered greater and potentially significant without the mitigation to install a northbound left-turn pocket lane to improve the current safety hazards at this intersection.

(Draft EIR, p. 5.0-5.)

Under “Transportation,” the “No Project Alternative” discussion states:

No construction traffic would be generated in association with the No Project Alternative because no mineral extraction plant would be constructed. Additionally, fewer truck trips would occur under the No Project Alternative, resulting in less impacts and no need to mitigate the potential safety impact at the intersection of Highway 111 and McDonald Road. Although with mitigation, Project impacts to transportation would be less than significant, impacts under the No Project Alternative would be reduced when compared to the Project.

(Draft EIR, p. 5.0-5; see *id.* at p. 5.0-8.)

This conflicting discussion inadvertently discloses what should be obvious – the Project's contribution to safety impacts at the intersection of Highway 111 and McDonald Road is cumulatively considerable and requires mitigation – but the Draft EIR overall fails to acknowledge and disclose the Project's significant adverse transportation-related effects. (See Draft EIR, p. 5.0-8 [Project's transportation impacts are “less than significant with mitigation”].) Instead, the Draft EIR presents information in confusing and conflicting ways, and the Draft EIR's transportation discussion provides no evaluation whatsoever of the intersection of Highway 111 and McDonald Road. At a minimum, mitigation measures for impacts at this intersection clearly are necessary as a



result of the Project, yet the Draft EIR identifies none. (See Draft EIR, pp. ES-37, 4.11-5 (the second one).)

The Draft EIR must be revised and recirculated for public review to serve its basic informational purpose concerning the proposed Project's transportation-related impacts. (Pub. Resources Code, § 21092.1; CEQA Guidelines, § 15088.5; *Laurel Heights Improvement Association v. Regents of University of California* (1993) 6 Cal.4th 1112, 1130 (“*Laurel Heights II*”).)

b. Utilities and Service Systems

Section 4.13.5 (and the Draft EIR as a whole) glosses over the proposed Project's need for a new onsite substation and provides no evaluation of associated environmental effects. (Draft EIR, p. 4.13-14; see also Draft EIR, pp. 2.0-13 [Section 2.6.9 (Substation and Electrical Power Transmission); 4.2-10 – 4.2-17 [substation description and evaluation absent from air quality impact analysis], 4.5-8 – 4.5-11 [substation description and evaluation absent from energy impact analysis].)⁶ The new onsite substation is discussed only twice, in two superficial paragraphs, in the entire Draft EIR. (Draft EIR, pp. 2.0-13, 4.13-14.) Impacts of substation construction and operation, including but not limited to impacts related to aesthetics, lighting, and visual quality, biological and cultural resources, noise, geology and soils, and hazards (including impacts of herbicide use for vegetation management/maintenance) are ignored.

The Draft EIR repeatedly suggests that interconnection with the existing transmission system will occur at “the IID interconnect station near Hudson Ranch (HR1).” (Draft EIR, pp. 2.0-1, see also *id.* at pp. 2.0-8, 2.0-13, 3.0-1, 4.3-2.) We expect that CYRQ, the new owners, will also address this issue, but for the record, this substation is *jointly owned* by CYRQ and IID. To our knowledge, the HR1 substation does not have the capacity for additional substation equipment. Therefore, it is unclear how the proposed Project's new 230 KV line with associated substation(s) actually will interconnect to the existing transmission system and how it may adversely impact existing utilities and service systems. (See Draft EIR, pp. 4.13-13 – 4.13-18, 4.13-2 – 4.13-3 (second one).)⁷

⁶ / The Draft EIR's Executive Summary and Introduction fail even to mention the new substation at all among their identification of project activities. (See, e.g., Draft EIR, pp. ES-1, 1.0-1.)

⁷ / As noted above, the Draft EIR is improperly and confusingly paginated. As another example, the Draft EIR begins its discussion of “Utilities and Service Systems” on page 4.13-1, which continues through page 4.13-18. The page that should be numbered 4.13-19 is incorrectly numbered as another page 4.13-2; page number 4.13-3 also is repeated, which concludes the chapter.



Basic information regarding the size, location, and character of essential project components is missing from the Draft EIR. For example, will there be one single 230 KV line with a single set of conductors, or will there be multiple conductors? Conflicting information abounds, and it appears from some information that power may be intended to be redirected from HR1 to a new substation along Davis Road, then back to the 230KV line at HR1. Is there in fact a new substation along Davis Road outside of the project site? Will the new steel poles actually be direct-bury steel structures as stated in the Draft EIR's Project Description? (Draft EIR, p. 2.0-13.) The Draft EIR fails to address the corrosive nature of the soil in this area, which make direct-buried steel poles an inappropriate and unsafe solution, not to mention their ineffectiveness and costliness for future maintenance by IID. It is critical for the Draft EIR to provide a clear description of this gen-tie line to inform the public and the decision makers of its impacts. For instance, the Draft EIR indicates that the new line would be north of McDonald Road, while IID ROW is located on the south side. A new 230 KV line in this location would result in construction and operational conflicts, directly, indirectly, and cumulatively, which the Draft EIR fails to evaluate.

c. Air Quality Impacts and Health Risk Assessment

Section 4.5.4 of the Draft EIR indicates that off-road construction equipment for the proposed Project will use 636,310 gallons of diesel fuel, and on-road Project trips will use 8,554,787 gallons of diesel fuel, for a total Project impact of 9,191,096 gallons of diesel fuel. (Draft EIR, p. 4.5-9.) Under the guidelines and procedures of the California Air Resources Board ("CARB") and the Office of Environmental Health Hazard Assessment ("OEHHA"), as well as per the NOP comments on the proposed Project by the Imperial County Air Pollution Control District ("APCD"), a comprehensive air quality analysis is required that includes a health risk assessment as well as hot spot modeling to determine compliance with the state CO standards at intersections and roadway links as determined by a traffic impact analysis. These requirements concerning CO hot spot modeling using an APCD approved model (such as CALINE4, developed by and available through Caltrans) are not addressed in the Draft EIR or in the underlying Air Quality Technical Report, which states only that "[t]here are no sensitive receptors within two miles of the proposed project, therefore a health risk assessment was not conducted." (Air Quality Technical Report, p. 2; see *id.* at pp. 17, 28-29.)

A CO hot spot analysis is not sensitive receptor dependent, however. It is a sub-regional transportation-related assessment of CO, PM₁₀ and PM_{2.5} impacts on a smaller scale than the entire nonattainment or maintenance area, including, for example, congested roadways, intersections, and highway facilities. To determine the proposed Project's air quality impacts and health risks resulting from the use of heavy-duty diesel



equipment on local roadways, a traffic study/local mobility assessment and hot spot modeling are required.

As discussed above, the Draft EIR contains many errors, omissions, and inconsistencies that are procedural as well as substantive. We are very concerned that the County plans to rely on a CEQA process that fundamentally fails to inform the public and decision makers regarding the environmental impacts of the proposed Project. (*Sierra Club v. County of Fresno* (2018) 6 Cal.5th 502.) EnergySource Minerals LLC is not opposed to the Hell's Kitchen Project and seeks only to ensure that environmental resources are managed cooperatively in a sustainable manner.

The EIR must be substantially revised and recirculated because the proposed Project will have significant adverse environmental effects related to, among others, transportation and circulation, utilities and service systems, water and wastewater, air quality and health risk, and energy, that were not analyzed and disclosed in the Draft EIR. (CEQA Guidelines, § 15088.5; *Laurel Heights II, supra*, 6 Cal.4th at p. 1130; *Vineyard Area Citizens for Responsible Growth v. City of Rancho Cordova* (2007) 40 Cal.4th 412, 449 ("*Vineyard Area Citizens*").) Importantly, EnergySource Minerals LLC's comments do not merely dispute the EIR's analysis or conclusions; rather, the Project EIR must be substantially revised and recirculated because it omits basic information and fails to discuss and evaluate fundamental environmental issues. (CEQA Guidelines, § 15088.5; *Banning Ranch Conservancy v. City of Newport Beach* (2017) 2 Cal.5th 918, 935; *Vineyard Area Citizens, supra*, 40 Cal.4th at p. 426.) Its hasty preparation and release, without proper consideration of important environmental issues as CEQA requires, is evident throughout the Draft EIR.

Finally, we note the incomplete and confusing manner in which the Draft EIR was circulated for public review, first calling for comments by October 18th, then by October 23rd, then acknowledging that portions of the Draft EIR had been omitted from the initial release and circulated later, for fewer than 45 days. (Draft EIR, p. 1.0-5; see Exhibit C [County/State Clearinghouse Correspondence dated September 6, 2023, October 3, 2023, and October 4, 2023].) We therefore request that the comment period on the Draft EIR be extended by at least another 30 days to afford the statutory minimum amount of time for interagency consultation as well as public review and comment. (Pub. Resources Code, § 21091(a); CEQA Guidelines, § 15105(a).)

Although there are numerous other deficiencies in this EIR we have only focused on the issues that directly and potentially adversely affect our project. Once again, we are not opposed to the project and only request that the above impacts are adequately addressed and mitigated.

Thank you for the opportunity to review the Draft EIR. Pursuant to Public Resources Code section 21092.2, please provide all notices concerning the review, processing, and consideration of the proposed Project to me at 2524 Gateway Road, Carlsbad, Ca. 92009 and by email at jheuberger@esminerals.com.

2524 Gateway Road, Carlsbad, CA 92009 | Phone 858-509-0150 | Facsimile 858-509-0157



Sincerely,

A handwritten signature in blue ink, appearing to read "Jurg Heuberger", is written over the typed name and title.

Jurg Heuberger
SVP, Permitting and Compliance

cc: Jim Minnick, County of Imperial, Planning & Development Services Director
Diana Robinson, County of Imperial, Planning Division Manager

2524 Gateway Road, Carlsbad, CA 92009 | Phone 858-509-0150 | Facsimile 858-509-0157

Exhibit A:

Brief Summary of Qualifications

For

Jurg Heuberger

2010-present: involved in the energy sector as a consultant which included permitting a Geothermal plant; compliance with regulatory requirements for a Geothermal plant, permitting a minerals/lithium project, and permitting several solar energy projects as well as transmission lines. All of these projects included compliance with the California Environmental Quality Act (CEQA).

1985-2010: Served as the Director of the Planning and Development Services Department for the County of Imperial, which also included being the Building Official; for a portion of that time, the Director of Economic Development; and also for part of that time the Parks and Recreation Director.

1975-1985: Served as Chief Building Official and Building Inspector for Imperial County.

1973: Earned a BS degree in Architecture from California Polytechnic State University at San Luis Obispo

Exhibit B:

Response to NOP filed on May 10th, 2022

**EnergySource Minerals, llc
12544 High Bluff Dr., Suite 320
San Diego, Cal. 92130**

May 10, 2022

Imperial County Planning & Development Services Dept.
801 W. Main St.
El Centro, Ca. 92243

ATTN: David Black, Sr. Planner
RE: Response to NOP for CUP 20-0020, 20-0021 Variance 21-0004 & 21-0005
(Response deadline May 13, 2022)

Mr. Black:

EnergySource Minerals llc (ESM), appreciates receiving the notice on the NOP for the Hell' Kitchen Power and Lithium projects and the opportunity to provide comments.

Please consider the following comments not as an opposition to the project rather issues that we feel need to be addressed during the preparation of the environmental and project reviews.

TRAFFIC:

- As you know Hudson Ranch Power I, llc was as part of its permit approval required to pave approximately two miles of McDonald Rd. Likewise ESM was required to pave the remaining two miles of McDonald Rd. Both of these requirements included provisions for "reimbursements" by other "projects" that may use McDonald Rd as their access. To determine the fair share contribution for the respective parties, a comprehensive traffic analysis needs to be done on this project to determine not only the traffic safety issues that could arise given the massive amount of traffic projected, but also the reimbursement to EnergySource llc for prior and current expenditures on this road.
- In addition to McDonald Rd improvement, similar or rather associated improvements are required on HWY 111 and McDonald Rd. These also include structural improvements to IID structures at those locations. Again, the traffic analysis needs to carefully analyze those impacts and mitigation measures.
- The scheduling of this project's construction phases should be spelled out early on, even before a draft EIR is released and shared with EESM. This is critical insofar that ESM is currently completing engineering and permitting for the above road improvement, which also includes a traffic management plan. While we do not expect Hell's Kitchen to be under construction in the near future there will be times that these roads may not be available and is critical that both companies understand the potential curtailments.
- Given the amount of construction traffic and the extreme amount of operational traffic on this road by Hell's Kitchen, consideration needs to be given on routine maintenance requirements.

INTERCONNECTION:

- Given that this project intends to connect at the substation located at Hudson Ranch, the gentle line location, scheduling and associated potential impacts need to be clearly addressed. The gentle line cannot interfere with the operations of HR1 or ESM Minerals both of which will be in operation at the time this line is built and connected.

ESM response to NOP on Hell's Kitchen project may 10, 22

EnergySource Minerals, llc
12544 High Bluff Dr., Suite 320
San Diego, Cal. 92130

- Tie-ins to the substation typically require the IID to take the 230 KV line out of service for a period of time. This will have an adverse effect on the HR1 poser? transmission side and on the operation of the ESM project and this project should be responsible for interruption and associated cost. In addition, the scheduling needs to be closely coordinated.

AIR QUALITY & GHG:

- Given the ever-increasing scrutiny and regulatory requirements in CA, the cumulative impacts of this project could have an impact on both HR 1 and ESM. The Air Quality analysis including the GHG and PM 10 and PM2.5 among others need to be closely analyzed and the cumulative impacts if any disclosed particularly if they have the potential to change the operations of HR1 or ESM.
- Given the proximity of the two projects, the Health Risk assessment is of concern to ESM and HR1.

COMMUNICATION:

- Given the lack of high-speed communication services in this area it is suggested that this be analyzed and a proposed improvement to this communication system(s) be considered as a shared responsibility for multiple operators in the area.

Respectfully submitted



Jurg Heuberger
SVP Permitting & Compliance

760.996.0313 Mobile
409 W. McDonald Rd.
Calipatria, Ca. 92233



jheuberger@energysource.us.com
www.energysource.us.com

CC:

Eric Spomer, CEO
Derek Benson, COO
Jim Minnick, Planning Director

ESM response to NOP on Hell's Kitchen project may 10, 22

Response to Comment Letter #8

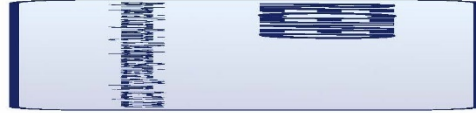
The EIR has been revised to reflect the correct number of anticipated of workers accessing the Project site during peak construction; the Table reference (4.11-1) in the Transportation Section has been revised in the EIR; the EIR has been revised to reflect the correct number of truck trips during construction (4,000).

The Project Proponent has engaged Energy Source Minerals to resolve the issues raised in the comment letter associated with traffic and circulation and utilities. Additionally, the Project Proponent is working with IID to establish the interconnection point should an alternative be required. As the comment pertains to air quality, please see Response to Comment #3.

Comment Letter #9



October 23, 2023



David Black
Planner
Imperial County Planning & Development Services Department (the "County")
801 Main Street
El Centro, CA 92243

By email to: ICPDSComentLetters@co.imperial.ca.us

RE: Hell's Kitchen Project Draft Environmental Impact Report
From Hudson Ranch Power I LLC

Dear Mr. Black:

This letter is with regard to the Hell's Kitchen (the "Proposed Project") draft Environmental Impact Report ("EIR"). These comments are submitted on behalf of Hudson Ranch Power I LLC ("Hudson Ranch"), owner of the John L Featherstone Geothermal Power Plant ("Power Plant"), which neighbors the Proposed Project. Specifically, we provide comments on: (1) transportation, (2) energy interconnection, (3) air quality, (4) communications infrastructure, and (5) resource management. This letter supplements concerns listed in our May 20, 2022 Comment Letter ("Original Comment").

Transportation

According to the EIR, during construction of the Proposed Project's power plant, there will be an estimated 54,000 truck trips over the approximately 25-month construction period. During grading, 250 truck trips are expected per day. During construction of the lithium facility: 25 trucks per day. Post construction (during operations), the two facilities are expected to have an estimated 432 daily trips. The EIR characterizes transportation impacts as "Less than Significant," however these volumes are significant increases from the current road use. Hudson Ranch respectfully asks that this finding be reconsidered.

Per the draft EIR, ingress and egress to the Proposed Project site will occur via Davis Road. The Proposed Project includes building a Class II base for Davis Road followed by paving between McDonald Road and Noffsinger Road, but only *after* construction of the Proposed Project is complete (2.0-2).

In our Original Comment, we noted that Hudson Ranch's predecessor, EnergySource Minerals, was required to pave approximately two miles of McDonald Road as part of the Power Plant's permit approval. The paving requirement included provisions for reimbursement by other projects that may, in the future, use McDonald Road for access. In light of the cost-sharing

409 W McDonald Road
(p) 760.348.2619

info@cyrqenergy.com

Calipatria, CA 92233
(t) 801.875.4299

provisions of the Hudson Ranch Power Plant permit approval, and because the EIR notes that all workers, vendors, and haul trucks will be required to utilize Highway 111, Davis Road or McDonald Road to access the site, the County should require a more comprehensive traffic analysis. We believe that the increased traffic is a material impact to Imperial County roads. County law requires that "Developer shall mitigate any problems whenever they arise" 91702.00(E). Mitigation is warranted and should be addressed in the permitting process.

Hudson Ranch respectfully suggests that the County require the developer to prepare a traffic analysis to: (a) determine the projected quantity and impact of both construction and operational traffic, (b) evaluate potential traffic safety issues originating from two geothermal brine plants located in close proximity to each other, and (c) quantify the reimbursement amount to Hudson Ranch for prior and current expenditures in developing McDonald Road for industrial use. Based on the traffic analysis, Hudson Ranch respectfully asks the County to provide, through the permit process, a cost-sharing mechanism and maintenance requirements for McDonald Road.

Likewise, if McDonald Road is unavailable due to construction activities or access to our Power Plant is otherwise impeded, Hudson Ranch needs to be notified in advance to minimize impacts to our continued operations. We request the permit take into consideration these impacts and require appropriate mitigation from the developer.

Energy Interconnection

The transmission diagrams (Figures 2.0-1 through 2.0-4) show a 230-kilovolt gen-tie line for the Proposed Project running from Noffsinger Road for two miles to McDonald Road within IID's rights of way. They then show the proposed transmission line crossing McDonald Road north to south at the Hudson Ranch substation, and apparently connecting to the IID line *inside* the Hudson Ranch substation. The EIR states at 2.6.9 "The transformer will include air-insulated switchgear. The high voltage side of the main step-up transformer will be connected to a new gen-tie line located within IID's transmission ROW to the IID interconnect station at HR1."

Hudson Ranch owns the plant substation equipment, however, there currently is no agreement between the developer and Hudson Ranch for this connection. The substation includes a 230 KV bus and two sets of disconnect switches. One set of switches is connected to Hudson Ranch Unit 1. The second set is not connected, but that does not imply that it is available for use by others. The second connection is intended for future use by Hudson Ranch and is not for sale or lease. In addition, since Hudson Ranch owns the 230 KV bus inside the substation, we understand that, as a non-utility, we are prohibited by regulation from wheeling a third party's power through our system to IID.

If the Proposed Project is able to acquire the right to connect to the substation, Hudson Ranch has concerns about a forced outage when the Proposed Project takes the gen-tie line out of service to make the connection. As noted in our Original Comment, any work associated with the gen-tie line cannot interfere with the ongoing operations of Hudson Ranch. The developer should be required to coordinate scheduling and should be responsible for any service interruption and associated cost to Hudson Ranch.

Air Quality

While no sensitive receptors are within two miles and therefore a health risk assessment was not required, Hudson Ranch is cognizant that an additional operation the size and scope of the Proposed Project in the vicinity may result in collective emissions that heighten air quality risks to the population. In light of the Proposed Project's size and in order to ensure no health risks are implicated, Hudson Ranch respectfully suggests asking the Imperial County Air Pollution Control District ("ICAPCD") to evaluate the effect of the Proposed Project and, if warranted, make a finding that the cumulative impacts do not require an air quality assessment. Such a finding will help to ensure cumulative air quality does not negatively impact both Hudson Ranch and the broader area. Alternatively, if mitigation is needed, it should be identified and included in the permit process.

Hudson Ranch further suggests imposing fugitive dust emission controls to mitigate air quality concerns from the Proposed Project's construction activities. Specific mitigation examples include frequent watering of unpaved roads, establishing vehicle speed limits on McDonald Road as well as Davis Road for unpaved portions, creation of both windbreaks and transport container covers to prevent dust migration, and requirements for cleaning and sweeping procedures.

Communications Infrastructure

In our Original Comment, we highlighted the lack of high-speed communication services in this area. The draft EIR notes that the Proposed Project would utilize existing telephone lines and that there are no significant impacts, thus no mitigation is required. Hudson Ranch respectfully asks that this finding be reconsidered.

Resource Management

The Salton Sea area holds great potential for renewable energy, but only if the existing operations are protected and the geothermal resource is properly managed for heat sustainability.

While this County proceeding involves the Proposed Project only, a fair analysis of cumulative impacts cannot ignore the other proposed developments dependent on the geothermal resource: adjacent to Hudson Ranch is the proposed Morton Bay Geothermal Plant (157 MW), which sites several of its wells very close to the Hudson Ranch Unit boundary and less than 1/2 mile from Hudson Ranch wells 13-1 and 13-2. Within several miles are additional proposed geothermal power plants including Black Rock Geothermal (87 MW) and Elmore North Geothermal (140 MW). These are in addition to the Proposed Project (49.9 MW) and the eighteen geothermal plants already in operation in the County.

Hudson Ranch respectfully suggests that the current operators and the County need to fully understand the geothermal resource through a performance analysis, with a particular focus on proximity between operators and their wells to ensure the resource remains viable for years to come. Operational spacing is implied in state law but does not explicitly focus on density of operators or proximity between wells. Rather, state law ensures that geothermal wells cannot be located within 100' of a public road or outer boundary of a parcel, or 25' of a public road or outer boundary when "all or substantially all of the [parcel] surface is unavailable for the location of a geothermal well." Cal. Public Resources Code 3757; 3757.1. This void in regulation creates an opportunity for the County to create its own more stringent spacing rules to protect the geothermal resource. As the County studies geothermal performance in the area and implements policy related to geothermal energy resources, we respectfully suggest that it should reference similar guidance in state law for oil and gas, which provides for set spacing between wells. *See* Cal. Public Resources Code 3600; 3602; 3606; 3607. While geothermal resources will not be identical to oil and gas, the goal and premise of state law can act as a guide for the County.

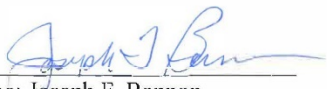
In addition to well spacing, Hudson Ranch respectfully suggests that the County should consider requiring a developer to bear the burden of demonstrating that its proposed use is an efficient use of the geothermal resource. For example, the Hudson Ranch Power Plant and all the BHE geothermal facilities in the Salton Sea use a triple flash geothermal process to maximize the steam extraction from the geothermal liquid/resource. The Hudson Ranch Power Plant consumes approximately 4,500 kph of geothermal fluid to generate 60 MW (gross), or a geothermal resource consumption rate of 75 kph per gross MW. The BHE facilities have similar energy conversion rate. However, the EIR indicates that the Hell's Kitchen power plant will be single flash facility, and section 2.9.2 indicates the facility will consume 5,900 kph of geothermal resource to generate 50 MW gross, or a geothermal resource consumption rate of 118 kph per gross MW (which is 57% of the other geothermal facilities in the Salton Sea reservoir). It merits consideration by the County whether this is an efficient use of the resource from a power generation perspective. It is difficult to comment on the energy efficiency of the Hell's Kitchen lithium minerals processing facility as practically no details about that facility are presented in the EIR. For example, the EIR notes that 90% percent of filter cake produced by the power plant would fall below California thresholds for STLIC and TTLIC, but makes no mention of the filter cake produced by the minerals extraction portion of the project.

Conclusion

We thank you for considering these comments intended to balance the benefits of new development with appropriate mitigation of environmental and economic effects to existing operators, like Hudson Ranch.

Sincerely yours,

HUDSON RANCH POWER 1 LLC

By: 
Name: Joseph F. Bannon
Title: Vice President, Environment & Utility Relations

cc (by email only):

Nicholas Goodman, CEO, Cirq Energy
Jim Minnick, Imperial County Planning & Development Services Director
David Black, Imperial County Planning & Development Services, Planner
Rosa Soto, Imperial County Planning & Development Services, Office Supervisor

15 West South Temple
(p) 801.875.4200

Suite 1900
info@cyrqenergy.com

Salt Lake City, UT 84101
(t) 801.875.4299

Response to Comment Letter #9

Please note, the number of truck trips throughout the life of construction has been updated in the EIR to correctly reflect the expected 4,000 truck trips. The limited number of trips are assumed to have a less than significant impact as identified in the EIR.

Interconnection with IID facilities will be determined through coordination and communication with IID and will be determined based on available capacity. If the Project is required to utilize an alternative IID interconnection station, then the Project will be required to analyze the impacts associated with interconnecting via different means.

See Response to Comment Letter #3 for issues regarding Air Quality. Also, please note the County does not have authority over IPAPCD analysis or permitting requirements.

The comment communicates concerns over the potential over-utilization of geothermal resources within the County and requests the County and current operators to protect the viability of the resource. The comment also requests the County establish a standard for measuring energy efficiency for geothermal power plants and mineral processing facilities. The comment, as it relates to geothermal resources within Imperial County, does not identify any specific flaws with the DEIR; therefore, no further comment is warranted.

Comment Letter #10

LAW OFFICE OF JORDAN R. SISSON

LAND USE, ENVIRONMENTAL & MUNICIPAL LAW

3993 Orange Street, Suite 201
Riverside, CA 92501

Office: (951) 405-8127
Direct: (951) 542-2735

jordan@jrssonlaw.com
www.jrssonlaw.com

October 23, 2023

VIA EMAIL:

David Black, Senior Planner
Imperial County Planning & Development Services Department
davidblack@co.imperial.ca.us
icpdscommentletters@co.imperial.ca.us

RE: DRAFT EIR COMMENTS REGARDING HELL'S KITCHEN POWERCO 1 AND LITHIUM CO 1 PROJECT (SCH NO. 2022030704)

Dear Mr. Black and Imperial County Planning & Development Services Department ("ICPDS"):

On behalf of Comité Civico del Valle ("Comité"), this office respectfully submits the following comments to the County of Imperial ("County") on the Draft Environmental Impact Report ("EIR") for the construction of a geothermal power plant that will produce up to 49.9 megawatts net of geothermal green energy ("HKPI"), and construction of a related commercial lithium hydroxide production plant via a geothermal brine process facility or ("HKLI"). Controlled Thermal Resources (US) Inc., via its subsidiary Hell's Kitchen Geothermal, LLC, (collectively "Applicant") is proposing the HKPI and HKLI facilities that includes a 2.3--mile gen-tie line (collectively "Project") located within Salton Sea geothermal field near adjacent to Davis Road and south of Noffsinger Road in Imperial County, California ("Site").

Comité incorporates by this reference all DEIR comments made by this office (attached hereto as "Attachment A") and the six academic/experts in their respective fields (attached hereto "Exhibit A" through "Exhibit F"). In short, Comité is concerned with multiple areas of the Draft EIR's analysis. For example, the Project's operations lack sufficient information about processes, water usage, power needs, and the full operations of the HKLI off-site shipment.¹ Additionally, the DEIR fails to provide any real analysis of Project water impacts caused by the almost certainty of reduced Colorado River water allocations to the Imperial Irrigation District ("IID"). So too, the Draft EIR fails to consider cumulative impacts caused by related existing and proposed related projects that are demanding significant amounts of non-agricultural, industrial uses. Furthermore, many of the claimed project design features and mitigation measures lack performance standards and unlikely to be actually implemented.² Moreover, the various lack and/or flawed analysis skewed the Draft EIR's alternative analysis that should have considered more than just a no-project alternative.³

/ / /

¹ Under CEQA, an accurate, stable and finite project description is the sine qua non of an informative and legally sufficient EIR. (See *San Joaquin Raptor Rescue Ctr. v. Cnty. of Merced* (2007) 149 Cal.App.4th 645, 654-655.)

² CEQA requires lead agencies to craft mitigation measures that would be based on enforceable performance criteria. (See *City of Maywood v. Los Angeles Unified School Dist.* (2012) 208 Cal.App.4th 362, 407.)

³ It is the County's affirmative duty to consider approval of the Project only after "meaningful consideration of alternatives and mitigation measures." (*Mountain Lion Foundation v. Fish & Game Com.* (1997) 16 Cal.4th 105, 134.)



Y

As fully discussed in the attached, the Draft EIR is fundamentally flawed that lacks critical information, analysis, and meaningful/enforceable mitigation. For this reason, Comité respectfully requests that the County recirculate the Draft EIR that address the issues discussed in the various attachments and exhibits, that considers a range of mitigation measures and project alternatives, including one with enhanced mitigation measures during operations. Furthermore, given the novelty of the lithium extraction operations by this applicant, the County should consider instituting some form of mandatory reporting and project approval renewal process (akin to a Conditional Use Permit renewal).

Thank you for your consideration. Comité may supplement these comments in the future.

Sincerely,



Jordan R. Sisson
Attorney for Comité Civico del Valle



ATTACHMENT A

Draft EIR Comments RE: Hell's Kitchen PowerCo 1 and LithiumCo 1 Project
October 23, 2023
Page 2 of 4

2. Air Quality

- a. DEIR proposes mitigation for air quality impacts during construction by using Tier 3 engines or better when commercially feasible (p. ES-8). There is no explanation why Tier 4 final engines is not appropriate here and/or what constitutes “commercially available” and who would make that determination.
- b. DEIR proposes limited VOC architectural coatings (p. ES-9). However, there is no explanation why “super compliant” coatings are not appropriate here as proposed in other air districts.²
- c. DEIR claims no receptors within 2 miles of the proposed project (p 4.2-4), which is inconsistent with other areas of the DEIR that identifies sensitive receptor 0.5 miles from the Site (p. 4.1-10). Other sensitive receptor may be near intended and unintended truck routes that should also be considered.
- d. The DEIR cites “proven abatement systems” to control hydrogen sulfide (p. 2.0-12) but provides little to now information about said systems. The DEIR should substantiate claims of 95% reduction of said systems (p. 2.0-23) as well as ensure a routine monitoring/reporting program to ensure compliance.
- e. DEIR does not consider alternative mitigations than utilizing NOX mitigation fees (pp. 2.0-23, 4.2-8). Alternative mitigation measures including changed operations should be identified and clearly demonstrated to be not feasible before utilizing mitigation fees.
- f. The DEIR states start up emissions would exceed relevant CEQA thresholds but does not discuss whether said operations could be altered in order to reduce emissions on-site prior to seeking offsets under ICAPCD Rule 207 (p. 4.2-13). Onsite reductions should be prioritized prior to seeking offsets elsewhere.
- g. As discussed below, daily truck trips are not adequately discussed, limited, nor ensured to be electric. This means that the Project could be accessed by heavy-duty diesel equipment that must be considered in the EIR and human health risk assessment (“HRA”).

3. Greenhouse Gas Emissions

- a. DEIR utilizes a 20,000 MTCO₂e threshold (pp. ES-32, 4.7-11). However, this conflicts with County’s prior practice of utilizing much lower thresholds.³
- b. The claim of 37,103 MTCO₂e (avoided) is not fully justified (PDF pp. 203 [DEIR Tbl. 4.7-3] & 487 [Technical Report]). Here, this 37,103 of avoided emissions suggest the project is removing emissions that are currently existing—which is not the case for this vacant Site.
- c. Again, the use of Tier 4 engines is illusory given there is no meaningful distinction of what “commercially available” or other vague commitment that reference “appropriately available” means (DEIR, Tbl. 4.7-4).
- d. The DEIR should also consider the Project’s consistency with CARB’s 2022 Scoping Plan (p. 4.7-18 [only considering 2017 Scoping Plan]).

² See e.g., South Coast AQMD, <https://www.aqmd.gov/home/rules-compliance/compliance/vocs/architectural-coatings/super-compliant-coatings>.

³ See e.g., Hudson Ranch Power Project Report, PDF p. 47 (utilizing 900 MTCO₂e/yr), <https://www.icpds.com/assets/hearings/CUP22-0020-IS22-0034-Hudson-Ranch-Power-I-EEC-ORIGINAL-Packet-04-13-23--1681833882.pdf>;



Draft EIR Comments RE: Hell's Kitchen PowerCo 1 and LithiumCo 1 Project
October 23, 2023
Page 3 of 4

4. Traffic & Vehicle Miles Traveled (“VMT(s)”)

- a. Claims up to 500 workers per day during construction of the project (p. 2.0-16).
- b. During operations of both facilities, DEIR estimates roughly 112 full-time employees and 113 truck trips per day (p. 2.0-18). Yet, the VMT analyzed 40 trucks of product shipment (p. 4.11-7). This inconsistency needs to be addressed.
- c. The DEIR claims 20.84 VMTs per employee below the 15 percent below the 25.25 Countywide average (pp. ES-37, 4.11-4). Yet, this considers only VMTs generated by 112 employees (id., at Tbl. 4.11-2). This does not consider the VMTs travel by the 113 or 40 truck trips noted above. Even if these vehicles are entirely electric—which there is no meaningful requirement under current DEIR language—these vehicles will still produce VMTs, dust from unpaved roads, and toxic brake dust from breaking along truck routes that must be accounted for in this DEIR.
- d. The DEIR utilized ITE trip rates despite it not including any samples of geothermal power plants or lithium extraction facilities (p. 4.11-8). The assumption of ITE 170 rate is thus inappropriate. The DEIR should consider comparable projects to determine a reasonable assumption of trips.
- e. DEIR assumes Site being accessed via Davis Road via McDonald Road (Highway 111) (p. 4.11-3). This includes areas that are unpaved and produced substantial dust that should be adequately considered and mitigated. So too, the DEIR should consider the likelihood that the Site could be accessed from alternative routes.

5. Water Supply

- a. The DEIR admits potential impacts on water supply if IID does not receive its annual appropriation but claims that Applicant will work with IID in the event to ensure water availability (p. ES-41).
- b. DEIR claims the Project will minimize reliance on external water sources to the “greatest extent practical” but fails to provide any meaningful details or performance standards to this measure (p. 2.0-19).

6. Energy

- a. DEIR seems to include artifacts of EIR prepare notes states “these numbers are confusing, and unclear what the point is” (p. 4.5-10). This begs the question, if confusing to the EIR preparers, how can the EIR serve as an information document to the public and decisionmakers?
- b. DEIR claims operation of the HKLI would be offset by energy generated by HKPI (i.e., difference of 9.9 MW) (p. 20-19). However, the DEIR does not provide sufficient information to confirm that HKPI will consistency operate at level that off-sets HKLI’s normal and peak power demands. Nor does the DEIR consider the prospect of HKLI operating during extended periods where HKPI is underperforming or even shut down for extended periods of times.
- c. The DEIR’s surplus energy claim relies on various assumptions (p. 4.5-10 [operations-related electricity]), which needs to be substantiated.
- d. What requirement or limitation ensures that HKLI will not operate if HKLI is inoperable due to maintenance, outage, or for longer term (p. 4.5-10)?




Draft EIR Comments RE: Hell's Kitchen PowerCo 1 and LithiumCo 1 Project
October 23, 2023
Page 4 of 4

7. Alternatives

- a. The DEIR examined only a no project alternative (p. 5.0-3). This is inadequate due to the inadequate analysis (discussed supra), which may have underestimated significant impacts and thus skewed the current alternatives analysis. At minimum, the DEIR should consider an alternative with enhanced mitigation measures during operations that would potentially reduce project/cumulative impacts discussed herein and elsewhere in the accompanied expert letters.

Thank you for consideration of these comments. We ask that this letter is placed in the administrative record for the Project.

Sincerely,



Jordan R. Sisson
Attorney for CCV



EXHIBIT A



To: David Black, Senior Planner, Imperial County
From: James J. A. Blair, Associate Professor in Geography and Anthropology, Cal Poly Pomona
Date: October 18, 2023
Re: Comments on Draft Environmental Impact Report for Hell's Kitchen Project

Dear Mr. Black and Colleagues:

Thank you for the opportunity to comment on the Draft Environmental Impact Report (EIR) for the Hell's Kitchen PowerCo 1 (HPKP1) and LithiumCo 1 Project (HKL1). By describing the potential environmental effects associated with the development of a commercial lithium hydroxide production plant within the Salton Sea geothermal field in Imperial County, California, this draft report helps to identify some impacts, alternatives and mitigation measures. This has the potential to be an important reference contributing to a baseline because the proposed geothermal direct lithium extraction (DLE) technology is still not proven at a commercial scale, and there remain several unknowns about the potential cumulative impacts of the proposed Lithium Valley development projects until Imperial County's Specific Plan and Programmatic EIR become available. This draft EIR also gestures toward innovations to mitigate environmental impacts that may seem virtuous, such as statements indicating possible reuse of steam condensate and reverse osmosis for water needs, wetland habitat restoration for special status species, promotion of electric trucks for operations, and production of biproduct materials like silica that might divert some potentially hazardous solid waste from landfills. Nonetheless, it remains unclear exactly how some of these declarative statements factor into the proposed mitigation measures that the public is led to believe would result in less than significant levels across all categories.

Unfortunately, sufficient detail is also lacking on the proposed operations due to the proprietary nature of the geothermal DLE technology, so description of potential impacts of the processing of lithium involving acid and substantial amounts of water is rather opaque. The delayed addition of Chapters 6 and 7 also provided a narrow window of time within which to analyze all CEQA considerations and references. And the exceedingly short list of related projects shown in Table 3.0-1 demonstrate how this report treats this project in isolation and falls short of CEQA compliance on cumulative impacts, especially when we consider the ambitious, multi-sector land use planning for the Lithium Valley development project that is currently underway.

Still, I am grateful for the opportunity to review the document, and in what follows I highlight some areas of needed improvement. These suggestions are not exhaustive, but I hope that these modest observations may offer recommendations to enhance the report for a more robust consideration of potential alternatives and mitigations for the construction and operation phases, as well as cumulative impacts. Here are some comments on key aspects of the report that still need to be addressed:

Air Quality

Dust pollution is a serious concern in the Salton Sea region because toxic contaminants are already being swept into the atmosphere from the exposed playa due to the rapidly receding sea level. This has contributed to poor air quality and high rates of respiratory illness. Given this urgent local public health problem and the acknowledgment that the project has potentially significant impacts that conflict with or obstruct implementation of the applicable air quality plan, the Dust Control Plan is a welcome addition

3801 West Temple Avenue, 5 – 144 Pomona, CA 91768
Telephone: (909) 869-5085 E-mail: jblair@cpp.edu

THE CALIFORNIA STATE UNIVERSITY Bakersfield, Channel Islands, Chico, Dominguez Hills, Fresno, Fullerton, Hayward, Humboldt, Long Beach, Los Angeles, Maritime Academy, Monterey Bay, Northridge, Pomona, Sacramento, San Bernardino, San Diego, San Francisco, San José, San Luis Obispo, San Marcos, Sonoma, Stanislaus

to this report. However, consideration of cumulative impacts of geothermal DLE development should include mitigation measures for exacerbating fugitive dust pollution indirectly through exploitation of water resources that might otherwise be used for the priority needs to conserve or replenish the reduced inflow to the Salton Sea.

The report offers contradictory information about compliance with air quality plans for O₃, PM_{2.5} and PM₁₀ for which the area is in serious non-attainment. This, as well as an explicit discussion of noncondensable gases and cooling tower drift, as well as HCl vapor emissions and airborne pollutants from brine ponds require further explanation and clarification. It is also concerning that the project exceeds the threshold for NO_x in construction, as well as exceeding the threshold for CO and NO_x in operation due to the diesel generator. These emissions call for mitigation measures and should be considered in relation to the other geothermal plants operating in the region, existing agriculture, as well as the proposed battery manufacturing, battery recycling and associated logistics industry that will form the inland port that the County has planned for development as part of its Lithium Valley Land Use Alternatives. Myriad cumulatively considerable construction projects are planned throughout the area near the project location, and it is unreasonably myopic to suggest that because none are within one mile of the site that a less than significant cumulative air quality impact would be expected.

Biological Resources

Given the direct destruction of wetland habitat for a high occurrence of special status wildlife to construct this project, the report's attention to potentially significant impacts is valuable. Still, it remains unclear if the location of the Mitigation Plan area is appropriate for constructed native wetland habitat in an area of restored wetland in which native species like cattails have already been removed because they are deemed to obstruct the view of hunters and leveling areas. Such wildlife areas are not ecological reserves or preserves and should be managed differently. Please also note that BIO-5 Power Wash Equipment seems to be missing from Table ES-1.

Geology and Soils

Imperial Valley already has significant earthquake risks, so there are heightened local concerns about induced seismic activity from geothermal drilling as well as subsidence due to geothermal brine extraction and reinjection. Downplaying concerns about seismic activity, subsidence, lateral spreading and liquefaction risks because the project area is not located within a fault zone elides the known potential for ground shaking and surface rupture. Sparse detail provided on a forthcoming geotechnical engineering investigation does not inspire confidence that the level of impact after mitigation would be less than significant. Full description of recommendations should be summarized in Table ES-1 rather than copied across all thresholds. This may include recommendations on site preparation, foundations and settlements, soil mixing, piles, concrete mixes and corrosivity, site fill, excavations, seismic designs, pavements, and more. Similarly Table 4.6.1 lacks direct responses to each of the land use planning objectives. These mitigations need further explanation.

Hazards and hazardous materials

Given the track record of spill-related contamination at most of the geothermal facilities in the Salton Sea Known Geothermal Resource Area (SSKGRA) after inaccurate predictions of low spill risk in previous EIRs, the level of potential impact is far from "less than significant," especially when we consider cumulative effects. It is worth noting that CalEnergy / BHE Renewables already agreed to pay a \$910,000 penalty and conduct soil remediation as part of a 2007 consent agreement. It would be prudent for Controlled Thermal Resources (CTR) to plan for this potential consequence of inaction by providing more detailed mitigation measures in this EIR (beyond the vague assertion that HKP1 and HKL1 would cooperate with responsible agencies to facilitate spill response cleanup and spill site

remediation in section 2.9.2). Mitigation is required to account for substantial risks from further spills of arsenic and lead-containing materials from blowouts, corrosion, abrasion, accidents and scaling. Scaling limits geothermal power plant operations and must be removed or diluted from brine to avoid clogging reinjection wells if silica becomes colloidal. This may increase the use of freshwater and/or hydrochloric acid (HCl). Spills of geothermal brine could potentially impact extensive habitat for the special status wildlife in the area listed in Biological Resources.

Moreover, it is critical for handling and disposal routes of hazardous solid waste to be described in greater detail, especially iron silica filter cakes. According to a forthcoming report on environmental justice in California's "Lithium Valley" by Comite Civico del Valle and Earthworks, when iron and silica are precipitated on filter cakes, the resulting solid waste may include hazardous or harmful elements, including arsenic, barium and lead. It is intriguing that CTR is already considering second life uses of silica scaling by aiming to produce not just lithium hydroxide, but also silica (as well as bulk sulfide and polymetallic products) for commercial sale. The report even states that "the mineral extraction process would not generate any waste but result in biproducts which will be sold" (4.13.5). If it were described more explicitly in this context how this might serve as a mitigation measure for storing and transporting hazardous materials, then a cradle-to-cradle approach might help to divert these potentially hazardous solid waste streams away from the surrounding area or landfills. Scientists have already successfully synthesized from geothermal water mesoporous silica, which is a material that may be used in a variety of industries—including energy and mineral resources—as catalysts, adsorbents, ion exchangers, optic materials, and solar panels. Furthermore, geothermal silica waste may also be used to synthesize zeolites, which may serve as water retainers in soil to mitigate water loss for irrigation in the area due to drought and increased apportioning of water for industrial uses like this project. Some zeolites even have the capacity to encapsulate lead in the soil through mineral remediation. If measures are described clearly and taken to prevent contamination, this circular approach to hazardous waste management might offer potential mitigation for soil contamination due to spills.

Hydrology and Water Quality

Given recent significant hazardous flooding and quite shallow groundwater in the immediate area surrounding the project, the planned preparation of a Stormwater Pollution and Prevention Plan (SWPPP) will be a welcome contribution, though it would be helpful to provide more information at this moment because best management practices (BMPs) may not be sufficient in this environment. How will the Applicant mitigate flooding's impact on potential contamination from drilling sumps or brine ponds? Furthermore, despite poor quality groundwater with limited uses, cumulative impacts on water quality from disposal of geothermal fluids and upward mobility of fluids due to faulty injection well seals or seeps from brine ponds merit more detailed mitigation measures.

Transportation

Again, it is intriguing that the Applicant has committed to using electric trucks for all product shipping (4.11.4), but it is unclear how these fleets or heavy duty vehicle charging infrastructure might be assembled in such a short timeframe, when they will become commercially available, or how the use of these trucks might help mitigate air pollution. Moreover, merging of thresholds a and b as "less than significant" contradicts the listing of threshold b (and c) as potentially significant in previous planning documents for geothermal lithium development in the area, such as the EIR for EnergySource's neighboring ATLiS project. In this Hell's Kitchen draft EIR there is no commute trip reduction or rideshare program because the proposed project is "not considered a major employment center" (Table 4.7-4). This remarkable acknowledgment might match the listed number of 112 jobs (22 jobs at HKP1 and 90 jobs at HKL1), but it pales in comparison to the cumulative job growth estimates of 4,000+

locally hired workers that CTR has advertised extensively to gain the support of fence-line community members in an area with high rates of unemployment.

Tribal Cultural Resources

It is telling that undeleted comments from the report authors accidentally published in the available EIR document in section 4.12.5 acknowledge that “based on the consultation summary, Quechan did not want us to be involved.” Even if another accidentally published comment deemed the consultation complete, it would be helpful to provide details on the updates to the cultural resources report. Has the Cultural Committee from the Quechan Tribe had the opportunity to review this report? Assembly Bill 52 requires public agencies to consult with tribes during the CEQA process. Recent public hearings have revealed significant opposition to geothermal development from Indigenous elders and leaders who are working with the Native American Land Conservancy to register the Southeast Lake Cahuilla Active Volcanic Cultural District, and there have been serious failures to provide timely consultation to Tribes for the proposed Lithium Valley projects thus far.

It is critical to acknowledge not just the potential encounter of archaeological artifacts and site-specific cultural resources during development, but also to provide relevant mitigation measures for obtrusion on a viewshed within a broader cultural landscape that includes nearby sacred sites, including mud pots, steam vents, and Obsidian Butte, Southern California’s only source of obsidian that has been used by California Indian peoples who have imbued it with meaning and power in rituals, traditions and stories. The determination that “there are no known tribal cultural resources within the Project site” fails to recognize these potentially significant impacts on the surrounding viewshed and cultural landscape. CEQA Guidelines indicate that even if a site is not listed, this does not mean it is not significant. It does not help that in the section of Table ES-1 on Aesthetics, thresholds a and b are combined, circumventing CEQA guidelines on scenic vistas. What if Rock Hill or Red Hill were used for the visual plan rather than highways? Visual consistency with existing power plants is not a strong standard.

Finally, in addition to a qualified archaeologist, a Tribal monitor should be included for monitoring of Tribal cultural resources. These experts, as well as the paleontologist, should be given more than 48 hours notice if other contractors like the hired biologist are employed during a longer stretch to be present and document compliance. Even if some Tribes have not responded with requests for consultation since the 2021 reporting, it may bear reminding that in 2016 the “Morongo Band of Mission Indians expressed concern for the project and requested monitoring by a Cahuilla representative during construction activities” (4.4.4). Also note that Appendix C, not Appendix E seems to contain the Native American Contact Program. It would be helpful for the public if the appendices were more clearly organized.

Utilities and Service Systems

Potential water constraints are mentioned in section 4.13 in the Environmental Issue Area of Utilities and Service Systems. Given the dominant historical legal standing of California relative to Arizona, Nevada and Mexico for access to water from the Colorado River, this report assumes that the Imperial Irrigation District (IID) will remain in a relatively stable position for the time being. However, this is misleading because the Colorado River Basin States Representatives of Arizona, California, and Nevada (Lower Division States) reached an agreement in May 2023 to conserve at least an additional 3 million acre-feet (MAF) of Colorado River Water in the Lower Basin by the end of calendar year 2026, with at least 1.5 MAF of that total being conserved by the end of calendar year 2024 (Lower Basin Plan). In this context, the Applicant’s general willingness to “work with IID to ensure any reduction in water availability can be managed by the Project” (section 4.13.7; see also Table ES-1) is not an adequate plan for the possibility that the IID might not receive its annual 3.1 million acre feet per year (AFY) according to the Quantification Settlement Agreement (QSA). It bears reminding

that the QSA already supplies nearly 415,000 AFY to San Diego County Water Authority (SDCWA), Coachella Valley Water District (CVWD) and LA's Metropolitan Water District (MWD). Water availability is thus already limited due to the QSA, as well as decreasing flows of the Colorado River due to long-term drought conditions, not to mention water needed to replenish the Salton Sea. The worst-case scenario must be addressed with a clear long-term plan if Lake Mead's water level drops to a "dead pool" point that may be too low to deliver water through the canal system to California and Imperial Valley in the first place.

Moreover, it is well known that the vast majority of IID water is apportioned to agriculture, and the listed number of AFY of water already distributed for non-agricultural uses is outdated in this draft report. The Applicant mentions in section 4.13.5-6 that "as of January 2022, 23,020 AFY remain available for new projects, ensuring reasonably sufficient supplies for new nonagricultural water users." However, we now know as a result of the August CEC public hearing for BHE's new proposed geothermal projects that as of July 2023, out of 25,000 AFY IID reserves for non-agricultural uses, 5,380 AFY were committed. Meanwhile, BHE Renewables has now requested 13,165 AFY for its three new proposed geothermal plants (not even including plans for lithium extraction), leaving only 6,455 AFY. Nonetheless, here the Applicant estimates that construction will require 240 AFY and once the geothermal DLE sites are fully constructed and operating the project will require 6,500 AFY of freshwater (200 for HKP1 operations and 6,300 for HKL1 operations). This appears to exceed the 6,455 AFY available after BHE's apportioned amount of water that IID has already supported in public letters submitted to the CEC docket.

Even though the DLE technology may have proprietary restrictions, it would be helpful to have a more detailed water supply assessment for both geothermal power and lithium extraction processes involved in the project. It remains unclear how this particular geothermal plant (HPKP1) will require just 200 AFY—far less water than other proposed geothermal plants in the study area (e.g. 5,560 AFY proposed for BHE's Morton Bay, 6,480 AFY proposed for Elmore North and 1,125 AFY proposed for Black Rock). This estimate of 200 AFY listed toward the end of the report does not even match the approximately 400 AFY of fresh water listed for normal operation of HKP1 in an early section of the same report in section 2.9.2 Project Operations.

Now, if one of the key claims to the ostensible environmental superiority of this project is decreased water use for lithium extraction relative to conventional methods of brine evaporation or open-pit mining, then the considerable use of freshwater for lithium extraction (6,300 AFY for HKL1's projected life of 46 years) needs to be more clearly mitigated. Again, here this estimate of 6,300 AFY listed toward the end of the report does not match the approximately 6,100 AFY of water listed for HKL1 operations in the earlier relevant section of the same report in section 2.9.2. We do not have much basis for comparison, but the approved EIR for EnergySource's ATLiS operation at neighboring Hudson Ranch listed 3,400 AFY for that project's life of 30 years, just over half the amount of water per year estimated for HKL1 and for 20 fewer years.

For cumulative impacts, it would be highly pertinent to provide mitigation measures that reflect the most recent Colorado River agreements and planning for drought, which may become a significant constraint for nonagricultural water demand in IID water service areas that is estimated to increase from 26 AFY in 2020 to 80 AFY in 2055 for industrial uses, according to Table 4.13-3. Evidence of potential mitigation measures like reverse osmosis or the viability of reusing water from steam condensate mentioned in section 2.9.2 should be considered in relation to the sustainability of the entire operation of the project, including reinjection. If aspirations toward more sustainable and circular approaches are sincere and not illusory, then these potentially innovative mitigation measures need to be considered in more detail in the accounting of cumulative impacts on water resources.

Curriculum Vitae

JAMES J. A. BLAIR, Ph.D.

Department of Geography and Anthropology
California State Polytechnic University, Pomona
3801 West Temple Avenue, Pomona, CA 91768
909.869.5085
jblair@cpp.edu

EDUCATION

- Ph.D. **The Graduate Center, City University of New York, Anthropology:** 2016.
M.Phil. **The Graduate Center, City University of New York, Anthropology:** 2013 (Distinction).
B.A. **Boston College, History, Philosophy and Latin American Studies (Honors):** 2007.

ACADEMIC AND PROFESSIONAL EXPERIENCE

- 2023-Present **California State Polytechnic University, Pomona, Department of Geography and Anthropology, Associate Professor (Early Tenure and Promotion).**
2018-2023 **California State Polytechnic University, Pomona, Department of Geography and Anthropology, Assistant Professor.**
2017-2018 **Mellon/American Council of Learned Societies (ACLS), Public Fellows Program, appointed as International Advocate, Natural Resources Defense Council (NRDC).**
2016-2017 **Brooklyn College, City University of New York, Department of Anthropology and Archaeology, Visiting Assistant Professor.**

SELECT PUBLICATIONS

- Blair, J. J. A. 2023. *Salvaging Empire: Sovereignty, Natural Resources and Environmental Science in the South Atlantic*. Ithaca and London: Cornell University Press.
- Blair, J. J. A., G. Gutierrez and R. Balcázar. 2023. "From Watershed Moment to Hydrosocial Movement: Patagonia without Dams and The Free-Flowing Rivers Network in Chile." *Human Organization*. Vol. 82 (3): 288-303.
- Blair, J. J. A., R. Balcázar, J. Barandiarán and A. Maxwell. 2023. "The Alterlives of Green Extractivism: Lithium Mining and Exhausted Ecologies in the Atacama Desert." *International Development Policy*. Vol. 16 (co-authored with Ramón Balcázar M., Javiera Barandiarán and Amanda Maxwell).
- Blair, J. J. A., R. Balcázar, J. Barandiarán and A. Maxwell. 2022. "Exhausted: How We Can Stop Lithium Mining From Depleting Water Resources, Draining Wetlands, and Harming Communities in South America." Report for the NRDC in collaboration with the Plurinational Observatory of Andean Salt Flats (OPSAL).
- Blair, J. J. A. and R. Balcázar. 2022. "Plurinational Climate Action: Environmental Governance Beyond Green Extractivism." *Cultural Anthropology: Hot Spots, Fieldsites*.
- Blair, J. J. A. and C. Isenhour. 2022. "Introduction: Negotiating the Crisis: Critical Perspectives on Climate Governance." *Cultural Anthropology: Hot Spots, Fieldsites*, June 23.
- Blair, J. J. A. 2022. "Data Gaps: Penguin Science and Petrostate Formation in the Falkland Islands (Malvinas)." In *The Nature of Data: Infrastructures, Environments, Politics*. Edited by J. Goldstein and E. Nost. Lincoln: University of Nebraska Press.
- Blair, J. J. A. 2022. "Tracking Penguins, Sensing Petroleum: 'Data Gaps' and the Politics of Marine Ecology in the South Atlantic." *Environment & Planning E: Nature and Space*. Vol. 5 (1): 60-80.

- Blair, J. J. A. 2022. "Natural Resource Defense Council (NRDC)." In *The Palgrave Handbook of Global Sustainability*, edited by Robert Brinkmann. Cham: Palgrave Macmillan.
- Blair, J. J. A. 2020. "Extractivismo del Litio y el Problema de la Escala: Acción Climática Global y Justicia Ambiental Local." *Salares Andinos: Ecología de Saberes por la Protección de Nuestros Salares y Humedales*. Edited by B. J. Henríquez, S. Uribe Sierra and R. M. Balcázar. Santiago: Fundación Tanti.
- Blair, J. J. A. 2019. "South Atlantic Universals: Science, Sovereignty and Self-Determination in the Falkland Islands (Malvinas)." *Tapuya: Latin American Science, Technology and Society*. Vol. 2 (1): 220-236.
- Blair, J. J. A. 2019. "Splintered Hinterlands: Public Anthropology, Environmental Advocacy and Indigenous Sovereignty." *Journal of Ethnobiology*. Vol. 39 (1): 32-49.
- Blair, J. J. A. 2017. "Settler Indigeneity and the Eradication of the Non-Native: Self-Determination and Biosecurity in the Falkland Islands (Malvinas)." *The Journal of the Royal Anthropological Institute (JRAI)*. Vol. 23 (3): 580-602.

SELECT CONFERENCE PUBLICATIONS

- "Between Clean and Green: Mining and Maladaptive Mitigation of Climate Change." Invited talk in Climate Vulnerabilities: Panel at U.S. National Academy of Sciences and Indonesian Academy of Sciences, Kavli Frontiers of Science Symposium in Balikpapan, Indonesia, August 10, 2023.
- "Hydrosocial Movements and Green Extractivism: Water Protection and Renewable Energy Development in Chile." Invited talk in Special Lecture Series on Latin America hosted online by Hankuk University of Foreign Studies, Korea, May 24, 2023.
- "Avoiding Methodological Nationalism Through Critically Engaged Research in a Disputed Overseas Territory." Invited talk at Researching the Overseas Territories Online Workshop, Newcastle, Exeter, and Royal Holloway, University of London, May 23, 2023.
- "The Limits and Possibilities of 'Extractive Recovery.'" Paper presented in "STS Engagements with Critical Mineral Studies" panel at Annual Meeting of the Society for Social Studies of Science (4S) in Cholula, Mexico, December 14, 2022.
- "Risks and Best Practices of Extracting Critical Minerals in the Transition to Cleaner Fuels." Invited talk at 11th Annual Environmental Health Leadership Summit, Comité Cívico Del Valle, Imperial Valley College in Imperial, CA, October 27, 2022 (with Jared Naimark).
- "The Disputed Hydrosocial Dynamics of Lithium Mining in Chile and California." Invited talk at the University Forum, Utah Tech University in St. George, UT, September 20, 2022.
- "Agotado: Cómo evitar que la minería del litio agote el recurso hídrico, drene los humedales y perjudique a las comunidades en América del Sur." Invited virtual webinar presentation with the Plurinational Observatory of Andean Salt Flats (OPSAL), May 17, 2022.
- "Developing Lithium Valley: Hydrosocial Dynamics and the Importance of Community Engagement for a Just Transition." Paper presented at California State University (CSU) Water Resources and Policy Initiatives (WRPI) Conference in Northridge, CA, April 7, 2022 (with Alexa Buss).
- "Energy Justice for Whom? Ethical Plateaus of Lithium Extraction and Electrified Transportation." Paper presented at Annual Meeting of the Society for Social Studies of Science (4S), Toronto, Canada, October 7, 2021.
- "Beyond Extractive Renewables: Addressing Ethical Dilemmas in Decarbonization." Invited presentation at the United Nations Association of Pomona Valley, November 17, 2020.
- "Transición Energética, Electromovilidad y Extractivismo del Litio en Salares de Chile, Argentina y Bolivia." Invited presentation at parallel civil society climate summit to the UN COP25 Global Climate Change Conference in Cerrillos, Chile, December 5, 2019.

SELECT EXTERNAL FUNDING

2023-2024	Imperial County, California, Community Engagement and Outreach Grant: Salton Sea Renewable Specific Plan and Programmatic Environmental Impact Report (\$363,000 allocated to Comit� Civico del Valle to establish the Lithium Valley Equity Technical Advisory Group).
2023-2026	Environmental Protection Agency (EPA)-G2022-STAR-F2, Early Career: Drivers and Environmental Impacts of Energy Transitions in Underserved Communities Grant (\$649,456 total amount, \$115,000 allocated to Cal Poly Pomona as subrecipient with: PI Alida Cantor, Portland State University; Co-PI Dustin Mulvaney, San Jose State University; and Co-PI Kate Berry, University of Nevada, Reno).
2022-2025	National Science Foundation, BCS Human-Environment and Geographical Sciences (HEGS) Grant (\$399,876 total amount, \$84,000 allocated to Cal Poly Pomona as subrecipient with: PI Alida Cantor, Portland State University; Co-PI Dustin Mulvaney, San Jose State University; and Co-PI Kate Berry, University of Nevada, Reno).
2019-2020	Natural Resources Defense Council (NRDC), consultancy contracts (\$65,999).
2017-2019	Mellon/ACLS, Public Fellowship (\$140,000, appointed as International Campaign Advocate, Natural Resources Defense Council (NRDC)).
2014-2015	National Science Foundation, SBE Doctoral Dissertation Research Improvement Grant (\$17,703, co-funded by the Cultural Anthropology and Science, Technology, and Society (STS) programs).
2014-2015	Fulbright-III, All-Disciplines Postgraduate Award to United Kingdom (£12,000).
2013-2014	Wenner-Gren Foundation, Dissertation Fieldwork Grant (\$20,000).
2012	Social Science Research Council, Dissertation Proposal Development Fellowship (DPDF), Governing Global Production subfield (\$5,000).

PROFESSIONAL AFFILIATIONS

- Lead expert in Comit  Civico del Valle's Lithium Valley Equity Technical Advisory Group established to conduct community-engaged research with fenceline communities regarding Imperial County's Salton Sea Renewable Specific Plan and Programmatic Environmental Impact Report, 2023-2024.
- Book Reviews Co-Editor, *American Anthropologist*, 2020-2023.
- Engaged Scholars Initiative participant, Campus Compact, 2021-2022.

EXTERNAL AWARDS AND HONORS

2023	U.S. National Academy of Sciences and Indonesian Academy of Sciences, Kavli Frontiers of Science Fellowship, sponsored by the David and Lucile Packard Foundation.
2021-2022	Campus Compact Engaged Scholar Award.

SKILLS

Languages

Spanish (fluent reading, speaking and writing; trained in media communication).
Portuguese (reading ability).

Computer

Data visualization (ESRI Story Maps and ArcGIS, Google Maps beta, OpenStreetMap).
Qualitative data analysis (NVivo, Atlas TI, Zotero, Evernote, Scrivener, Microsoft Office).

Advocacy

Indigenous Peoples partnership training, Indigenous Leadership Initiative/NRDC.

EXHIBIT B



Environmental Studies
College of Social Sciences

San José State University
One Washington Square
San José, CA 95192-0225

The California State University:
Chancellor's Office
Bakerfield
Channel Islands
Chico
Dominguez Hills
East Bay
Fresno
Fullerton
Humboldt
Long Beach
Los Angeles
Maritime Academy
Monterey Bay
Northridge
Pomona
Sacramento
San Bernardino
San Diego
San Francisco
San José
San Luis Obispo
San Marcos
Sonoma
Stanislaus

October 23, 2023

To the County of Imperial, Planning and Development Service Office,

Please find attached my comments on the proposed geothermal-lithium development with a draft environmental impact report (DEIR) currently under review called Hell's Kitchen. I appreciate the opportunity to present this feedback to help strengthen community input to the environmental review process. I have been conducting research on environmental impacts from energy development for 15 years and a short version of my CV is attached to this memo. My comments are organized by theme grouped below, though some issues overlap.

Water

The project description lists several commercial outputs from the project including "lithium hydroxide, silica and polymetallic products, and possibly boron compounds, for commercial sale." What would be the implications for processing to recover all of these materials on water use? Would boron recovery increase the potential need for processing water? Or do processing water estimates include the maximum minerals recovery? What are the implications for wastewater disposal?

Dust control for construction and during operations is critical to air quality and public health, especially with the receding lake and rising incidences of valley fever in the region.¹ There seems to be some inconsistency in estimates for how much and where water use for dust control. In one place the document states rather precise amounts of water used to mitigate dust (240 AFY and 50,000 gallons per day), but elsewhere they describe water as one of several types of materials sprayed on land to do the same task. Do these other dust control techniques augment or reduce the amount of water needed for dust control? What is the contingency plan if the water use is not enough to adequately control dust?

Finally, what are the cumulative impacts to water resources in the area? Will water use on project site lead to decreased water use in agricultural operations? Will water use on the project site lead to reduced deliveries to nearby fields resulting in the loss of flows to marshes and wetlands?

Biological Resources

The Salton Sea region is part of the California Desert Conservation Area (CDCA) and given its ecological significance, any project here that converts land or changes water flows can raise impacts of concern. My primary comments on biological resources are that the biological resource impacts from the proposed project should require stronger mitigations for avian species, and there are some avian impacts that are not described.

¹ Johnston, J. E., Razafy, M., Lugo, H., Olmedo, L., & Farzan, S. F. (2019). The disappearing Salton Sea: A critical reflection on the emerging environmental threat of disappearing saline lakes and potential impacts on children's health. *Science of the Total Environment*, 663, 804-817.

Does the project include an avian protection plan? Will the project monitor avian mortality related to the operations of its facilities or associated roads?

There are suggested impacts to burrowing owls and habitat, yet the mitigations seem weak compared to Burrowing owl mitigations in other nearby projects in the CDCA. For example, there are potential impacts to avian species from sound during construction and operation. The assumption that nests will not be abandoned because the construction sounds are continuous and will be mitigated by emplacing hay bale buffers seems inconsistent with mitigations used elsewhere that require work stoppage when nearby nests or burrow are discovered.

The biological resource section should also describe the potential for the project to attract species that could negatively impact local species. There is no mention of the potential for power lines to attract ravens. Many nearby military facilities, national parks, and energy generation facilities in the California desert have raven adaptive management plans because they are predators of small vertebrates and bird eggs subsidized by human infrastructures.² How will garbage/dumpsters be managed?

Regarding the endangered Yuma Ridgway's rail and Burrowing owl, will the pre-construction surveys include nesting and burrow surveys? The applicant describes burrow surveys for burrowing owl and these and any nest surveys should be conducted and with sufficient intensity to find actively used burrows. There is also no mention of impacts or mitigations that might occur with the maintenance of road and berms to the project site, which could also be used by avian species of concern.

It is suggested in the mitigations that Yuma Ridgway's rail habitat loss will be offset by protecting other habitat. How near will that habitat be? How long will it be protected? This bird species is shown to do much better with Colorado River water than agricultural runoff which can contain selenium, and is injurious to the rail. Where will the location be and what type of water is delivered to those marshes?

Collisions with powerlines have been a known cause of injury to avian species for 150 years. Transmission line extensions should employ best practices to reduce collisions and it is not clear this impact is being mitigated at all. Electrocution of avian species is another consideration with extending new power lines.³ Will "avian safe" electrical equipment be used on the project? Project designs should avoid any ecological traps that attract avian species to habitat where they can be injured.

The loss of Iodine Bush Scrub habitat is small, is it possible to avoid altogether? Where will the mitigation iodine bush scrub be located? Will that offset be in perpetuity? This species in this ecosystem needs period flooding to reproduce and

² Programmatic Environmental Assessment for Integrated, Adaptive Management of the Common Raven on Department of Defense Lands in the California Desert.
<https://www.29palms.marines.mil/Portals/56/Docs/Environmental%20Affairs/FinalPEAandSignedFONSIforManagementoftheCommonRavenOnDODLandsintheCalifornia%20Desert.pdf>

³ Avian Power Line Interaction Committee, *Suggested Practices for Avian Protection on Power Lines: The State of the Art in 2006*

be sustained so should mitigation parcels should be carefully evaluated for suitability and water availability. Loss of this habitat would conflict with "Goal 4 – Support development of renewable energy resources that will contribute to the restoration efforts of the Salton Sea." This habitat loss alongside avian issues seems inconsistent with "the Project is being designed to minimize impacts to Salton Sea restoration areas."

Environmental Justice

There are a few places where the applicant claims DEIR claims consistent with General Plan, but where it seems several elements are not adequately evaluated. In Table 4.5-1, "Objective 3.7 – Evaluate environmental justice issues associated with job creation and displacement when considering the approval of renewable energy Projects." They note that "No sensitive receptors are within two miles of the Project site. No impacts to disadvantaged communities would occur from implementation, and no Health Risk Assessment is required." The applicant does not mention where construction worker housing might be and whether this might displace local resident or drive up the costs of housing. The project should have a health risk assessment for cumulative impacts from dust.

Energy/Greenhouse Gases

Similar to a question raised in the section on water, what would be the additional energy requirements for recovery of boron versus without the recovery of boron (or other materials that might be recovered/foregone)? Is more energy required?

There are a few areas where the project is deemed "Inconsistent" with the county plans for the area. For example the proposed project will not include pedestrian and bicycle pathways on site that connect to the offsite roads, due to the distance from the nearest community centers located in Niland.

The project claims that it will minimize GHG impacts by utilizing electric powered construction equipment, but there is not a threshold set for defining when this practice will be followed. How nearby does equipment need to be to be commercially available? What premium is the applicant willing to pay to use electric vehicles or does it simply need to be similarly cost-effective. This lack of detail, triggering thresholds, or performance criteria makes this mitigation seem unenforceable.

The project claims there is no plans for bus service to area. Is this a topic that has been discussed with the local community plans for growth and amenities in the area? Supporting bus service to the plan could allow some workers to travel on public transportation and reducing GHGs.

All building structures should include rooftop solar, not just solar-ready roofs as described. All structures should be designed to exceed Title 24 Part 6 building energy efficiency standards, including self-generation.

The applicant claims to credit the project's generation of renewable energy in excess of what the project operations would require to offset its direct GHGs, but these are incommensurable. Onsite emissions includes combustion of liquid fuels whereas the renewable energy generation is for electricity. In their assessment of renewable energy generation they assume a capacity factor of 95% whereas the average capacity factor in the U.S. for geothermal is 78%.⁴

Truck traffic operational emissions are assumed to be electric but there is nothing binding in the plan that would result in electric trucks being used. It is not clear if the applicant will own and control these trucks or whether it is expected the buyers will use electric trucks? A more accurate estimate operational delivery trucks should use a blended emissions factor and assume some portion of the trucks will operate on diesel fuel in the short term, as nearly all trucks do today. It can be assumed that electric engine proportions will increase over time.

The plan notes that EV vehicle use will be encouraged by installation of EV chargers. But there is no number of chargers specified, nor whether they will be for light-duty or heavy-duty vehicles. It is noted there will be 84 truck trips per day. What portion of these trucks will have access to EV chargers installed onsite? There are currently only three EV chargers in all of Imperial County.

The project claims it is inconsistent with the county's plans for adding to the bike lane network because the nearest connection is 3.5 away. Has the idea that no bike lane is needed to this area been vetted with local planning officials and the community? This project is one of multiple projects coming together would add to vehicle miles travelled to the site and the early development of bike lanes could help encourage use, if it is something the community sees as important infrastructure to build. As the area gets built out, who will contribute to building biking and public transportation opportunities.

Does the estimate of GHGs include the potential use of equipment for installation of buffers to protect avian species from construction disturbances, should they occur? Does the total number of truck trips for dust control and water application, also include equipment use for soil amendment/stabilization?

The plan for landscaping on the project is unclear. In one part of the cross-check for consistency with county planning, it is deemed "Consistent. No landscaping is proposed as part of the Project; thus, no increase demand for water for landscaping." Then further below in the same table, Consistent. 10% of the developed Project site will be landscaped per County requirements." What is the plan for landscaping? How will landscaping consider local habitat.

Air Quality

Air quality is critical to this region so its critically important these impacts are adequately mitigated given the county's challenges meeting the air quality

⁴ Energy Information Administration. <https://www.eia.gov/todayinenergy/detail.php?id=42036>

mitigation plans. Unfortunately the mitigations for this project look rather meager at lessening the impacts on the region's already overburdened air quality.

The main concern with air quality during all of construction, operation, and cumulatively are with dust emissions. Increased traffic on rural unpaved roads could be magnified by future developments.

Similar to issues related to GHG emissions, there are no binding requirements or thresholds that would hold project developers to using electric construction equipment, the primary mitigation for PM10, PM2.5, and ozone.

Instead of Tier 3 construction equipment standards for air quality, which were introduced in 1994, the applicant should propose tier 4 standards, a more recently final rule in 2004, and which would reduce emissions of PM and NOx by 90% from nonroad engines.⁵

During operations it is not clear how emissions of benzene or ammonia will be mitigated. There is no assessment of particulate matter emissions from tire dust or break pads which could increase particulate matter and heavy metal emissions.⁶

Hazards and Hazardous Materials/Geology Soils

There are numerous carbon dioxide wells in the area. Are there any known abandoned oil and gas wells nearby? Is there any concern that the project could result in disturbance to the integrity of the (purportedly) capped wells? Who is responsible for any disturbance to well integrity?

It would be helpful to understand the impacts of this project on fire protection resources or will the project require improvements off site that enhance road safety for emergency personnel and first responders. Transmission and distribution powerlines are the leading cause of wildfires in California, and recent fires in the area show this region is fire prone much like the rest of the state. Would the project stretch existing fire resources too far?

Finally, does the project have an adequate plan for decommissioning, including capping geothermal and injection wells? There should be a clear plan for how legacy wells that need to be capped and site cleanup will be financed managed.

Thank you for the opportunity to provide feedback in review of this project.

Sincerely,
Dustin Mulvaney,
Professor, Environmental Studies Department,
San José State University, San José, California

⁵ U.S. Environmental Protection Agency. <https://www.epa.gov/regulations-emissions-vehicles-and-engines/regulations-emissions-heavy-equipment-compression>

⁶ California Air Resources Board. <https://ww2.arb.ca.gov/resources/documents/brake-tire-wear-emissions>

Curriculum Vitae

Dustin Mulvaney, Professor,
Environmental Studies Department, San José State University

(a) Professional Preparation

New Jersey Institute of Technology	Newark, NJ	Chemical Engineering	BS, 1999
New Jersey Institute of Technology	Newark, NJ	Environmental Policy Studies	MS, 2002
University of California, Santa Cruz	Santa Cruz, CA	Environmental Studies	PhD, 2007
University of California, Berkeley	Berkeley, CA	Environmental Science, Policy, and Management	2009–2011

(b) Appointments

2020–, **Professor**, Environmental Studies Department, San Jose State University,

2020–, **Fellow**, Payne Institute for Public Policy, Colorado School of Mines,

2015–2020, **Associate Professor**, Environmental Studies Department, San Jose State University,

2016–2017, **Visiting Scholar**, Bill Lane Center for the American West, Stanford University

2011–15, **Assistant Professor**, Environmental Studies Department, San Jose State University,

2009–11, **Science, Technology, & Society Postdoctoral Scholar**, Department of Environmental
Science, Policy, and Management, University of California, Berkeley

2008–09, **Teaching Fellow in Sustainability Engineering and Ecological Design**, Electrical
Engineering, UC Santa Cruz.

(c) Selected Publications

Mulvaney, D., Bazilian, M. (2023). Price Volatility, Human Rights, and Decarbonization Challenges in
Global Solar Supply Chains. *Energy Research and Social Science*, 102, 103167.

<https://doi.org/10.1016/j.erss.2023.103167>

Turley, B., Cantor, A., Berry, K., Knuth, S., Mulvaney, D., Vineyard, N. (2022). Emergent landscapes of
renewable energy storage: Considering just transitions in the Western United States. *Energy Research
and Social Science*, 90, 102583. <https://doi.org/10.1016/j.erss.2022.102583>

- Mulvaney, D., Richards, R., Bazilian, M.D., Hensley, E., Seetharaman, S. (2021). Progress Towards a Circular Economy in Materials to Decarbonize Electricity and Mobility. *Renewable and Sustainable Energy Reviews*. 137: 110604. <https://doi.org/10.1016/j.rser.2020.110604>
- Sovacool, B.K., S.H. Ali, M. Bazilian, B. Radley, B. Nemery, J. Okatz, D. Mulvaney. (2020). Sustainable Minerals and Metals for a Low Carbon Future. *Science*. 367(6473): 30–33. <https://science.sciencemag.org/content/367/6473/30>
- Pellow, M. A., Ambrose, H., Mulvaney, D., Betita, R., & Shaw, S. (2020). Research Gaps in Environmental Life Cycle Assessments of Lithium ion Batteries for Grid-Scale Energy Storage Systems. *Sustainable Materials and Technologies*, 7: e00120. <https://doi.org/10.1016/j.susmat.2019.e00120>
- Mulvaney, D. (2020). *Sustainable Energy Transitions: Socio-Ecological Dimensions of Sustainability*. Palgrave-MacMillan, London. <https://www.palgrave.com/us/book/9783030489113>
- Mulvaney, D. (2019). *Solar Power: Innovation, Sustainability, and Environmental Justice*. University of California Press: Oakland, CA. <https://www.ucpress.edu/book/9780520288171/solar-power>
- Rebecca R. Hernandez, Alona Armstrong, Jennifer Burney, Greer Ryan, Kara Moore, Ibrahimia Diedhiou, Steven M. Grodsky, Leslie Saul-Gershenz, Davis R., Jordan Macknick, Dustin Mulvaney, Garvin A. Heath, Shane B. Easter, Brenda Beatty, Michael F. Allen, and Daniel M. Kammen. (2019). Techno-ecological synergies of solar energy produce beneficial outcomes across industrial-ecological boundaries to mitigate global environmental change. *Nature Sustainability*. 2(7): 560–568. <https://doi.org/10.1038/s41893-019-0309-z>
- Wade, A., R. Sinha, K. Drozdiak, D. Mulvaney, J. Slomka. (2018). Ecodesign, Ecolabeling and Green Procurement Policies – enabling more Sustainable Photovoltaics? *Proceedings of the IEEE Photovoltaic Specialist Conference and World Conference on Photovoltaic Electricity Conversion*. June 16, 2018.
- Mulvaney, D. (2014). Are Green Jobs Just Jobs? Cadmium Narratives in the Life Cycle of Photovoltaics. *Geoforum*, 54, 178–186. <http://dx.doi.org/10.1016/j.geoforum.2014.01.014>
- Newell, P. & Mulvaney, D. (2013). The Political Economy of the Just Transition. *The Geographical Journal*, 178(3), 1-12. <http://onlinelibrary.wiley.com/doi/10.1111/geoj.12008/abstract>

(d) Synergistic Activities

- External Evaluator, NASA, Center for Applied Atmospheric Research and Education.
- Voting member of the Joint Committee to develop the Sustainability standard for photovoltaics, an initiative led by the National Standards Foundation and the Green Electronics Council.
- Technical Advisory Committee, Waste Reduction Commission of Santa Clara County, to the Recycling and Waste Reduction Commission of Santa Clara County.
- Technical Committee, Ultra Low Carbon Solar Standard for photovoltaic manufacturing.
- Perovskite PV Accelerator for Commercial Technologies, Advisory Board Member, Electric Power Research Institute.

EXHIBIT C



College of Liberal Arts and Sciences
Department of Geography

Post Office Box 751 503-725-3165 tel
Portland, Oregon 97207-0751 acantor@pdx.edu

To: County of Imperial Planning & Development Services

From: Alida Cantor, Associate Professor of Geography

Date: October 23, 2023

Re: Comments on Draft Environmental Impact Report for the Hell's Kitchen Powerco 1 and Lithiumco 1 Project, Imperial County, California

Thank you for the opportunity to provide comments on the Draft Environmental Impact Report for the Hell's Kitchen PowerCo 1 (HKP1) and Hell's Kitchen LithiumCo 1 (HKL1) Project, Imperial County, California. Geothermal power and geothermal direct lithium extraction (DLE) may provide important renewable energy resources. However, it is crucial to examine any new proposed infrastructure carefully to ensure disproportionate or unacceptable impacts on local and/or disadvantaged communities. Because impacts may result in environmental injustices and/or impacts on Indigenous communities, it is important to critically examine any proposal, particularly one that utilizes a relatively new technology.

Below are my comments on the Draft Environmental Impact Report. I list comments in three areas: Water resources; cumulative impacts; and cultural and Tribal cultural resources.

Water resources:

The DEIR raises questions about water resources. Both HKP1 and HKL1 require water resources for their production processes, with additional water required for dust mitigation associated with construction and general operations.

In particular, future projected availability of Colorado River water presents a concern. The DEIR does not take into account recent developments around Colorado River Basin Drought Contingency Planning processes. Throughout Spring 2023, states using water from the Colorado River Basin have been negotiating; in May 2023, Arizona, California, and Nevada submitted a proposal to the federal government proposing to reduce Colorado River water use by 3 million acre feet. The plan is proposed to be implemented over the coming three years. This is an extremely meaningful development that could have significant impacts on IID's water allocations in the future.

The project proposes to utilize IID's "Interim Water Supply Policy (IWSP) for Non-Agricultural Projects." The plan notes the applicant will "work with IID to ensure reduction in water availability can be managed." However, this is vague and relies on a

third party's cooperation. If IID does not agree or is unable to provide the water needed, it would have implications for the project's functionality.

Cumulative impacts:

The project lightly addresses cumulative impacts throughout, noting that there are currently five other related projects nearby.

Related to the issue of water resources, there is potential for cumulative impacts of water availability which is not discussed adequately in the DEIR.

In section 4.13, "Utilities and services systems," the report notes that "As previously mentioned, the Project's water use represents 28.2% of the unallocated supply set aside in the IWSP for nonagricultural projects and approximately 28.2% of forecasted future nonagricultural water demands planned in the Imperial IRWMP through 2055." It is unclear how this project fits in with other planned projects, including the five other related projects nearby, as well as other geothermal and DLE projects within the IID's service area that are covered by the IRWMP.

If this project requires approximately 1/3 of the unallocated supply set aside, will there be sufficient water for the other planned projects? If other planned projects use more water, will there be enough water for this planned project? These are important questions that could have implications for the project's success.

This raises a concern that cumulative impacts need to be considered at multiple scales- that is, an assessment of cumulative impacts should consider not only the projects that are physically closest, but other projects that may draw upon the same resource bases, such as other projects relying upon the same nonagricultural water supply set aside by IID.

Cultural resources and Tribal cultural resources:

Consultation activities were somewhat unclear and inconsistent between section 4.4 and section 4.12.

Section 4.4 notes that "*The Morongo Band of Mission Indians expressed concern for the Project and requested monitoring by a Cahuilla representative during construction activities,*" but it is unclear whether there are actually plans in place for a Cahuilla representative to monitor construction activities, as requested.

If work activities and/or construction ceases due to discovery of cultural resources, it is unclear how long this pause will last until work resumes; how this could impact other aspects of the project; and what the archaeological data recovery program involves if a discovery contains significant and unavoidable impacts.

It appears that local Tribes were contacted in 2021, but it is unclear if all local Tribes have been consulted with regularly, up until the present date. There are several sentences in the document indicating that local Tribes have expressed concern with the project, and it is

not clear whether the Tribes consider the proposed mitigation measures to be adequate in addressing their concerns or not.

Thank you for the opportunity to provide comments.

Sincerely,



Alida Cantor, Ph.D
Associate Professor
Portland State University Department of Geography
acantor@pdx.edu

CURRICULUM VITAE

Alida Cantor

Education

Ph.D.	2016	Geography, Clark University, Worcester, MA
M.S.	2008	Community and Regional Development, University of California at Davis, Davis, CA
B.A.	2005	Geography, Simon's Rock College, Great Barrington, MA

Academic Employment

Associate Professor, Department of Geography, Portland State University, 2023-present
Assistant Professor, Department of Geography, Portland State University, 2017-2023
Postdoctoral Research Fellow, Wheeler Water Institute, Center for Law, Energy & the
Environment, UC Berkeley School of Law, 2017
Teaching Assistant, Instructor, and Graduate Researcher, Graduate School of Geography, Clark
University, 2011-2016

Selected Publications

- Cantor, Alida**, B. Turley,* and K. Maxfield.* Accepted, 2023. Energy storage and environmental justice: A critical examination of a proposed pumped hydropower facility in Goldendale, Washington. *Antipode*.
- Kay, Kelly, C. Knudson, and **A. Cantor**. 2023. "Plantation pasts, plantation futures: Resisting zombie water infrastructure in Maui, Hawai'i." *Journal of Peasant Studies*.
- Ross, Alexander,* H. Chang, and **A. Cantor**. 2023. "Understanding Perspectives on Climate Hazards, Water Management, and Adaptive Transformation in an Exurban Community." *Sustainable and Resilient Infrastructures* 8(1): 48-67.
- Quimby, Barbara, C. Nichols, M. duBray, **A. Cantor**, J.C. Bauch, A. Wutich, C. Williams, S. Porter, W. Eaton, K. Brasier. 2023. "Changing Flows: Sociotechnical Tinkering for Adaptive Water Management." *Environmental Management* 71: 421-431.
- Song, Wonsuh, **A. Cantor** and H. Chang. 2022. "Virtual water and agricultural exports during recent drought in California." *International Journal of Geospatial and Environmental Research*. 9(1): Article 5.
- Cantor, Alida**, B. Turley,* M. Glass,* and C. Ross.* 2022. "Changes to alfalfa production practices and perceptions during the 2011-2017 California drought." *The Professional Geographer* 74(4): 628-641.
- Turley, Bethani,* **A. Cantor**, S. Knuth, D. Mulvaney, K. Berry, and N. Vineyard.* 2022. "Emergent landscapes of renewable energy storage: Considering just transitions in the Western United States." *Energy Research and Social Science* 90: 102583.
- Cantor, Alida**, M. Kiparsky, R. Bales, S. Hubbard, R. Kennedy, L.C. Pecharroman, K. Guivetchi, G. Darling, and C. McCreedy. 2021. "Making a water data system responsive to information needs of decision makers." *Frontiers in Climate: Special issue on Democratizing Data: Environmental Data Access and its Future* 3:761444.
- Cantor, Alida**, L. Sherman, A. Milman, and M. Kiparsky. 2021. "Regulators and utility managers agree about barriers and opportunities for innovation in the municipal wastewater sector." *Environmental Research Communications* 3(3): 031001.

Alida Cantor CV

- Cantor, Alida.** 2021. "Hydrosocial hinterlands: An urban political ecology of Southern California's hydrosocial territory." *Environment and Planning E: Nature and Space* 4(2): 451-474.
- Cantor, Alida, K. Kay, and C. Knudson.** 2020. "Legal geography and political ecology of Hawai'i's public trust doctrine and water allocation in Maui." *Geoforum* 110: 168-179.
- Sherman, Lukas, A. Cantor, A. Milman, and M. Kiparsky.** 2020. "Examining the complex relationship between innovation and regulation through a survey of wastewater utility managers." *Journal of Environmental Management* 260: 110025.
- Owen, Dave, A. Cantor, N. Green Nylen, T. Harter, and M. Kiparsky.** 2019. "California groundwater management, science-policy interfaces, and the legacies of artificial legal distinctions." *Environmental Research Letters* 14(4): 045016.
- Cantor, Alida and S. Knuth.** 2019. "Speculations on the postnatural: Restoration, accumulation, and sacrifice at the Salton Sea." *Environment and Planning A: Economy and Space* 51(2): 527-544.
- Cantor, Alida and J. Emel.** 2018. "New Water Regimes: An Editorial." *Resources* 7(2).
- Cantor, Alida.** 2017. "Material, political, and biopolitical dimensions of "waste" in California water law." *Antipode* 49(5): 1204-1222.
- Stoddard, Elisabeth and A. Cantor.** 2017. "A relational network vulnerability assessment of the North Carolina hog industry." *Annals of the American Association of Geographers* 107(3): 682-699.
- Cantor, Alida.** 2016. "The public trust doctrine and critical legal geographies of water in California." *Geoforum* 72: 49-57.

External grants and research funding (PI)

- Environmental justice impacts across the life cycle of energy storage. PI: Alida Cantor. Co-PIs: Dustin Mulvaney, Kate Berry, James Blair. US Environmental Protection Agency. Early Career: Drivers of Environmental Impacts of Energy Transitions in Underserved Communities. 2023. (\$649,456).
- Building capacity for collaborative interdisciplinary research on water and society. PI: Alida Cantor. Co-PIs: Melissa Haeffner, Janet Cowal, Heejun Chang, Shelby Anderson. NSF Build and Broaden Program. 2022. (\$369,530).
- Hydrosocial dynamics and environmental justice in water-energy transitions. PI: Alida Cantor. Co-PIs: Dustin Mulvaney, Kate Berry, James Blair. NSF Human-Environment and Geographical Sciences Program. 2022. (\$399,876).
- California water law and policy research. PI: Alida Cantor. University of California Water Security and Sustainability Research Initiative. 2018-2019. (\$21,000)

Awards and honors received

- Outstanding Researcher Award, Sigma Xi Research Society, Columbia-Willamette. 2023.
- John Eliot Allen Outstanding Teaching Award, Portland State University. 2021.
- Excellence in Sustainability Research Award, Portland State University. 2019.

Membership in Professional Organizations

- American Association of Geographers
Society for Applied Anthropology
Society for Social Studies of Science

EXHIBIT D



CalPolyPomona

California State Polytechnic University, Pomona • 3801 West Temple Avenue, Pomona, CA 91768
909.869.2488 • Fax 909.869.4342 • www.cpp.edu

Civil Engineering
College of Engineering

To: Mr. David Black, Senior Planner, Imperial County

From: Dr. Ali Sharbat, Professor of Civil Engineering, Cal Poly Pomona

Date: October 20, 2023

Re: Comments on Draft Environmental Impact Report for Hell's Kitchen Project

Dear Mr. Black,

Thank you for the opportunity to review the Draft Environmental Impact Report (DEIR) for Hell's Kitchen Powerco 1 (HKP1) and Lithiumco 1 (HKL1) Project. I am pleased to have the chance to analyze the document in detail and offer my feedback from my academic perspective. I am a Professor of Civil Engineering at Cal Poly Pomona, specializing in water engineering. Below, I have provided my comments and questions reflecting my perspective on the DEIR:

1. **Section 1:** The DEIR presents HKP1 and HKL1 as a single interconnected package. While the primary purpose is to assess their cumulative effects, it would be beneficial for reviewers to provide clear details for HKP1 and HKL1 separately to enhance the clarity of the report.
2. **Section 2:** The report mentions a net power generation rating of 49.9 megawatts. The applicant needs to provide more specific details about power generation and consumption in various processes and stages. Additionally, the report needs to clarify the power consumption associated with the lithium extraction process in details.
3. **Section 2:** The report is presented in a manner that assumes both HKP1 and HKL1 will be operational simultaneously. It is, however, unclear whether and how HKL1 is going to operate if, for any reason, HKP1 is offline. The applicant needs to provide details on the contingency plans or operational strategies for HKL1 in case HKP1 experiences downtime. Clarity in this regard is essential for a comprehensive understanding of the project's operational resilience and environmental impacts.
4. **Section 2.6:** Has there been a hydrogeology study focused on the geological interconnection between deep well injection and geothermal resources specific to this proposal? This connection has not been discussed. Mismanagement of brine injection could potentially affect existing geothermal resources.
5. **Section 2.6:** What are the specific chemical characteristics of the brine that will be injected into the underground layers? Are there any trace chemicals associated with membrane, ion-exchange resin, or other processes?



CalPolyPomona

California State Polytechnic University, Pomona • 3801 West Temple Avenue, Pomona, CA 91768
909.869.2488 • Fax 909.869.4342 • www.cpp.edu

Civil Engineering
College of Engineering

6. **Section 2.8:** Is the reference to a "3-inch/24-hour rain event" (i.e., the 100-year event) based on the county's stormwater manual? This information is not clear in the report.
7. **Section 4.2:** The report lacks information on water usage for air quality mitigation efforts. Additionally, the applicant needs to provide details on the water quality parameters associated with this particular water supply / usage.
8. **Section 4.6:** More details are needed on deep well injection, including injection pressure, well depth, and any potential seismic impacts.
9. **Section 4.9:** The report does not mention the disposal strategy for the RO concentrate (i.e. reject brine) stream. The applicant needs to provide information on how this waste stream will be managed.
10. **Section 4.8:** More information is needed on the composition and volume of the filter cake. The applicant needs to elaborate on transportation and disposal routes, and consider discussing any alternative disposal options.
11. **Section 4.8:** Have alternative locations been considered for the disposal facility for the filter cake?
12. **Section 4.8:** Regarding hazardous waste, is the spent resin considered hazardous waste or regular solid waste? What is the disposal plan for spent resin?
13. **Section 4.9:** For runoff water management, if a Stormwater Pollution Prevention Plan (SWPPP) is developed, what Best Management Practices (BMPs) are being considered? Conventional BMPs may not be effective due to the shallow groundwater table in the region. Is there any runoff water leaving the site? A detailed SWPPP, including alternative assessments, is needed.
14. **Section 4.13:** The DEIR states a total IID dependence of 6,500 acre-feet per year. However, recent developments and events related to the Colorado River's Quantification Settlement Agreement (QSA) allotment may affect IID's annual water supply. The report should address water supply sustainability, especially in light of changes in the Colorado River basin's hydrology and assess alternative scenarios. This is a major comment.
15. **Section 4.13:** The applicant should specify the chemicals used for regenerating resins in the HKL1 plant.

These clarifications would not only enhance the comprehensibility of the DEIR but also contribute to a more robust and informative assessment of the Hell's Kitchen Powerco 1 (HKP1) and Lithiumco 1 (HKL1) Project. Thank you for considering these comments. I am fully committed to assisting in any way possible to ensure that the report is as accurate and thorough as possible. Please feel free to reach out to me if there is any need for further clarification on my comments and questions. I am readily available to engage in further discussions and provide additional insights to support the refinement of the DEIR.



CalPolyPomona

California State Polytechnic University, Pomona • 3801 West Temple Avenue, Pomona, CA 91768
909.869.2488 • Fax 909.869.4342 • www.cpp.edu

**Civil Engineering
College of Engineering**

The County's willingness to reflect these comments is greatly appreciated, and I look forward to collaborating to achieve a more comprehensive and transparent evaluation of this project.

Sincerely,

A handwritten signature in black ink, appearing to read "A. Sharbat", with a stylized flourish at the end.

Ali Sharbat, PhD, PE
Professor, Department of Civil Engineering
Cal Poly Pomona
Email: sharbat@cpp.edu
Phone: 909-869-2175

Ali Sharbat, Ph.D., P.E.

Professor • Civil Engineering Department • California State Polytechnic University, Pomona
3801 West Temple Ave, Pomona, CA 91768 • sharbat@cpp.edu

Education:

- **Post-Doctoral:** Institute for Energy and the Environment, New Mexico State University (NMSU), 2010-2012.
- **Ph.D. in Engineering: Environmental Engineering,** University of Nevada Las Vegas (UNLV), 2007-2010.
- **M.Sc. in Civil Engineering: Environmental Engineering,** Sharif University of Technology, Tehran-Iran, 2003-2005.
- **B.Sc. in Civil Engineering:** Science and Culture University, Tehran-Iran, 1999-2003.

Patent at Cal Poly Pomona:

- US 2021/ 63210948 A1: Baghaei Lakeh, R., **Sharbatmaleki, M.**, Engel, T., “A Heat Storage System using Storage Materials with Uncontrolled Thermo-physical Properties”.
- US 2014/0102980 A1: **Sharbatmaleki, M.**, Moe, N., “Process and Apparatus for Treating Perchlorate in Drinking Water Supplies”.
- US 2017/0050868 A1: **Sharbatmaleki, M.**, Michael Lepore, Tiffany Lai, Terrence Gaines, Kalvin Lam, Lucas Townsend, Ik-Hyoun Kim, Natalie La, Deanna Lestina, Christine Zheng, and Yaocihuatl Bourdon; “Photovoltaic Powered Electrodialysis Desalination System”.

Book Chapters at Cal Poly Pomona:

- Author, Chapter 9 of the book titled “Inland Desalination and Concentrate Management”, Publisher: American Water Works Association, 2018.
- Editor, Chapter 3 of the book titled “Electrodialysis and Electrodialysis Reversal”, Publisher: American Water Works Association. *In Press.*

Funding History at Cal Poly Pomona:

- PI: \$555K contract sponsored by the LA County Safe, Clean Water Program (SCWP): “Evaluation of Infiltration Testing Methods for Design of Stormwater Drywell Systems”, 2022-2026.
- PI: \$44K contract sponsored by the Eastern Municipal Water District: “Brine Concentration Demonstration Project Phase II”, 2020-2021.
- PI: \$45K contract sponsored by the Eastern Municipal Water District: “Purified Water Replenishment Brine Concentration Pilot Project”, 2019-2020.
- PI: \$10K grant sponsored by the Southern California Gas Company, Environmental Champion program: “Development of Carbon Sequestration Methods: Research, Education, and Outreach”, 2019-2020.
- PI: \$141K grant sponsored by the US Department of Interior, Bureau of Reclamation’s US Department of Interior (DSDI) research contract: “Evaluating Contaminates of Emerging Concern’s Fate in Potable Reuse Membrane Treatment”, 2020-2023.
- Co-PI: \$149K grant sponsored by the US Department of Interior, Bureau of Reclamation’s Desalination and Water Purification Research (DWPR) Program: “Repurposing Concentrate of Membrane Processes for Low-cost Thermal Energy Storage”, 2019-2020.
- PI: \$145K funded by King Lee Technologies for advancements phases in Development of Solar Decentralized Graywater Treatment Unit, 2018-2019.

- PI: \$182K (plus \$30K amendment) project (involving 5 other CPP faculty members) under CSU-WRPI for providing technical assistance (TA) to Sunbird Mobile Home Park disadvantaged community (DAC) for the California State Water Resources Control Board (SWRCB), 2017-2018.
- PI: \$60K grant sponsored by the US Department of Interior, Bureau of Reclamation's US Department of Interior research contract: "Contaminants of Emerging Concerns in Potable Reuse Concentrate – Phase II", 2017-2018.
- PI: \$10K grant sponsored by the Southern California Gas Company, Environmental Champion program: "Water Energy Nexus Development and Outreach", 2017.
- PI: \$70K grant sponsored by the US Department of Interior, Bureau of Reclamation's US Department of Interior (DSDI) research contract: "Contaminants of Emerging Concerns in Potable Reuse Concentrate". 2016-2017.
- Co-PI: \$100K grant sponsored by the Metropolitan Water District of Southern California titled "Solar Decentralized Graywater Treatment Unit", under 2016 Innovative Conservation Program (ICP), 2016-2018.
- PI: \$9,500 sponsored by the CPP SPICE funding program: "Improving the Quality of Computer Simulations in the Existing Environmental Engineering Courses at the CE department", 2016-2017.
- PI: \$10K grant sponsored by the Southern California Gas Company, Environmental Champion program: "CECs in Water Reuse", 2016.
- \$11K award sponsored by the Cal Poly Pomona's "Early Career Summer Support Program", 2016.
- Co-PI: \$25K research grant from the Strategic Interdisciplinary Research Grant Program (SIRG), Cal Poly Pomona: "Microalgae for a Synergistic Approach to Agricultural Nutrient Recovery", 2016.
- Co-PI: \$25K research proposal for the Strategic Interdisciplinary Research Grant Program (SIRG), Cal Poly Pomona: "Water for Communities in Need: Determining Processes, Priorities, and Successes": Spring 2016
- PI: \$10K grant sponsored by the Metropolitan Water District of Southern California under Southern California World Water Forum College Grant Program: "Solar-powered Desalination and Purification System of Inland Brackish Water Using Reverse Osmosis", 2016.
- PI: \$100K grant sponsored by the US Department of Interior, Bureau of Reclamation's Desalination and Water Purification Research (DWPR) Program: "Development of Photovoltaic Electrodialysis (PV-ED) Desalination System", 2014-2015.
- PI: \$10K grant sponsored by the US Department of Interior (DSDI) research contract: "Direct/Indirect Potable Reuse: Emerging Contaminants (ECE's) in Concentrate Stream of RO Facilities", 2014-2015.
- PI: \$6,164 proposal for release-time & student assistant grant for CPP SPICE grant opportunity titled: "Development of Campus-wide Workshops on Water Education Water Awareness", 2015.
- Co-PI: \$25K research proposal for the Strategic Interdisciplinary Research Grant Program (SIRG), Cal Poly Pomona: "A Solar-assisted Inland Water Desalination System Using Thermal Energy Storage": Spring 2015.
- Participated as one of the core team members at the CSU WRPI in preparation of applications for the Technical Assistance (TA) for Disadvantaged Communities (DAC) programs for the California State Water Resources Control Board (SWRCB) and California Department of Water Resources (DWR) to receive \$2.0M TA-DAC grant since spring 2015 till present.
- PI: \$8,061 proposal for release-time & student assistant grant for CPP SPICE grant opportunity titled: "Citation and Referencing Workshops for Cal Poly Pomona Academic Community: Mendeley Free Citation Tool": Summer 2014.

- PI: \$8,500 project (plus \$3,000 for a grad-student intern) for CSU Water Resources and Policy Initiatives (WRPI): "Drinking Water Technical Assistance and Training for Disadvantaged Communities in the California Central Valley", 2014.
- PI: \$4,500 (plus \$2,826 for a student intern) from President's Research, Scholarship, and Creative Activity (PRSCA), Cal Poly Pomona, proposal: "Renewable Energy for Desalination: Development of a Photovoltaic Reverse Osmosis (PV-RO) Desalination System": Fall 2014.
- Team member on a collaborative multi-institutional project: "Engineers in Training: Expanding multi-institutional bonds to team up students for the creation of novel environmental projects" among Cal Poly Pomona and Pasadena Community College (PCC), 2012-2016.
- PI: \$20K Strategic Interdisciplinary Research Grant Program (SIRG), Cal Poly Pomona, proposal: "Perchlorate Removal from Ground Water by Electrodialysis": Spring 2013.
- PI: \$4,000 President's Research, Scholarship, and Creative Activity (PRSCA), Cal Poly Pomona, proposal: "Investigation of Possible Mechanism(s) of Ion-exchange Resin Biological Regeneration Used for Treatment of Oxyanion Pollutants from Drinking Water", Fall 2012.
- PI: \$1,000 Kellogg FuTURE Mini-Grant, Cal Poly Pomona, proposal: "Removal of Nitrate from a Rural Water System Using Ion Exchange Media in Conjunction with Bioregeneration": Spring 2013.

Journal Publications at Cal Poly Pomona:

- K.M. Sadeghi, S. Symons, S. Saneie, N. McIntosh, J. Jimenez, O. Murillo, S. Gonzales, M. **Sharbatmaleki**, and H.A. Loaiciga, "The New Headworks Odor Control BioTrickling Filter Project: Performance Data and Operations & Maintenance Challenges at Hyperion Water Reclamation Plant in City of Los Angeles, California," World Env & Water Resources Congress, 2023 (pp. 59-73).
- Sadeghi, K.M., Murillo, O., Symons, S., Saneie, S., Daycock, M., Kucherer, C., **Sharbatmaleki, M.** and Loaiciga, H., (2022) "Hyperion Water Reclamation Plant: Air Emission Control System at Hyperion BioEnergy Facility (HBEF) Using Catalytic Oxidation (CO) and Selective Catalytic Reduction in the City of LA, California". In World Env and Water Resources 2022 (pp. 1196-1210).
- Medinilla, V. R., Sprague, T., Marseilles, J., Burke, J., Deshmukh, S., Delagah, S., & **Sharbatmaleki, M.** (2020). Impact of Ammonia-Based Aeration Control (ABAC) on Energy Consumption. Applied Sciences, 10(15), 5227.
- Huang, J., Xu, Q., Wang, X., Ji, H., Quigley, E. J., **Sharbatmaleki, M.**, ... & Li, C. (2021). Effects of hydrological and climatic variables on cyanobacterial blooms in four large shallow lakes fed by the Yangtze River. Environmental Science and Ecotechnology, 5, 100069.
- Li, S., Duran, K., Delagah, S., Mouawad, J., Jia, X., & **Sharbatmaleki, M.** (2020). Energy efficiency of staged reverse osmosis (RO) and closed-circuit reverse osmosis (CCRO) desalination: a model-based comparison. Water Supply, 20(8), 3096-3106.
- Li, Simeng, Celeste Y. Chan, **M. Sharbatmaleki**, Helen Trejo, and Saied Delagah. "Engineered Biochar Production and Its Potential Benefits in a Closed-Loop Water-Reuse Agriculture System." Water 12, no. 10 (2020): 2847.
- Shahrestani, H., Moghaddam, H., Delagah, S., **Sharbatmaleki, M.**: "Utilization of Local Water Supplies for the City of Los Angeles by Investment in Indirect Potable Water Reuse" Submitted to the Journal of Water Science and Technology.
- Farrokh Shad, M., Juby, G. J., Delagah, S., & **Sharbatmaleki, M.** (2019). Evaluating occurrence of contaminants of emerging concerns in MF/RO treatment of primary effluent for water reuse—Pilot study. Journal of Water Reuse and Desalination, 9(4), 350-371.
- Hanrahan, C., Karimi, L., Ghassemi, A., & **Sharbat, A.** (2016). High-recovery electrodialysis reversal for the desalination of inland brackish waters. Desalination and Water Treatment, 57(24), 11029-11039.

- Romeyn, T. R., Harijanto, W., Sandoval, S., Delagah, S., & **Sharbatmaleki, M.** (2016). Contaminants of emerging concern in reverse osmosis brine concentrate from indirect/direct water reuse applications. *Water Science and Technology*, 73(2), 236-250.
- **Sharbatmaleki, M.**, Unz, R. F., & Batista, J. R. (2015). Potential mechanisms for bioregeneration of perchlorate-containing ion-exchange resin. *Water research*, 75, 1-10.
- **Sharbatmaleki, M.**, “Dynamic Analysis Approach for Decision Making around Expansion of Wastewater Treatment Facilities”, Western Decision Sciences Institute (WDSI) 2013.
- **Sharbatmaleki, M.**, Batista, J. R., “Multi-cycle Bioregeneration of Spent Perchlorate-containing Macroporous Selective Anion-exchange Resin”, *Water Research*, Vol. 46 (1), pp 21-32, 2012.

Conferences and Presentations at Cal Poly Pomona:

- K.M. Sadeghi, S. Symons, S. Saneie, N. McIntosh, J. Jimenez, O. Murillo, S. Gonzales, M. Sharbatmaleki, and H.A. Loaiciga, "The New Headworks Odor Control BioTrickling Filter Project: Performance Data and Operations & Maintenance Challenges at Hyperion Reclamation Plant in City of LA, California," World Env & Water Resources Congress, Henderson, NV, May 21-24, 2023.
- Huang, J., Li, S., Delagah, S., Ahles, D., Mouawad, J., Sharbat, A., (2022)., High Recovery Water Reuse: An Innovative Method of Using Closed Circuit Reverse Osmosis (CCRO) – Pilot Study”., paper submitted for the American Water Works Association (AWWA) / American Membrane Technology Association (AMTA) Annual Conference, Las Vegas, NV, 2022.
- Gauri Mhamunkar, Joseph Kiriakos, Brian Camey, Saied Delagah, Aaron Mandell, Ali Sharbat, and Reza Baghaei Lakeh (2021), Techno-Economics of Using Concentrate of Membrane Processes as a Low-Cost Thermal Energy Storage Medium, ASME International Mechanical Engineering Congress
- Cerano-Lopez, Alejandro, Chad N. Contreras, Allison Y. Inanoria, Karla I. Duran, Simeng Li, Ali Sharbat, and Xudong Jia, (2019), "Purified Water Replenishment Brine Concentration Pilot Project." the 2019 Southern California Conferences for Undergraduate Research
- Lakeh, RB, Andrade, D, Miller, K, Modabernia, MM, Nguyen, TJ, Nguyen, J, Flanagan, E, Jacobo, D, Lopez, L, Phun, B, Kest, J, Baradii, J, Delagah, S, & Sharbatmaleki, M., (2018), "Design and Testing of a Solar-Driven Wastewater Treatment Unit for Off-Grid Applications." Proceedings of the ASME 2018 International Mechanical Engineering Congress, Vol. 6B: Energy.
- Justine Nguyen, Kyle James Miller, Thuan N Nguyen, Daniel Andrade, Masoud Modabernia, Reza Baghaei Lakeh, and Ali Sharbat, (2017), “Decentralized Renewable Off-Grid Wastewater Treatment”, 2017 Southern California Conferences for Undergraduate Research
- Baghaei Lakeh, R, Andrade, D, Miller, KJ, Du, B, Pham, J, Modabernia, MM, Ng, PY, Nguyen, TN, Nguyen, JL, Mena, C, Anderson, KR, & Sharbatmaleki, M. (2017), "A Case Study of Decentralized Off-Grid Water Treatment Using Reverse Osmosis." Proceedings of the ASME 2017 International Mechanical Engineering Congress. Vol. 5: Education and Globalization
- Baghaei Lakeh, R., Sharbat, A., (2017), “Decentralized, Renewable Off-grid, Water Treatment”, Annual Conference of CSU Water Resources and Policy Initiative (WRPI), San Jose, CA
- R. Baghaei Lakeh, S. Delagah, and M. Sharbatmaleki: “Reverse Osmosis Concentrate: A Waste or an Asset” at the ASME 2019 Int. Conference on Energy Sustainability, Bellevue, WA, July 2019.
- Alejandro Cerano-Lopez; Chad N. Contreras; Allison Y. Inanoria; Karla I. Duran; Mariya Borovska; Victoria R. Medinilla; Xudong Jia; Simeng Li.; and Ali Sharbat, "Purified Water Replenishment Brine Concentration Pilot Project" the 2019 Southern California Conferences for Undergraduate Research, November 23, 2019, San Marcos, CA.
- Ramirez, I., Lim, B., Juby, G., Delagah, S., Farrokh Shad, M., Sharbatmaleki, M., “Removal of Contaminants of Emerging Concern from using a Novel Water Reclamation”, WateReuse California Annual Conference, Garden Grove CA, March, 17-19, 2019.

- Zabalza, C., Juby, G., Delagah, S., Farrokh Shad, M., Sharbatmaleki, M., “Suggested Monitoring for Direct Potable: Southern California Water Reclamation”, WaterReuse California Annual Conference, Garden Grove CA, March, 17-19, 2019.
- Farrokh Shad, M., Juby, G., Delagah, S., Sharbatmaleki, M., “Tracking Contaminants of Emerging Concern through a Novel MF/RO Water Reclamation Process” Submitted to WEFTEC, the Water Environment Federation's Technical Conference, Chicago, IL, September 21-25, 2019.
- Farrokh Shad, M., Juby, G., Delagah, S., Noh, B., Sharbatmaleki, M., “Analysis and removal of CECs from a WWTP Primary Effluent by Novel MF/RO Treatment Process-Pilot Study” AWWA 2019 Membrane Technology Conference, New Orleans, LA, Feb. 25-28, 2019.
- Lakeh, Reza Baghaei, Daniel Andrade, Kyle Miller, Mohammad Masoud Modabernia, Thuan John Nguyen, Justine Nguyen, Elbon Flanagan et al. “Design and Testing of a Solar-Driven Wastewater Treatment Unit for Off-Grid Applications.” In ASME 2018 International Mechanical Engineering Congress and Exposition, American Society of Mechanical Engineers, 2018.
- Graham Juby, Mojtaba Shad, Ilene Ramirez, and M. Sharbatmaleki: “Alternative Approach to Produce High Quality Water for Groundwater Replenishment” at the Inland Empire Utilities Agency, Chino, CA, April 2018.
- Lakeh, Reza Baghaei, Daniel Andrade, Kyle J. Miller, Bowen Du, Joshua Pham, Mohammad M. Modabernia, Pui Y. Ng et al. “A Case Study of Decentralized Off-Grid Water Treatment Using Reverse Osmosis.” In ASME 2017 International Mechanical Engineering Congress and Exposition, American Society of Mechanical Engineers, 2017.
- Graham Juby, Mojtaba Shad, Saied Delagah, M. Sharbatmaleki: “Evaluating Management and Disposal of CECs in Water Reuse Projects” at the American Water Works Association (AWWA) / American Membrane Technology Association (AMTA) Conference, Long Beach, CA, Feb, 2017.
- Reza Baghaei Lakeh, and M. Sharbatmaleki: “Decentralized Renewable Off-grid Water Treatment” at the 2017 Annual Conference of California State University Water Resources and Policy Initiative (WRPI), San Jose, CA, April 2017.
- Reza Baghaei Lakeh, Daniel Andrade, Kyle Miller, Bowen Du, Joshua Pham, Mohammad Modabernia, Pui Ng, Thuan Nguyen, Kevin R. Anderson, M. Sharbatmaleki: “Solar-powered Desalination and Purification System of Inland Brackish Water Using Reverse Osmosis” at the Metropolitan Water District of Southern California for the Southern California World Water Forum College Grant Program (WWF). Los Angeles, CA, May 2017.
- M. Sharbatmaleki: “Development of a Zero-Carbon Footprint Brackish Water Desalination System” to American Water Works Association (AWWA) / American Membrane Technology Association (AMTA) Annual International Conference, San Antonio, TX, Feb 2016.
- Kevin R. Anderson, Maryam Shafahi, Pedro Perez, Benjamin Kampen, Chris McNamara, Suzanne Shihadeh, Ali Sharbat, Monica Palomo, Reza Baghaei Lakeh, Yasser Salem, Souha Jouhar, Saman Bahrani, Kaian Wang, Joseph Juarez: “Case Study of a Solar Tower/ Compost Waste-to-Energy Test Apparatus” at the 31st International Conference on Solid Waste Technology and Management, Philadelphia, PA, April 3-6, 2016. Awarded the “Russell Ackoff Award” for best paper.
- Team presentation “Algal Productivity in Brine Water for Biofuel Production: A Multi-disciplinary Approach to Investigating the Effects of TDS, Nitrate, and Anti-Scalant on Algal Growth” at the 2015 National Conference on Undergraduate Research (NCUR) conference in Cheney, WA. (April 16-18, 2015).
- Team presentation “Algal Productivity in Brine Water for Biofuel Production: A Multi-disciplinary Approach to Investigating the Effects of TDS, Nitrate, and Anti-Scalant on Algal Growth” at the 2015 National Conference on Undergraduate Research (NCUR) conference in Cheney, WA. (April 16-18, 2015).

- Team presentation “Drought Solutions through Green Treatment Technology: A Photovoltaic Electro-Dialysis Unit” at the 2015 Water Reuse California Annual Conference (March 16, 2015).
- Team presentation “Treatment Methods and Regulations for Contaminants of Emerging Concern in RO Brine Concentrate” at the 2015 Water Reuse California Annual Conference (March 16, 2015).
- Team presentation “Inland Desalination and Brine Management: Salt Recovery and Beneficial Uses of Brine” at the 2015 ASCE EWRI Congress, Austin, TX (May 16-19, 2015)
- Team presentation “Inland Desalination and Brine Management: Salt Recovery and Beneficial Uses of Brine” at the NSF 2015 Emerging Researchers National (ERN) Conference in STEM in Washington, DC (Feb. 19-21, 2015).
- Team presentation “Water Reuse, Contaminants of Emerging Concern, Current Practices, and Future Trends” at the 2015 American Water Resources Association (AWRA) conference (March 30, 2015)
- Conference Proceeding and Presentation titled “Contaminants of Emerging Concern In Reverse Osmosis Brine Concentrate From Indirect/Direct Water Reuse Applications”, 2015 AWWA/AMTA Annual Conference, Orlando, FL, March 2-6, 2015.
- Team presentation “Algal Productivity in Brine Water for Biofuel Production: A Multi-disciplinary Approach to Investigating the Effects of TDS, Nitrate, and Anti-Scalant on Algal Growth”, 2015 National Conference on Undergrad Research (NCUR) conference, Cheney, WA, April 16-18, 2015.
- Sharbatmaleki, M., Poster presentation titled “Assessing Local Implementation of Hexavalent Chromium Treatment Technologies” at the CSU COAST-WRPI Research Poster Reception, Long Beach, CA (March 8, 2016).
- Team presentation titled “Heavy Metal Pollution In The Santa Ana River Watershed Due To Passenger Vehicles” at the 2016 Creative Activities and Research Symposium, Cal Poly Pomona (August 17, 2016)
- Team presentation titled “The Design of a Photovoltaic Electrodialysis (PV-ED) Unit: Zero Carbon Footprint Desalination” at the 4th Annual RSCA Conference at Cal Poly Pomona (March 4, 2016).
- Team presentation titled “Geo-synthetics and Design of Pavements” at the 2016 Creative Activities and Research Symposium, Cal Poly Pomona (August 17, 2016)
- Team presentation titled “Drought: Direct and Indirect Water Reuse Case Studies” at the 2015 Southern California Conferences for Undergraduate Research (SCCUR) at Harvey Mudd College, Claremont, CA (November 21, 2015)
- Sharbatmaleki, M., “Dynamic Analysis Approach for Decision Making around Expansion of Wastewater Treatment Facilities”, Western Decision Sciences Institute (WDSI) 2013 Annual Conference, Long Beach, CA, March 2013.
- Lara, M., Perreyra, Y., Rodriguez, T., Grano, P., Sharbatmaleki, M., “Comparison of Concentrate Disposal/Management Methods”, LA Metropolitan Water District Exposition, May 1, 2014.
- Calderon, B., Espinoza, D., Kashifi, A., Williams, S., Yang H., Palomo, M., Sharbatmaleki, M., “The Removal of Nitrate and Perchlorate from RO Concentrate Stream”, 2014 Cal Poly Pomona Student Research Conference, Pomona, CA, March 2014.
- Calderon, B., Espinoza, D., Kashifi, A., Williams, S., Yang H., Palomo, M., Sharbatmaleki, M., “The Removal of Nitrate and Perchlorate from RO Concentrate Stream”, The 28th Annual CSU Student Research Competition, East Bay, CA, May 2014.
- Choe, A., Sharbatmaleki, M., “Inland Brine Disposal for Brackish and Saline Water Desalination Plants Producing Drinking Water”, Southern California Conferences for Undergraduate Research, Whittier, CA, Nov. 23, 2013.
- Palomo, M., DiFiori, R., Sharbatmaleki, M., “Expanding Multi-institutional Bonds to Team up Students for the Creation of Research Environmental Projects”, ASEE Zone IV Conference, Long Beach, CA, April 25, 2014.

- Sharbatmaleki, M., “Mass Transfer Studies of Ion-exchange Resin Bio-Regeneration Used for Treatment of Perchlorate from Drinking Water”, AWWA Water Quality Conference, Long Beach, CA, November 2013.
- Sharbatmaleki, M., “Mass Transfer Studies of Ion-exchange Resin Bio-Regeneration Used for Treatment of Perchlorate from Drinking Water” to AWWA Water Quality Conference. November 2013, Long Beach, CA.

Honors and Awards:

- **Excellence in Teaching Award:** Chi Epsilon 2019 James Robbins Award
- 2020-2021 **Outstanding Advisor Award** for the College of Engineering, Cal Poly Pomona
- **Tau Beta Pi, Chi Epsilon, and Phi Kappa Phi** Honor Society member.
- Co-adviser for a student team winning the **1st place** award for the Best Senior Project of the year: College of Engineering, Cal Poly Pomona, May 2019.
- Co-adviser for a student team winning the **2nd place** Eco Innovator Award of Excellence: 2017 Green Expo of the Metropolitan Water District of Southern California.
- Adviser for a student team winning the **2nd place** Eco Innovator Award of Excellence: 2016 Green Expo of the Metropolitan Water District of Southern California.
- **Best Paper** Award at the 2015 Water Reuse California Annual Conference (March 16, 2015).
- Adviser of the **2nd place** team: 2015 ASCE EWRI Congress – Senior Design Competition in Austin, TX (May 16-19, 2015).
- **Best Paper** Award at the 31st International Conference on Solid Waste Technology and Management, Philadelphia, PA (April 3-6, 2016).
- **Merit Scholarship**, Sharif University of Technology, Master’s Degree, 2003-2005.
- Ranked 89th among 9324 participants in the Nationwide Civil Engineering M.Sc. Entrance Exam, (**top 1%**), Iran, spring 2003.

Professional Affiliations:

- Professional Engineering (**PE**) # 022428, Nevada, 2013 to present.
- American Society of Civil Engineers (**ASCE**), 2006 to present.
- American Water Works Association (**AWWA**), 2007 to present. (active member)
- Water and Environment Federation (**WEF**), 2007 to 2010.
- International Desalination Association (**IDA**), 2012 to 2014.
- American Chemical Society (**ACS**), 2008 to 2010.

Graduate Students at Cal Poly Pomona:

- **Undergraduate students:** 200+ students, and most of them found their career in the water industry.
- **Graduate students:** Ignacio Ramirez, Darian Doyle, Travis Romeyn, Hoda Shahrestani, Ilene Ramirez, Mojtaba Farrokh Shad, Benson Lim, Christina Zabalza, Han Yang, Erik Cheung, Sahar Ahmed, Andres Convarrubias, Rommel Garcia, Nisarg Joshi (incomplete), Robert Kochan, Tiffany Tran, Han Yang, Victoria Medinilla, Ilene Ramirez, Jian Haung, Micheal Kim, Levon Tawilian.

EXHIBIT E

October 23, 2023

Sent via email

David Black, Senior Planner

davidblack@co.imperial.ca.us

Imperial County Planning and Development Services

801 Main Street El Centro, CA 92243

Dear Mr. Black,

Please find the attached comments from Earthworks on the Draft Environmental Impact Report (DEIR) for the Hell's Kitchen PowerCo1 and LithiumCo1 Project. Earthworks is an environmental nonprofit organization that protects communities and the environment from the adverse impacts of mineral and energy development while promoting sustainable solutions. We're driven by our commitment to collaborate with communities on the frontline, using science in innovative ways, and building people power to ensure a more just and livable future. For the past two years we have worked with communities in Imperial County to better understand the impacts of proposed lithium extraction projects. We have reviewed the DEIR and are concerned that it has failed to disclose and analyze several significant environmental impacts as required by the California Environmental Quality Act (CEQA). We ask that the DEIR be revised to address our comments below.

Please include this letter and references in your file for the project. Please also include me on your notice list for all future updates, notices, and documents related to the project.

Thank you for your consideration,



Jared Naimark

California Mining Organizer

Earthworks

1958 University Ave.

Berkeley, CA 94704

jnaimark@earthworksaction.org

Aesthetics

brine is known to contain hazardous elements that may become airborne when wind blows across the pond. These impacts should be analyzed in the EIR and mitigation measures required.

The main contributor to poor air quality in the region is the receding Salton Sea and exposed playa.² By consuming additional freshwater that may otherwise flow into the Salton Sea, the project is contributing to worsening air quality. The DEIR does not include any analysis of indirect impacts to air quality from exacerbating Salton Sea degradation. The DEIR should be revised to analyze this as a connected action. Furthermore, the DEIR should be revised to include an analysis of how the project's impacts on water supply (and cumulative impacts of the lithium industry overall) may limit Salton Sea restoration options, such as voluntary fallowing to transfer agricultural water into the sea.

Hazards and hazardous materials

The DEIR fails to analyze the impact of brine spills from drilling, pipeline, processing, reinjection or descaling. Brine is known to contain hazardous materials such as lead and arsenic, and has been spilled by similar operations in the area.^{3 4 5 6} The DEIR should be revised to analyze the impact of brine spills and include specific mitigation measures.

Utilities and service systems

The DEIR finds that when drought conditions occur, water supply will be unaffected because of IID high priority Colorado River water rights (4.13-16). However, there is no discussion of negotiated cuts to IID's Colorado River use agreed to in 2023, nor is there discussion of the

² Frie, A. L., Dingle, J. H., Ying, S. C., & Bahreini, R. (2017). The Effect of a Receding Saline Lake (The Salton Sea) on Airborne Particulate Matter Composition. *Environmental Science & Technology*, 51(15), 8283–8292.
<https://doi.org/10.1021/acs.est.7b01773>

³ Department of Toxic Substances Control. (n.d.). *CALENERGY - CALENERGY - VULCAN/DEL RANCH(HOCH)FACILITIES*. EnviroStor. Retrieved May 17, 2023, from https://www.envirostor.dtsc.ca.gov/public/profile_report?global_id=71003831

⁴ Department of Toxic Substances Control. (n.d.). *CALENERGY - ELMORE FACILITY*. EnviroStor. Retrieved May 17, 2023, from https://www.envirostor.dtsc.ca.gov/public/profile_report?global_id=71003832

⁵ Department of Toxic Substances Control. (n.d.). *CALENERGY - LEATHERS FACILITY*. EnviroStor. Retrieved May 17, 2023, from https://www.envirostor.dtsc.ca.gov/public/profile_report?global_id=71003833

⁶ Department of Toxic Substances Control. (n.d.). *CALENERGY - UNITS1&2/UNITS 3&4/5 FACILITIES*. EnviroStor. Retrieved May 17, 2023, from https://www.envirostor.dtsc.ca.gov/public/profile_report?global_id=71003830

likelihood of future cuts. The DEIR should be revised to include an analysis of water supply within the context of extreme drought and likely cuts throughout the Colorado River basin.

Furthermore, the mitigation measure listed simply states that the project will work with IID should reductions come into effect, but does not include any details. The DEIR should be revised to include detailed mitigation steps, including whether or not water be cut to the project or if reductions would come from elsewhere, and analysis of the impacts of cutting water supply during the project's operation.

As the lithium industry in Imperial Valley expands, it may be limited by water supply. IID has reserved up to 25,000 acre-feet of water per year for non-agricultural use. However, the DEIR does not include an analysis of cumulative impacts to this water supply. The DEIR should be revised to include a cumulative analysis of how this project, along with other past, present, and reasonably foreseeable lithium projects, including geothermal, battery plants, and associated infrastructure with lithium valley, would impact the region's non-agricultural water supply. This should include discussion of whether water may have to be diverted from agriculture or Salton Sea restoration to supply the growing lithium industry.

Finally, the DEIR finds that the descaling process, estimated to be required every three years, has the potential to exceed hazardous waste standards for both California and Nevada. In this case it would have to be trucked to Nevada. The DEIR states this is an extremely rare occurrence, occurring only twice in the past 10 years (4.13-2). However, this is a new project. It is not clear what record of waste disposal is being cited here. This section should be revised to include a clear analysis of the hazardous waste expected to be produced by Hell's Kitchen descaling operations and appropriate mitigation measures.

[← BACK TO STAFF](#)

Jared Naimark

California Mining Organizer



Jared joined Earthworks in 2022. He works to support frontline communities at risk from existing and proposed mining throughout California. Before joining Earthworks, Jared worked for two years as a program associate at the 11th Hour Project, where he helped develop new grantmaking initiatives to support Indigenous self-determination, protect the right to protest, and address the impacts of mining in the context of the renewable energy transition.

Jared has a background in political ecology and is passionate about movements for environmental and social justice. He previously worked in solidarity with the Karen Indigenous rights movement in Myanmar, conducting research and advocacy for campaigns to defend territory from mining, mega-dams, oil palm, and other extractive projects.

He holds a BS in Earth Systems from Stanford University, and a Master of Environmental Science from the Yale School of the Environment. Outside of work, Jared loves to hike, bike, and listen to old jazz records.

Contact Jared (he/him)

Email: [jnaimark\[at\]earthworks\[dot\]org](mailto:jnaimark@earthworks.org)

Phone: 202-887-1872 X 156

Twitter: [@JaredNaimark](https://twitter.com/JaredNaimark)

Location: Palo Alto, California on unceded Ohlone lands

EXHIBIT F

October 19, 2023

David Black, Senior Planner
Imperial County Planning & Development Services Department
801 Main Street
El Centro, CA 92243

Dear Mr. Black and staff:

I am a Professor of Geography at the University of Nevada, Reno and have been working on water and natural resource issues for over 30 years. My CV is attached.

As part of the Lithium Valley Environmental and Technical Advisory Committee developed by Comite Civico del Valle, I have been asked to review the Draft Environmental Impact Report (DEIR) for the Hell's Kitchen Power Co1 and Lithium Co1 Project (Hell's Kitchen project) proposed by Controlled Thermal Resources Inc. (CTR). Below you will find comments on the DEIR for the Hell's Kitchen project organized around construction phase, operations, and cumulative impacts.

Construction Phase

- In CUL-3 it is mentioned that a tribal monitor shall be provided an opportunity to attend briefings and be present onsite, if requested. It is unclear whose tribal monitor this is and what they can actually do while onsite. Moreover, this minimal effort does not satisfy the need for free, prior, and informed consent with Tribes.
- In Cultural Resources, Threshold c, how can finding human remains be considered "less than significant" both before and after mitigation, given NAGPRA and other cultural resource protection statutes and regulations?
- In Hazards and Hazardous Materials, Threshold b – MM HAZ-2, will the soil sampling be targeting surface or subsurface samples? Need to describe the goal of soil sampling, the process to be used in sampling and analysis, what the thresholds are, and what will be done if thresholds are exceeded.

Operations

- In BIO-13 it is mentioned that to offset the loss of the Yuma Ridgway Rail's habitat, it is necessary to procure water from IID. Who will procure this water? How is this specifically accounted for in the overall water demands and water planning for the Hell's Kitchen project?
- In BIO-19 there is a discussion of mitigation wetland loss by creating ~152 acres of native wetland/open water habitat. Who will procure this water? How is this specifically accounted for in the overall water demands and water planning for the Hell's Kitchen project?

- In Utilities and Service Systems, threshold b, the likelihood of drought is not adequately addressed. The mitigation listed under UTIL-1 is not actually mitigation.

Cumulative Impacts

- While the Hell's Kitchen project is highly dependent on receiving water from Imperial Irrigation District (IID), this DEIR has not adequately addressed the evolving situation with allocations of Colorado River water. The U.S. Department of Interior has new guidelines for managing the Colorado River starting in 2027 that establish new operating rules for water allocations in the Lower River. Moreover, a consensus-based proposal from the Lower Basin states that included California agreed to a 3 million acre-foot reduction, which also impacts IID's allocation of Colorado River water. Better water planning for the Hell's Kitchen project needs to be done to take into account the long-term and cumulative impacts of declining allocations for IID. In addition, the Hell's Kitchen project needs to be evaluated in terms of the cumulative impacts of broader development proposals within Imperial County.

Sincerely,



Kate A. Berry, Ph.D.

Biographical Sketch

Kate A. Berry, Professor
Department of Geography
University of Nevada, Reno

(a) Professional Preparation

Northern Arizona University	Flagstaff, AZ – For. & Natural Resources Mgt.	BS, 1980
Colorado State University	Ft Collins, CO - Watershed Science & Mgt.	MS, 1985
University of Colorado, Boulder	Boulder, CO – Geography	PhD, 1993

(b) Appointments

2012-present **Professor**, Department of Geography, University of Nevada, Reno
2011-2013 **Director**, University Core Curriculum, University of Nevada, Reno
2011-2012 **Acting Director**, Nevada State Climate Office
2008-2011 **Chair**, Department of Geography, University of Nevada, Reno
1999-2011 **Associate Professor**, Department of Geography, University of Nevada, Reno
1993-1999 **Assistant Professor**, Department of Geography, University of Nevada, Reno
1991-1993 **Adj. Fac. & Prog. Advisor**, Env. Policy & Mgt. Division, University of Denver
1985-1991 **Environmental Consultant**, ERO Resources, Denver, CO
1980-1982 **Forester**, Columbia Gorge Ranger District, Mt Hood National Forest, Troutdale, OR

(c) Selected Publications

Borgias SL*, **Berry KA**. (accepted & being revised) Beyond injustice: Diverse visions and coalitions for water justice in rural-urban water conflicts. *Water Alternatives*.

Vineyard, N*, **Berry KA**, Ormerod KJ. (2023) Legal geographies of water. *WIRES Water* e1652. <https://doi.org/10.1002/wat2.1652>.

Berry KA, Cohn TC. (2023) Space, time, and hydrosocial imaginaries: Water quality governance of the Pyramid Lake Paiute Tribe. *Professional Geographer*. <https://doi.org/10.1080/00330124.2022.2075403>.

Turley B, Cantor A, **Berry KA**, Knuth S, Mulvaney D, Vineyard N. (2022) Emergent landscapes of energy storage: Considering just transitions in the Western United States. *Energy Research & Social Science* 90: 102583. <https://doi.org/10.1016/j.erss.2022.102583>.

Cohn TC, Higheagle S, Whyte KP, **Berry KA**, Green K, Carter M. (2022). “We had to jump over, but we’re still here”: *Nimiipiu* spatio-temporalities of water and fish in times of climate change, *Indigenous Water and Drought Management in a Changing World*, ed. Sioui M. Elsevier Publishers, pp 91-108.

Hillis V, **Berry KA**, Swette B, Aslan C, Barry S, Porensky L. (2020) Unlikely alliances and the future of social-ecological systems in the American West. *Environmental Research Letters* 15: 045002. <https://doi.org/10.1088/1748-9326/ab6fbc>.

Cohn TC, **Berry KA**, Whyte KP, Norman E. (2019) Spatio-temporality and tribal water quality governance in the United States. *Water* 11(1): 99. doi:10.3390/w11010099. Also published in: Wilson NJ, Harris LM, Nelson J, Shah SH. (2019) *Water Governance: Rethinking Politics* Basel, Switzerland: MDPI, p. 236-249. ISBN 978-3-03921-560-7. doi.org/10.3390/books978-3-03921-561-4.

Berry KA, Jackson S, Saito L, Forline L. (2018). Reconceptualising water quality governance to incorporate knowledge and values: Case studies from Australian and Brazilian Indigenous communities. *Water Alternatives* 11(1): 40-60. <https://www.wateralternatives.org/index.php/alldoc/articles/vol11/v11issue1/408-a11-1-3/file>.

Berry KA, Matsui K, Jackson S, Cavazos Cohn T. (2017) Indigenous water histories II: Water histories and the cultural politics of water for contemporary Indigenous groups, *Water History* 9(1): 1-8. doi:10.1007/s12685-017-0195-0.

Horangic A, **Berry KA**, Wall T. (2016) Influences on stakeholder participation in water negotiations: a case study from the Klamath Basin. *Society & Natural Resources* 29(12): 1421-1435. doi:10.1080/08941920.2016.1144837.

Perry D, **Berry KA**. (2016) Central American regional integration through infrastructure development: A Costa Rican case study of hydropower. *Regions & Cohesion* 6(1): 96-115. doi:10.3167/reco.2016.060105.

Mann K, **Berry KA**, Bassett S, Chandra S. (2013) Voting on floodplain conservation: the role of public values and interactions along the Carson River, Nevada. *Society & Natural Resources* 26(5): 568-585. doi:10.1080/08941920.2012.713449.

Berry KD, Saito L, Kauneckis D, **Berry KA**. (2012) Understanding perceptions of successful cooperation on water quality issues: a comparison across six western US interstate watersheds. *Regions & Cohesion* 2(2): 57-82. doi:10.3167/reco.2012.020204.

Berry KA. (2012) Tribes and water, In *A twenty-first century U.S. water policy*, edited by Gleick P, Christian-Smith J. Oxford: Oxford University Press pp 90-108.

Berry KA, Mollard E. (2010) Editors, *Social participation in water management and governance: Critical and global perspectives*, London: Routledge/Earthscan Publishers.

(d) Synergistic Activities

Member, Board of Directors of Great Basin Resource Watch (since 2017).

Discussions with Tribal leaders and rural residents on water and hard rock mining issues in Nevada, in association with the Great Basin Resource Watch (2018-2020).

Chair, International Programme Advisory Committee for CoCooN (Conflict & Cooperation in Natural Resource Management in Developing Countries), Netherlands Organization for Scientific Research (NWO-WOTRO) (2009-2018).

Member, Association of American Geographers' project on Catalyzing Research on Geographies of Broadening Participation (2012-2014).

Response to Comment Letter #10

Many of the comments associated with Comment Letter #10 request further information on the Project Description; however, the comment does not specifically state any errors in analysis of Project Description. The absence of the requested information does not inherently result in flaws with the Project Description. Many of the comments are highly speculative and request information that would in no way benefit the analysis or directly result in a better understanding of the Project or its impacts on the environment. However, below are responses to the comments which require a direct response.

Tier 4 construction equipment is generally commercially available given improvements in engine efficiencies and standards over the last several years. The County will be responsible for reviewing the Combustion Exhaust Emission Control Program, which will define the construction equipment used. ICAPCD is also expected to review the plan.

The volatile organic compounds (VOC) architectural coating limits specify that the use of paints and solvents with a VOC content of 100 grams per liter or less for interior and 150 grams per liter or less for exterior surfaces shall be required. When available, super compliant VOC coatings for all architectural applications shall be used, based on a regulatory schedule of VOC limits for architectural coatings. Many manufacturers have reformulated their coatings to levels below these limits. These are referred to as "Super-Compliant" and contain less than 10 grams of VOC per liter.

See Response to Comment #3 for discussion of health impacts associated with sensitive receptors.

The proposed project will use the best available control technology for proven abatement systems as required by the APCD. The ICAPCD will require use of best management practices and require use of best available control technologies. Additional details will be provided to the ICAPCD and the APCD will be the decision body on the approval of the final system installed.

Mitigation Measure AQ-2 includes measures that would reduce NOX to a less than significant level and no mitigation fees are anticipated.

The Draft EIR states "HKP1 would not cause or contribute to a violation of the CO NAAQS/CAAQS. The 1-hour and 8-hour CO modeled concentration plus background concentrations are 2,213 and 1,369 micrograms per cubic meter ($\mu\text{g}/\text{m}^3$), respectively, which are well below the NAAQS/CAAQS. Therefore, the startup operations associated with the proposed standby/black-start diesel engine generator would have a less than significant impact on CO concentrations." The impact on CO concentrations is less than significant prior to use of offsets.

The applicant commits to the use of electric vehicles for product movement as commercially practicable. Additionally, the proposed project will adhere to APCD regulations, as it will require an Authority to Construct permit issued by APCD prior to starting construction and an Authority to Operate permit prior to starting operations. It is anticipated that more detailed design and information on specific operational emissions will be provided to APCD at the time of air permitting and more detailed quantification of operational emissions would be included in the air permit process with APCD. The applicant will prepare any required additional modeling as required by the APCD. See response to comment 17 regarding health risk assessment.

The project would not exceed either the 10,000 MTCO_{2e} threshold or the 20,000MT CO_{2e} threshold.

HKL1 would consume approximately 275,940,000 kilowatt-hours per year of electricity (per 90 percent availability or 7,884 hours); (assumed to be “brown” power via the electrical grid). However, HKP1 would generate approximately 430,567,140 kilowatt-hours per year of (renewable) electricity (per 98.5 percent availability or 8,630 hours); assumed to be “green” power avoiding the electrical grid. Therefore, there will be a surplus of renewable electrical generation of approximately 154,627,140 kilowatt-hours per year of electricity, which results in a net reduction of GHG emissions.

The electrical generation of the HKP1 would likely be greater than the electrical demand of the HKL1. Importantly, the HKL1 would not operate if the HKP1 was not operating due to maintenance or outage. The air quality analysis conservatively assumes that the electrical demand of the HKL1 would be provided by the electrical grid (“brown” power) instead of being provided by the HKP1 (“green” power). Nevertheless, under this conservative condition, the operations of the HKP1 and the HKL1 would have a net 154,627,140 kilowatt-hours per year of (renewable) electricity generation. The GHG emission calculations are based on this conservative condition.

The amount of renewable electricity generation would be even greater under the condition that HKP1 supplies the entire power demands of HKL1. There would be an avoidance of the 275,940,000 kilowatt-hours per year of electricity from the HKL1 plus generation of the 154,627,140 kilowatt-hours per year of (renewable) electricity. This results in a surplus of renewable electrical generation of approximately 430,567,140 kilowatt-hours per year of (renewable) electricity (assumed to be “green” power avoiding the electrical grid); which results in an even greater reduction of GHG emissions.

The estimated annual operational GHG emissions for HKP1 will result in a reduction of a total 35,308 metric tons of CO₂e due to the generation of renewable energy (i.e., the geothermal plant would produce electrical output resulting in the avoidance of 37,103 metric tons of CO₂e while requiring equipment using 1,803 metric tons of CO₂e). The estimated annual operational GHG emissions for HKL1 are 24,865 metric tons of CO₂e. The net annual operational GHG emissions will be a reduction of 10,443 metric tons of CO₂e.

The proposed project would be consistent with CARB’s Scoping Plan by avoiding GHG emissions associated with geothermal electrical production and lithium production (electric vehicles) to advance statewide objectives for renewable energy. Thus, the proposed project would have a less-than-significant impact related to a conflict with a GHG reduction plan.

CARB’s 2022 Scoping Plan was adopted in December 2022. The three previous scoping plans focused on specific GHG reduction targets for the state’s industrial, energy, and transportation sectors — first to meet 1990 levels by 2020, then to meet the more aggressive target of 40 percent below 1990 levels by 2030. The 2022 Scoping Plan addresses recent legislation and direction from Governor Newsom, extending and expanding upon earlier scoping plans with a target of reducing anthropogenic emissions to 85 percent below 1990 levels by 2045.

See previous response regarding proposed project resulting in a net decrease in GHG emissions and forthcoming response regarding proposed projects construction and operation emissions being less than significant and thus not conflicting with applicable air quality plans.

The proposed project will adhere to APCD regulations, as it will require an Authority to Construct permit issued by APCD prior to starting construction and an Authority to Operate permit prior to starting

operations. It is anticipated that more detailed design and information on specific operational emissions will be provided to the APCD at the time of air permitting and more detailed quantification of operational emissions would be included in the air permit process with APCD. Additionally, the proposed project will use the best available technology to mitigate air pollutants.

The Imperial County Planning Division shall require that construction equipment such as concrete/industrial saws, pumps, aerial lifts, light stands, air compressors, and forklifts be electric or alternative-fueled (i.e., non-diesel), where feasible. Pole power shall be utilized at the earliest feasible point in time and shall be used to the maximum extent feasible in lieu of generators.

Benzene or ammonia emission will be mitigated through the use of best available technology if required by APCD, additionally any stationary sources of emissions operated on site will be required to adhere to ICAPCD Rule 207, new and modified stationary source review and Rule 201 that require permits to construct and operate stationary sources.

Both construction and operational emissions created from the proposed project would be within their respective ICAPCD thresholds. According to the ICAPCD Handbook, projects that are within the ICAPCD thresholds are consistent with the regional air quality plans. Furthermore, the standard mitigation measures provided in the ICAPCD Handbook have been incorporated into the project and the proposed project will be required to implement all of the ICAPCD Regulation viii, fugitive dust control measures during construction and operation of the proposed project. Furthermore, any stationary sources of emissions operated on site will be required to adhere to ICAPCD Rule 207, new and modified stationary source review and Rule 201 that require permits to construct and operate stationary sources. Therefore, the proposed project would not conflict with or obstruct implementation of the applicable air quality plans and impacts would be less than significant.

Only cars and light duty trucks are considered as vehicle miles traveled (VMT) per CEQA Guidelines Section 15064.3, subdivision (a), which states, "For the purposes of this section, 'vehicle miles traveled' refers to the amount and distance of automobile travel attributable to a project." The Office Planning and Research (OPR) define the term automobile as "on-road passenger vehicles, specifically cars and light trucks" in the Technical Advisor on Evaluating Transportation Impacts in CEQA (2018). Heavy duty trucks are not considered automobiles for the purposes of determining VMT.

The ITE trip generation was selected from the most comparable type of project in the ITE Manual and reflects the number of workers for the project specifically. The trip generation is a reasonable method of defining the number of trips generated by worker. Given the remote location of the site, the number of trips generated would likely be less than those estimated in the DEIR.

The proposed access approach from McDonald Road and Davis Road is the ideal access approach as other roads in the area are very narrow and would not support heavy duty truck access to the site.

Applicant is committed to the use of electric vehicles for mineral shipping as commercially practical and the infrastructure to support that. The Project includes the following design feature (page 2.0-23 of the DEIR): A Transportation Plan will be prepared for implementation during all phases of the project. The Transportation Plan will address methods for reducing construction worker traffic volumes and Project-related equipment and materials transport by implementing the following strategies: (1) provide a construction worker rideshare program; (2) schedule shift changes and deliveries to avoid conflict with

peak-hour traffic patterns; (3) establish traffic controls for transport of facility hazardous and nonhazardous materials, components, main assembly cranes, and other large pieces of equipment; and (4) evaluate alternative transportation approaches depending on specific object sizes, weights, origin, destination, peak-hour traffic, and unique handling requirements. Rideshares are factored into the project.

A Water supply Assessment will be approved along with the EIR. Approval of the Water Supply Assessment will ensure impact on water supply is less than significant.

The Energy Section has been updated to eliminate any language remaining from a previous draft. Please note, the stricken language does not apply to the analysis and was revised following the comment.

As stated in the EIR, no feasible alternatives were identified during the Scoping process.

Comment Letter #11

COURTNEY ANN COYLE
ATTORNEY AT LAW

HELD-PALMER HOUSE
1609 SOLEDAD AVENUE
LA JOLLA, CA USA 92037-3817

TELEPHONE: 858-454-8687 E-MAIL: COURTCOYLE@AOL.COM FACSIMILE: 858-454-8493

**Re: County of Imperial Draft Environmental Impact Report (DEIR)
for Hell's Kitchen PowerCo1 and LithiumCo1 Proposed Project**

Dear Mr. Black,

October 23, 2023

These comments on the subject DEIR are timely submitted on behalf of Carmen Lucas, Kwaaymii Laguna Band of Indians.


1. In a previous letter to the County, Ms. Lucas asked to be included in AB 52 notifications for proposed geothermal and lithium projects in Imperial County and related environmental documents. She is on the Native American Heritage Commission's (NAHC) contact list and has been designated for Ancestral remains found in Imperial County by the NAHC. However, the DEIR indicates that only the Quechan and Torres-Martinez tribes were sent AB 52 letters. AB 52 consultation with Ms. Lucas must be initiated without further delay by the County and integrated into the CEQA process. During consultation, a copy of the tribal cultural landscape boundary for the Southeast Lake Cahuilla Active Volcanic Cultural District (SELCAVCD) can be shared. We also request a copy of Appendix E, Tierra's 2021/2022 cultural study, be sent to Ms. Lucas or my office on a confidential basis.
2. The DEIR incorrectly asserts that there are no Tribal Cultural Resources (TCRs) in the project area and that the proposed project would not affect any TCRs. The DEIR fails to mention that the SELCAVCD has been identified by affiliated tribes and overlaps portions of the proposed project area. It would also have effects on cultural features including Mullet Island and the (new) mud pots, important areas to tribes for medicine and training. The DEIR also fails to mention whether a NAHC Sacred Lands File (SLF) search was conducted; if it had been, it would have shown a positive hit indicating this area has been entered on the SLF. The TCR section must be revised to include this information and consultation must be held with Ms. Lucas on these identifications.
3. The DEIR applies solely archaeologically based mitigation to TCRs, in violation of CEQA and current best practices in cultural resources management. Notably, the mitigation measures omit reference to requiring qualified tribal monitors during project surveys

and construction and do not involve affiliated tribes in the identification, evaluation, documentation, or treatment of discovered resources.

4. The DEIR fails to examine any alternatives to the proposed action. This is highly unusual and unsupported. Alternatives that reduce effects on the SELCAVCD must be analyzed which include alternative design options and off site alternatives. Effects to be studied and reduced include those related to direct/indirect/cumulative effects on biological resources, noise, visual, aesthetics, feeling, setting, and induced access.
5. The DEIR fails to examine the cumulative effects from other geothermal projects, including those currently being processed through the California Energy Commission (CEC) including BHE Renewable's Black Rock Geothermal, Elmore North Geothermal, and Morton Bay Geothermal or future phases at Hell's Kitchen. Taken together, these proposed projects would have serious cumulative effects on the SELCAVCD as well as the traditional spiritual and cultural practices of affiliated tribes. Consultation must occur on this issues and the DEIR revised accordingly.

For these reasons, we request that the DEIR be revised to reflect more complete tribal consultation efforts and be recirculated for comment. Please place my office on the list of those to receive project related notices, including hearing notices.

Sincerely yours,



Courtney Ann Coyle
Attorney at Law

Cc:
CEC
NAHC
Quechan Indian Tribe
Torres-Martinez Tribe
Native American Land Conservancy

29 Sept 2022

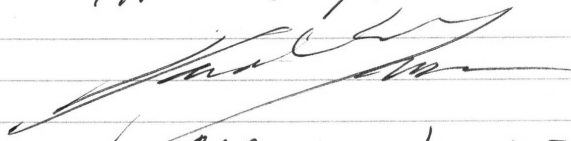
DIRECTOR,
PLANNING AND DEVELOPMENT SERV,
801 MAIN STREET
EL CENTRO, CALIF. 92243

to whom it may concern

I AM CARMEN LUCAS A
KWAAYMII LAGUNA MOUNTAIN INDIAN
WHO IS LISTED WITH THE NATIVE
AMERICAN HERITAGE COMMISSION
CONTACT LIST.

I AM REQUESTING THAT MY
NAME AND ADDRESS BE ADDED
ON THE IMPERIAL COUNTY SB-18
AND SB52 CONSULTATION LIST
IF I'M NOT ALREADY ON IT. THIS
REQUEST INCLUDES THE SPECIFIC
PLAN & PEER FOR LITHIUM
RECOVERY. I AM ALSO SPECIFICALLY
REQUESTING CONSULTATION ON THAT
PROJECT.

THANK YOU



CARMEN LUCAS
PO BOX 775
PINE VALLEY CA.
91962

1-619-769-4207



Subscribe to Our Newsletter

Subscribe



ROB BONTA

Attorney General

Attorney General Bonta Files Amicus Brief Supporting Koi Nation in Lawsuit Against City of Clearlake

Press Release / Attorney General Bonta Files Amicus Brief Supporting Koi Nat...

Friday, October 20, 2023

Contact: (916) 210-6000, agpressooffice@doj.ca.gov

OAKLAND — California Attorney General Rob Bonta today announced that the Lake County Superior Court has granted the Department of Justice's application to file an amicus brief in support of the Koi Nation of Northern California's lawsuit against the City of Clearlake. The Koi Nation contends that the site of a proposed 75-room hotel — known as the Airport Hotel and 18th Avenue Extension — contains tribal cultural resources and that the city did not adequately conduct consultation with the Koi Nation or consider the project's impacts on tribal cultural resources, in violation of the California Environmental Quality Act's (CEQA) tribal consultation requirements added by Assembly Bill 52 (AB 52). The Department of Justice's amicus brief supports the Koi Nation's position, providing information on the legislative history and intent of AB 52's requirements.

"The Clearlake area is home to Native American tribes who have lived there since time immemorial," said **Attorney General Rob Bonta**. "The preservation of tribal cultural resources is of great importance. We stand with the Koi Nation in seeking justice and accountability. The California Legislature passed AB 52 to ensure that government agencies' consultation with tribes regarding their tribal cultural resources would be meaningful — that simply didn't happen here."

"As a Southeastern Pomo Tribe with an area of traditional and cultural affiliation that stems from the Pomo homeland of Southeastern Clear Lake to the Russian River Valley in Sonoma County, the Koi Nation of Northern California is grateful for the action and leadership of Attorney General Rob Bonta and his hardworking team," **said Vice Chairman of the Koi Nation Dino Beltran**. "We hope this will be helpful for all California Native American Tribes in their protection of Tribal Cultural Resources moving forward. It is important to recognize traditional cultural knowledge as evidence. Our case is strengthened by the expertise and knowledge of Tribal Cultural Resources shared by Tribal Historic Preservation Officer and cultural practitioner Robert Geary."

In the amicus brief, Attorney General Bonta argues that:

- **Meaningful consultation under CEQA requires more than the city's cursory approach.** As amended by AB 52, CEQA requires consultation to be a "meaningful and timely process." In this case, the city held a single meeting with the Koi Nation and did not respond to the Koi Nation's subsequent communications flagging concerns about tribal cultural resources and suggesting mitigation measures. The city then unilaterally ended consultation without informing the Koi Nation of its conclusion or explaining in the record why mutual agreement was not possible.
- **Agencies must consider tribal expertise in determining tribal cultural resources, significant impacts to those resources, and mitigation measures under CEQA.** When the Legislature amended CEQA under AB 52, it distinguished tribal cultural resources from archaeological resources or historical resources under CEQA and required lead agencies to evaluate impacts to tribal cultural resources as a separate resource category. The Legislature also required lead agencies to incorporate tribal expertise and input when determining the existence of those resources, the potential for impacts on them, and the sufficiency of mitigation measures for avoiding those impacts. In this case, the city relied solely on a study by the city's archaeologist — and ignored tribal input and expertise — in identifying tribal cultural resources on the project site.

A copy of the amicus brief can be found **here**.

###

Response to Comment Letter #11

The County conducted the required AB 52 Tribal Consultation Process in compliance with the requirement. The County contacted all the Tribes that have requested consultation on projects within its jurisdiction. Please refer to DEIR Section 4.12 for a discussion of the AB 52 process conducted for this Project. Please note, the Tribal Cultural Section of the DEIR was prepared based on the consultation process.

Additionally, the letter dated September 29, 2022 is a request to be added to the Imperial County SB-18 and SB-52 (AB 52) consultation list for a different project. The letter references the Imperial Valley Specific Plan for lithium recovery. The Kwaaymii Laguna Band of Indians has been added to the Tribal notification list for this Project and future consultation requests will be distributed to the Tribe.

Additionally, the Scoping Period found no feasible alternatives to the Project.

2.3 ORGANIZATION COMMENTS

Comment Letter #12

State Building and Construction Trades Council

CHRIS HANNAN
PRESIDENT

of California

Established 1901
Chartered By
BUILDING AND CONSTRUCTION TRADES
DEPARTMENT
AFL - CIO

J. TOM BACA
SECRETARY/TREASURER

October 4, 2023

Mr. Jim Minnick
Planning & Development Services Director, County of Imperial PDS
801 Main Street
El Centro, CA 92243
JimMinnick@co.imperial.ca.us



RE: SCH Number 2022030704 - Hell's Kitchen PowerCo1 and LithiumCo1 Project

Dear Director Minnick:

On behalf of the State Building and Construction Trades Council of California, I write in support of the Hell's Kitchen PowerCo1 and LithiumCo1 Project (the "Project") with SCH Number 2022030704, whereby Controlled Thermal Resources (US) Inc. via its subsidiary Hell's Kitchen HoldingCo 1, LLC is proposing the Project in Imperial County, California. The Project involves the development of a geothermal power plant that will produce up to 49.9 megawatts (MW) net of geothermal green energy, and the development of mineral extraction and processing facilities capable of producing lithium hydroxide, silica, and polymetallic products, and possibly boron compounds, for commercial sale.

The State Building Trades is an umbrella organization representing nearly 500,000 highly skilled women and men in the construction industry, including roughly 65,000 enrolled in our state-of-the-art apprenticeship programs around the state. We work tirelessly with our 14 affiliated trades to ensure that our members receive world-class training and are prepared to provide the highest quality work when they step onto a jobsite.

CTR leadership has proactively engaged with us to develop a Project Labor Agreement (PLA), and we recognize the opportunity for significant union jobs as the project is constructed over the next several years. Furthermore, we recognize the positive impact the project will have on Imperial County by way of job creation and tax revenue for the community.

For these reasons, we are in strong support of the Hell's Kitchen Project and our members stand ready and able to bring the project to fruition. Please feel free to contact my office if you have any further questions.

Sincerely,

A handwritten signature in black ink, appearing to read "C. Hannan".

CHRIS HANNAN
President

CH:bp
opeiu#29/afl-cio

1231 I Street, Suite 302 • Sacramento, CA 95814-2933 • (916) 443-3302 • FAX (916) 443-8204

Response to Comment #12

Comment communicates support for the Proposed Project. The comment does not identify any issues with the DEIR; therefore, no further response is necessary.

SECTION 3.0 – DRAFT EIR REVISIONS

The following section includes revisions to the Draft EIR made in response to comments received during the comment period. Text revisions and corrections to the Draft MND are indicated by changes in font styling; deleted text is indicated by a strike-through (~~example~~), and added text is indicated by a bold underline (**example**). Minor editorial corrections (e.g., typographical, grammatical, etc.) have been made throughout the document and are not indicated by strikethrough or bold underlined text. These changes, which have been incorporated into the Draft EIR, constitute the Final EIR, to be presented to the [Planning Commission] for certification and approval. These modifications clarify, amplify, or make insignificant changes to the EIR. Revisions to the EIR have not resulted in new significant impacts or mitigation measures or increased the severity of an impact. None of the criteria for recirculation set forth in the CEQA Guidelines section 15088.5 for recirculation have been met, including:

- No new significant environmental impacts due to the project or due to a new mitigation measure has been identified;
- No substantial increase in the severity of an environmental impact has been identified; and
- No additional feasible project alternative or mitigate measure considerably different from others analyzed in the DEIR has been identified that would clearly lessen the significant environmental impacts of the project.

Revisions are as follows:

PAGE ES-2:

The County will use this Draft EIR to provide information on the potential environmental effects of the following proposed actions:

- Imperial County Planning Department – Conditional Use Permit
- Imperial County Planning Department – Zoning Variance
- Imperial County Planning Department – Development Agreement (if required)
- Imperial County Building Department – Building and Grading Permits
- Imperial County Public Works Department – Encroachment Permit(s)
- Imperial Irrigation District – Encroachment Permit(s)
- Imperial Irrigation District – Water Supply Agreement
- Imperial Irrigation District – Other approvals not yet known for water or power

PAGE ES-10:

The Project includes removal of ~~cattails and other vegetation that provide~~ potential breeding habitat for Yuma hispid cotton rat, ~~burrowing owl, western snowy plover, Yuma Ridgway's rail, California black rail, least bittern, wood stork, white-faced ibis, and desert pupfish.~~ Yuma hispid cotton rat These species could be impacted by construction activities if the species were to occur in the construction area at the time of construction. ~~In addition, construction activities include excavation of trenches and steep walled foundations where cotton rat could become trapped.~~ Because a qualified biologist would be on site to observe all vegetation removal activities and could relocate these species ~~Yuma hispid cotton rat~~ out of harm's way if one were observed in the area, the impact from vegetation removal activities would be less

than significant. In addition, because open trenches will be covered to avoid cotton rats from becoming trapped and a biologist will observe open excavations daily, the impact of open excavations on cotton rats will be less than significant.

PAGE ES-12

BIO-5. Power Wash Equipment: All equipment used during construction of the Project will be required to be power washed prior to arrival at the Project site to prevent the transportation and establishment of noxious weeds in the area.

PAGE ES-13

BIO-8. Desert Pupfish Protection and Relocation Plan: A desert pupfish protection and relocation plan will be prepared prior to construction activities in any suitable habitat for desert pupfish. Its implementation will ensure construction in the drain mouths and channels will be conducted with minimal effects on desert pupfish. The plan will provide the following:

- Avoidance of construction activities within suitable habitat for desert pupfish during the desert pupfish spawning season (April to October).
- Protocols for preconstruction surveys to assess species presence and spawning within or immediately adjacent to work areas (i.e., areas with ponded water).
- Protocols for capture (e.g., trapping for construction) and transport methods that will minimize handling and stress as well as exposure to heat, low dissolve oxygen, and crowding.
- Identification of locations for release of captured desert pupfish.

A desert pupfish protection and relocation plan will be prepared prior to construction activities in any suitable habitat for desert pupfish. Its implementation will ensure construction in any suitable habitat for desert pupfish will be conducted with minimal effects on desert pupfish. This plan will be submitted to the Service and the CDFW for review and approval prior to any ground-disturbing activities that have a water component. This plan will provide:

1. Protocols for pre-construction or pre-maintenance surveys to assess species presence and spawning within or immediately adjacent to work areas (e.g., in, or at the end of, the irrigation drains/drain canals, open water areas, and around the open water margins). The protocols will also outline the qualifications required for biologists to conduct desert pupfish survey, capture, and relocation activities and the process for biologist approval.
2. Capture (e.g., trapping in the irrigation drains for construction and maintenance; or trapping, dip netting, and seining in open water areas that are drained or if the water level is dropped) and transport methods to minimize handling and stress as well as exposure to heat, low dissolved oxygen (DO), and crowding.
3. Identification of locations for release of captured desert pupfish.
4. Timing windows when construction or maintenance in open water areas and in the irrigation drain mouths/canals may be conducted with minimal effects on desert pupfish spawning.
5. Adaptive management procedures that include assessment of mitigation measure effectiveness, development of revised measures to improve effectiveness, and similar assessment of revised measures to verify effectiveness. Yuma Ridgway's Rail Measures, Black Rail, and Other Marsh Bird Measures.

PAGE ES-18

BIO-16. Nesting Bird Plan. ~~A Nesting Bird Plan will be prepared that defines procedures for avoidance of nesting birds during Project construction. The Project will be scheduled to start construction activities outside the nesting season (February 1 through August 31), to the extent feasible. In the event that construction has to start during the nesting season, a qualified biologist will conduct surveys of the Project development area no more than 72 hours before any ground disturbance. If an active nest is observed in the Project development area, the qualified biologist will employ appropriate procedures for nest avoidance, and construction activities will not begin in the area of the active nest until all nesting activities have ceased and the young have fledged the nest.~~ Construction activities shall take place outside the general bird breeding season (February 15 to September 30), to the maximum extent practicable. Regardless of the time of year, prior to ground-disturbing activities, a qualified biologist shall conduct a nesting bird survey to comply with CDFW Code 3503 and 3503.5 and the Migratory Bird Treaty Act. The survey shall occur no more than three (3) days prior to initiation of proposed Project activities and shall include any potential habitat (including trees, shrubs, the ground, or nearby structures). Any occupied passerine and/or raptor nests occurring within the proposed Project area or the Project's zone of influence (generally 100-300 feet) shall be delineated and a no-disturbance buffer zone (as determined by the avian biologist) shall be established and maintained during Project activities. Additional follow-up surveys may be required by the resource agencies and Imperial County. The buffer zone shall be sufficient in size to prevent impacts to the nest. A qualified biologist shall monitor active nests to determine whether construction activities are disturbing nesting birds or nestlings. If the qualified biologist determines that construction activities pose a disturbance to nesting, construction work shall be stopped in the area of the nest and the no disturbance buffer shall be expanded. Once nesting has ceased and the fledglings are no longer using the nest area as confirmed by a qualified biologist, the buffer may be removed. A nesting bird survey report shall be provided to Imperial County and CDFW. If an active nest is encountered during construction, construction shall stop immediately until a qualified biologist can determine the status of the nest and when work can proceed without risking violation to state or federal laws.

PAGE ES-20

~~Less than Significant~~ Potentially Significant

PAGE 2.0-7

The development area for the Project would be approximately 68 acres. The Project site layout is illustrated in Figure 2.0-2. The Project does not include any work within the P, Q, R, and S Drains. Any such future work will require a separate approval and environmental review.

PAGE 2.0-14

A high-density polyethylene (HDPE)-lined freshwater pond with a capacity of 18 AF will be constructed at the southern end of the Project site and just north of the Q Drain.

PAGE 2.0-16

An average of approximately 225 workers will be on site daily during construction, with a maximum of approximately ~~450~~ 500 workers per day during peak construction. The power portion will be complete prior to the remainder of the Project, and it is anticipated to be complete in the 4th quarter of 2024.

The HKP1 Project will require approximately 54,000 truck trips over the course of the project construction.

PAGE 2.0-24

The following permits/agreements would be required from IID:

- Imperial Irrigation District – Encroachment Permit(s)
- Imperial Irrigation District – Water Supply Agreement
- Imperial Irrigation District – Other approvals not yet known for water or power

PAGE 2.0-25

A responsible agency includes all public agencies other than the lead agency that have discretionary approval power over a project. Due to the location of the Project, the California State Lands Commission would be a responsible agency. Additionally, IID is a Responsible Agency.

PAGE 4.3-28:

The most recent confirmed observation of desert pupfish in the Q Drain was in 1994, and in the R Drain was in 2002. During a 2023 survey and salvaging effort conducted by CDFW presence of pupfish has been confirmed in all three drains. Over 400 pupfish were captured and relocated from the extended area of the S Drain.

PAGE 4.3-42:

~~**BIO-8. Desert Pupfish Protection and Relocation Plan:** A desert pupfish protection and relocation plan will be prepared prior to construction activities in any suitable habitat for desert pupfish. Its implementation will ensure construction in the drain mouths and channels will be conducted with minimal effects on desert pupfish. The plan will provide the following:~~

- ~~• Avoidance of construction activities within suitable habitat for desert pupfish during the desert pupfish spawning season (April to October).~~
- ~~• Protocols for preconstruction surveys to assess species presence and spawning within or immediately adjacent to work areas (i.e., areas with ponded water).~~
- ~~• Protocols for capture (e.g., trapping for construction) and transport methods that will minimize handling and stress as well as exposure to heat, low dissolve oxygen, and crowding.~~
- ~~• Identification of locations for release of captured desert pupfish.~~

A desert pupfish protection and relocation plan will be prepared prior to construction activities in any suitable habitat for desert pupfish. Its implementation will ensure construction in any suitable habitat for desert pupfish will be conducted with minimal effects on desert pupfish. This plan will be submitted to the Service and the CDFW for review and approval prior to any ground-disturbing activities that have a water component. This plan will provide:

1. Protocols for pre-construction or pre-maintenance surveys to assess species presence and spawning within or immediately adjacent to work areas (e.g., in, or at the end of, the irrigation drains/drain canals, open water areas, and around the open water margins). The protocols will

also outline the qualifications required for biologists to conduct desert pupfish survey, capture, and relocation activities and the process for biologist approval.

2. Capture (e.g., trapping in the irrigation drains for construction and maintenance; or trapping, dip netting, and seining in open water areas that are drained or if the water level is dropped) and transport methods to minimize handling and stress as well as exposure to heat, low dissolved oxygen (DO), and crowding.

3. Identification of locations for release of captured desert pupfish.

4. Timing windows when construction or maintenance in open water areas and in the irrigation drain mouths/canals may be conducted with minimal effects on desert pupfish spawning.

5. Adaptive management procedures that include assessment of mitigation measure effectiveness, development of revised measures to improve effectiveness, and similar assessment of revised measures to verify effectiveness. Yuma Ridgway's Rail Measures, Black Rail, and Other Marsh Bird Measures.

PAGE 4.3-44

BIO-16. Nesting Bird Plan. A Nesting Bird Plan will be prepared that defines procedures for avoidance of nesting birds during Project construction. The Project will be scheduled to start construction activities outside the nesting season (February 1 through August 31), to the extent feasible. In the event that construction has to start during the nesting season, a qualified biologist will conduct surveys of the Project development area no more than 72 hours before any ground disturbance. If an active nest is observed in the Project development area, the qualified biologist will employ appropriate procedures for nest avoidance, and construction activities will not begin in the area of the active nest until all nesting activities have ceased and the young have fledged the nest. Construction activities shall take place outside the general bird breeding season (February 15 to September 30), to the maximum extent practicable. Regardless of the time of year, prior to ground-disturbing activities, a qualified biologist shall conduct a nesting bird survey to comply with CDFW Code 3503 and 3503.5 and the Migratory Bird Treaty Act. The survey shall occur no more than three (3) days prior to initiation of proposed Project activities and shall include any potential habitat (including trees, shrubs, the ground, or nearby structures). Any occupied passerine and/or raptor nests occurring within the proposed Project area or the Project's zone of influence (generally 100-300 feet) shall be delineated and a no-disturbance buffer zone (as determined by the avian biologist) shall be established and maintained during Project activities. Additional follow-up surveys may be required by the resource agencies and Imperial County. The buffer zone shall be sufficient in size to prevent impacts to the nest. A qualified biologist shall monitor active nests to determine whether construction activities are disturbing nesting birds or nestlings. If the qualified biologist determines that construction activities pose a disturbance to nesting, construction work shall be stopped in the area of the nest and the no disturbance buffer shall be expanded. Once nesting has ceased and the fledglings are no longer using the nest area as confirmed by a qualified biologist, the buffer may be removed. A nesting bird survey report shall be provided to Imperial County and CDFW. If an active nest is encountered during construction, construction shall stop immediately until a qualified biologist can determine the status of the nest and when work can proceed without risking violation to state or federal laws.

PAGE 4.5-10

~~These numbers are confusing, and unclear what the point is. HKP1 will generate about 416,000 MW-hr/yr (assuming 50 MW at 95% availability), while HKL1 will consume about 276,000 MW-hr/yr,~~

producing a surplus of 140,000 MW-hr/yr of renewable electric power (assumed to be “green” power avoiding the electrical grid); which results in an even greater reduction of GHG emissions.

PAGE 4.9-5

Imperial Integrated Water Resources Management Plan

The Imperial Integrated Regional Water Management Plan (IRWMP) serves as the governing document for regional water planning to meet present and future water resource needs and demands by addressing such issues as additional water supply options, demand management and determination, and prioritization of uses and classes of service provided. In November 2012, the Imperial County Board of Supervisors approved the Imperial IRWMP, and the City of Imperial City Council and the IID Board of Directors approved it in December 2012. Approval by these three stakeholders meets the basic requirement of the DWR for an IRWMP. Through the IRWMP process, IID presented the regional stakeholders with options in the event long-term water supply augmentation is needed, such as water storage and banking, recycling of municipal wastewater, and desalination of brackish water.

PAGE 4.9-6

Imperial Irrigation District

The IID is an irrigation district organized under the California Irrigation District Law, codified in Section 20500 et seq. of the CWC. Critical functions of IID include diversion and delivery of Colorado River water to the Imperial Valley; operation and maintenance of the drainage canals and facilities, including those in the Project area; and generation and distribution of electricity. Several policy documents govern IID operations and are summarized below:

- The Law of the River and historical Colorado River decisions, agreements, and contracts;
- The Quantification Settlement Agreement and Transfer Agreements;
- The Definite Plan Rules and Regulations governing the Distribution and Use of Water, now referred to as the Systems Conservation Plan, which defines the rigorous agricultural water conservation practices being implemented by growers and IID to meet the Quantification Settlement Agreement commitments;
- The Equitable Distribution Plan, which defines how IID will prevent overruns and stay within the cap on the Colorado River water rights The Equitable Distribution Plan manages the District's available water supply, distributing it equitably as determined by the IID Board of Directors; and,

During the development of the Imperial IRWMP, IID has adopted an Interim Water Supply Policy (IWSP) for Non-Agricultural Projects from which water supplies can be contracted to serve new developments within IID's water service area under which water supplies, up to 25,000 acre-feet annually, have been assessed for new non-agricultural development and may be contracted for conservation at the discretion of the IID Board. For applications processed under the IWSP, applicants shall be required to pay a processing fee and, after IID board approval of the corresponding agreement, will be required to pay a reservation fee(s) and annual water supply development fees.

PAGE 4.11-2

The HKP1 Project will require approximately 54,000 truck trips over the course of the project construction.

PAGE 4.11-4

Table ~~4.10-4~~ 4.11-1 analyzes the consistency of the Project with specific policies contained in the Imperial County General Plan associated with transportation and traffic.

PAGE 4.11-7

As discussed in **Chapter 32.0: Project Description**, the HKP1 Project will require approximately 54,000 truck trips over the course of the Project construction.

PAGE 4.13-1

~~The East Mesa Unit and the West Mesa Unit are located within the IID boundaries; however, the East Mesa Unit relies on four groundwater wells that are approximately 600 feet deep, and the West Mesa Unit has water delivered from the Elder Lateral Canal.~~

~~The 2003 Quantification Settlement Agreement and Related Agreements (QSA) serve as the laws, regulations, and agreements granting California the most senior water rights along the Colorado River and specifying—specifies that IID has access to 3.1 million acre-feet (maf) of Colorado River water per year.~~

PAGE 4.13-8

~~The 2003 Quantification Settlement Agreement and Related Agreements (QSA) serve as the laws, regulations, and agreements granting California the most senior water rights along the Colorado River and specifying—specifies that IID has access to 3.1 million acre-feet (maf) of Colorado River water per year.~~

Imperial Irrigation District

The IID is an irrigation district organized under the California Irrigation District Law, codified in Section 20500 et seq. of the California Water Code. Critical functions of IID include diversion and delivery of Colorado River water to the Imperial Valley, operation and maintenance of the drainage canals and facilities, including those in the Project area, and generation and distribution of electricity. Several policy documents govern IID operations and are summarized below:

- The Law of the River and historical Colorado River decisions, agreements, and contracts
- The Quantification Settlement Agreement and Transfer Agreements
- ~~The Definite Plan~~, Rules and Regulations governing the Distribution and Use of Water, now referred to as the Systems Conservation Plan, which defines the rigorous agricultural water conservation practices being implemented by growers and IID to meet the Quantification Settlement Agreement commitments

- ~~The Equitable Distribution Plan, which defines how IID will prevent overruns and stay within the cap on the Colorado River water rights~~ The Equitable Distribution Plan manages the District's available water supply, distributing it equitably as determined by the IID Board of Directors
- ~~Existing IID standards and guidelines for evaluation of new development and defining IID's role as a responsible agency and wholesaler of water~~

IID has adopted an Interim Water Supply Policy (IWSP) for Non-Agricultural Projects during the development of the Imperial IWRMP, ~~from which water supplies can be contracted to serve new developments within IID's water service area~~ under which water supplies, up to 25,000 acre-feet annually, have been assessed for new non-agricultural development and may be contracted for conservation at the discretion of the IID Board. For applications processed under the IWSP, applicants shall be required to pay a processing fee and, after IID board approval of the corresponding agreement, will be required to pay a reservation fee(s) and annual water supply development fees.

**DRAFT
ENVIRONMENTAL IMPACT REPORT
FOR THE
HELL'S KITCHEN POWERCO 1 AND LITHIUMCO 1
PROJECT
IMPERIAL COUNTY, CALIFORNIA**

Prepared for:

COUNTY OF IMPERIAL
Planning and Development Services Department
801 Main Street
El Centro, California 92243
(442) 265-1736

Prepared by:

CHAMBERS GROUP, INC.
9620 Chesapeake Drive, Suite 202
San Diego, California 92123
(949) 261-5414

AUGUST 2023

PC ORIGINAL PKG

TABLE OF CONTENTS

Section	Page
ES EXECUTIVE SUMMARY	ES-1
1.0 INTRODUCTION	1.0-1
2.0 PROJECT DESCRIPTION	2.0-1
3.0 ENVIRONMENTAL SETTING.....	3.0-1
4.0 ENVIRONMENTAL IMPACT ANALYSIS.....	4.0-1
4.1 AESTHETICS.....	4.1-1
4.2 AIR QUALITY.....	4.2-1
4.3 BIOLOGICAL RESOURCES	4.3-1
4.4 CULTURAL RESOURCES	4.4-1
4.5 ENERGY	4.5-1
4.6 GEOLOGY AND SOILS	4.6-1
4.7 GREENHOUSE GASES	4.7-1
4.8 HAZARDS AND HAZARDOUS MATERIALS.....	4.8-1
4.9 HYDROLOGY AND WATER QUALITY.....	4.9-1
4.10 NOISE	4.10-1
4.11 TRANSPORTATION	4.11-1
4.12 TRIBAL CULTURAL RESOURCES.....	4.12-1
4.13 UTILITIES AND SERVICES SYSTEMS	4.13-1
5.0 ALTERNATIVES ANALYSIS	5.0-1
6.0 OTHER CEQA CONSIDERATIONS.....	6.0-1
6.1 EFFECTS NOT FOUND TO BE SIGNIFICANT.....	6.0-1
6.2 IRREVERSIBLE ENVIRONMENTAL CHANGES	6.0-14
6.3 GROWTH INDUCING IMPACTS.....	6.0-15
6.4 SIGNIFICANT UNAVOIDABLE IMPACTS	6.0-16
7.0 REFERENCES	7.0-1
8.0 REPORT PREPARATION.....	8.0-1
9.0 ACRONYMS AND ABBREVIATIONS.....	9.0-1

LIST OF APPENDICES

- **APPENDIX A** – Initial Study and Environmental Analysis for the Hell's Kitchen PowerCo 1 and LithiumCo Project, March 2022, Chambers Group, Inc.; NOP; and NOP Comment Letters.
- **APPENDIX B** – DRAFT Air Quality Technical Report for the Hell's Kitchen Geothermal Power Plant and Lithium Production Plant, May 6, 2022, Panorama Environmental, Inc.
- **APPENDIX C** – Biological Resources Technical Report Hell's Kitchen PowerCo 1 and Hell's Kitchen LithiumCo 1 Projects, November 2021, Panorama Environmental, Inc.
- **APPENDIX D1** – Aquatic Resources Delineation Report Hell's Kitchen Geothermal Project Well Pad 4, November 2022, Great Ecology.
- **APPENDIX D1** – Aquatic Resources Delineation Report Hell's Kitchen Geothermal Project Stage 1, December 2022, Great Ecology.
- **APPENDIX E** – Cultural Resource Survey for the Hell's Kitchen PowerCo 1 and Hell's Kitchen LithiumCo 1 Projects Imperial County, California, October 22, 2021, Revised June 7, 2022, Tierra Environmental Services, Inc.
- **APPENDIX F** – Revised Geohazard Evaluation Report Hell's Kitchen PowerCo & Lithium PowerCo, LLC's Projects Section 10, 11, and 12; Township 11 North; Range 13 East Imperial County, California, July 26, 2022, Converse Consultants.
- **APPENDIX G** – Phase I ESA Report Proposed CTR Development Area NWC Davis Road and Alcott Road Calipatria, California, August 2021, GS Lyon.
- **APPENDIX H** – Conceptual Hydrology Study: Hell's Kitchen PowerCo 1 and LithiumCo 1 Project County of Imperial, California, June 7, 2022, Q3 Consulting.
- **APPENDIX I** – Conceptual Storm Water Quality Analysis: Hell's Kitchen PowerCo 1 and LithiumCo 1 Project County of Imperial, California, June 7, 2022, Q3 Consulting.
- **APPENDIX J** – Noise Assessment Hell's Kitchen Geothermal Project County of Imperial, CA, June 17, 2022, Ldn Consulting, Inc.
- **APPENDIX K** – Hell's Kitchen Geothermal Project VMT Analysis, December 3, 2021, DKS Associates.
- **APPENDIX L** - Assembly Bill (AB) 52 Tribal Consultation
- **APPENDIX M** – Water Supply Assessment

LIST OF TABLES

Table	Page
ES-1	SUMMARY OF SIGNIFICANT IMPACTS AND MITIGATION MEASURES..... ES-4
1.0-1	REQUIRED EIR CONTENTS..... 1.0-4
2.0-1	PROJECT APNS 2.0-1
2.0-2	EXPECTED BRINE COMPOSITION 2.0-10
3.0-1	RELATED PROJECTS..... 3.0-4
4.0-1	ENVIRONMENTAL IMPACT ANALYSIS 4.0-1
4.2-1	AMBIENT AIR QUALITY MONITORING SUMMARY..... 4.1-5
4.2-2	DESIGNATIONS/CLASSIFICATIONS FOR THE PROJECT AREA 4.2-5
4.2-3	ICAPCD THRESHOLDS OF SIGNIFICANCE..... 4.2-10
4.2-4	CONSTRUCTION-RELATED CRITERIA POLLUTANT EMISSIONS (UNMITIGATED)..... 4.2-11
4.2-5	OPERATIONAL-RELATED CRITERIA POLLUTANT EMISSIONS 4.2-11
4.2-6	OPERATIONAL-RELATED STARTUP CRITERIA POLLUTANT EMISSIONS..... 4.2-12
4.2-7	CONSTRUCTION-RELATED CRITERIA POLLUTANT EMISSIONS (MITIGATED)..... 4.2-12
4.2-8	ESTIMATED CO CONCENTRATIONS (µG/M3) FROM STARTUP OPERATIONS..... 4.2-13
4.3-1	IMPERIAL COUNTY GENERAL PLAN CONSISTENCY 4.3-5
4.3-2	DATABASE QUERIES..... 4.3-13
4.3-3	CRITERIA FOR EVALUATING SENSITIVE SPECIES POTENTIAL FOR OCCURRENCE (PFO) 4.3-13
4.3-4	VEGETATION COMMUNITIES AND LAND COVER TYPES IN THE PROJECT DEVELOPMENT AREA ... 4.3-17
4.3-5	AQUATIC RESOURCES AND WITHIN THE PROJECT DEVELOPMENT AREA..... 4.3-34
4.3-6	POTENTIALLY JURISDICTIONAL RESOURCES IN THE PROJECT DEVELOPMENT AREA..... 4.3-34
4.4-1	GENERAL PLAN CONSISTENCY 4.4-4
4.5-1	GENERAL PLAN CONSISTENCY 4.5-5
4.6-1	GENERAL PLAN CONSISTENCY 4.6-6
4.7-1	GLOBAL WARMING POTENTIALS, ATMOSPHERIC LIFETIMES, AND ABUNDANCES OF GHGS 4.7-4
4.7-2	PROPOSED PROJECT CONSTRUCTION-RELATED GHG EMISSIONS 4.7-13
4.7-3	PROPOSED PROJECT OPERATIONS-RELATED GHG EMISSIONS 4.7-14
4.7-4	CONSISTENCY WITH CARB'S 2017 SCOPING PLAN MEASURES FOR INDIVIDUAL PROJECTS 4.7-14
4.8-1	GENERAL PLAN CONSISTENCY 4.8-10
4.9-1	GENERAL PLAN CONSISTENCY 4.9-7
4.9-2	ANTICIPATED PROJECT SITE-DESIGN MEASURES..... 4.9-11
4.9-3	ANTICIPATED SOURCE CONTROL MEASURES 4.9-11
4.10-1	AMBIENT NOISE LEVELS..... 4.10-2
4.10-2	FTA PROJECT EFFECTS ON CUMULATIVE NOISE EXPOSURE 4.10-3
4.10-3	CONSISTENCY WITH COUNTY GENERAL PLAN 4.10-5
4.10-4	ROADWAY NOISE IMPACT ZONES 4.10-7
4.10-5	PROPERTY LINE NOISE LIMITS 4.10-8
4.10-6	CONSTRUCTION NOISE LEVELS..... 4.10-11

4.10-7	CONSTRUCTION EQUIPMENT NOISE CHARACTERISTICS	4.10-13
4.10-8	OPERATIONAL NOISE LEVELS	4.10-14
4.11-1	CONSISTENCY WITH COUNTY GENERAL PLAN	4.11-5
4.11-2	DAY-TO-DAY OPERATIONS TRIP GENERATION	4.11-8
4.11-11	VMT PER EMPLOYEE BY TAZ	4.11-9
4.12-1	GENERAL PLAN CONSISTENCY	4.12-3
4.13-1	IMPERIAL COUNTY WASTE DISPOSAL SITES	4.13-3
4.13-2	GENERAL PLAN CONSISTENCY	4.13-9
4.13-3	NONAGRICULTURAL WATER DEMAND IN IID WATER SERVICE AREA, 2015-2055 (KAF PER YEAR)	4.13-12
4.13-4	IID SYSTEM OPERATIONS CONSUMPTIVE USE WITHIN IID WATER SERVICE AREA AND FROM AAC AT MESA LATERAL 5 TO IMPERIAL DAM, 2019	4.13-12
4.13-5	IID HISTORIC AND FORECASTED CONSUMPTIVE USE FOR NON-AGRICULTURAL LAND USES	4.13-13
4.13-6	PROJECT WATER USES (AFY)	4.13-15
4.13-7	PROJECT WATER SUMMARY	4.13-16
4.13-8	AMORTIZED PROJECT WATER SUMMARY	4.13-16
4.13-9	COUNTY OF IMPERIAL LANDFILLS NEAR THE PROJECT SITE	4.13-18
5.0-1	COMPARISON OF ALTERNATIVES – PROJECT OBJECTIVES	5.0-6
5.0-2	COMPARISON OF ENVIRONMENTAL ISSUES	5.0-7

LIST OF FIGURES

Figure	Page	
1.0-1	THE ENVIRONMENTAL REVIEW PROCESS.....	1.0-2
2.0-1	PROJECT LOCATION AND VICINITY	2.0-3
2.0-2	SITE PLAN	2.0-4
2.0-3	ZONING MAP	2.0-5
2.0-4	LAND USE DESIGNATION MAP	2.0-6
3.0-1	RELATED PROJECTS	3.0-5
4.1-1	VISUAL SIMULATIONS VIEWPOINT MAP	4.1-4
4.1-2	VIEWPOINT 1 EXISTING AND PROPOSED.....	4.1-5
4.1-3	VIEWPOINT 2 EXISTING AND PROPOSED.....	4.1-6
4.1-4	VIEWPOINT 3 EXISTING AND PROPOSED.....	4.1-7
4.1-5	VIEWPOINT 3 EXISTING AND PROPOSED (ENHANCED).....	4.1-8
4.3-1	VEGETATION COMMUNITIES IN THE PROJECT DEVELOPMENT AREA.....	4.3-21
4.3-2	AQUATIC RESOURCES IN THE PROJECT DEVELOPMENT AREA.....	4.3-30

EXECUTIVE SUMMARY

ES.1 INTRODUCTION

This Draft Environmental Impact Report (Draft EIR or DEIR), prepared in accordance with the California Environmental Quality Act (CEQA), addresses potential environmental effects associated with the development of a commercial lithium hydroxide production plant within the Salton Sea geothermal field in Imperial County, California. The DEIR provides an overview of the Project and considered alternatives, identifies the anticipated environmental impacts from the Project and the alternatives, and identifies mitigation measures designed to reduce the level of significance of any impact.

ES.2 PURPOSE OF THE ENVIRONMENTAL IMPACT REPORT

The primary purpose of the CEQA process is to inform the public and decision makers as to the potential impacts of a project and to allow an opportunity for public input to ensure informed decision-making by the Lead Agency. CEQA requires all State and local government agencies to consider the environmental effects of projects over which they have discretionary authority. CEQA also requires each public agency to mitigate or avoid the significant environmental impacts resulting from proposed projects, when feasible, and to identify a range of feasible alternatives to the proposed project that could reduce those environmental effects.

Under CEQA, an EIR analyzes the impacts of an individual activity or specific project and focuses primarily on changes in the environment that would result from that activity or project. The Draft EIR must include the contents required by CEQA and the CEQA Guidelines and examine all phases of the project, including planning, construction, operation, and any reasonably foreseeable future phases.

ES.3 PROJECT DESCRIPTION

Controlled Thermal Resources (US) Inc. via its subsidiary Hell's Kitchen Geothermal, LLC is proposing the Hell's Kitchen PowerCo 1 (HKP1), and Hell's Kitchen LithiumCo 1 LLC is proposing the Hell's Kitchen LithiumCo 1 (HKL1) in Imperial County, California. HKP1 involves the development of a geothermal power plant that will produce up to 49.9 megawatts (MW) net of geothermal green energy. HKL1 involves development of mineral extraction and processing facilities capable of producing lithium hydroxide, silica and polymetallic products, and possibly boron compounds, for commercial sale. HKP1 and HKL1 (together referred to as the Proposed Project) will be constructed by Hell's Kitchen PowerCo 1 LLC and Hell's Kitchen LithiumCo 1 LLC respectively, both subsidiaries of Controlled Thermal Resources (US) Inc. (CTR) and will have shared facilities. Hell's Kitchen Operating Services LLC, also a subsidiary of Controlled Thermal Resources (US) Inc. will operate and maintain these facilities.

ES.4 INTENDED USES OF THIS EIR

This Draft EIR examines the environmental impacts of the Proposed Project. It is the intent of this Draft EIR to enable the County, other responsible agencies, and interested parties to evaluate the environmental impacts of the Proposed Project and identify feasible measures to mitigate such impacts, thereby enabling them to make informed decisions with respect to the requested entitlements.

The CEQA Guidelines require an EIR to include a statement briefly describing the intended uses of the EIR, including a list of agencies expected to use the EIR in their decision-making and the list of the permits and other approvals required to implement the Project.

The County will use this Draft EIR to provide information on the potential environmental effects of the following proposed actions:

- Imperial County Planning Department – Conditional Use Permit
- Imperial County Planning Department – Zoning Variance
- Imperial County Planning Department – Development Agreement (if required)
- Imperial County Building Department – Building and Grading Permits
- Imperial County Public Works Department – Encroachment Permit(s)
- Imperial Irrigation District – Encroachment Permit(s)
- Imperial Irrigation District – Water Supply Agreement
- Imperial Irrigation District – Other approvals not yet known for water or power

ES.5 PROJECT OBJECTIVES

The Proposed Project has the following objectives:

The HKP1 objectives include the following:

- To produce 49.9MW (net) of geothermal green energy from within CTR's geothermal lease area.
- To provide power to the Imperial Irrigation District and other potential off takers.
- To minimize and mitigate potential impacts to sensitive environmental resources while producing renewable energy and creating jobs.

The HKL1 objectives include the following:

- To provide a sustainable domestic source of lithium, a designated critical material identified by the U.S. Department of Energy.
- To extract and produce lithium hydroxide, silica, bulk sulfide, and polymetallic products for commercial sale from the geothermal brine within the Hell's Kitchen lease area.
- To minimize the distance between the geothermal power plant and lithium extraction plant for production efficiency and to reduce the extent of pipeline required to convey brine and steam to and from the geothermal power facility to the mineral extraction plant, therefore minimizing the overall industrial footprint of the combined power and mineral operations.
- To minimize and mitigate potential impacts to sensitive environmental resources within the Project area.

ES.6 SUMMARY OF ALTERNATIVES AND ENVIRONMENTALLY SUPERIOR ALTERNATIVE

As previously discussed, only one alternative was considered feasible and analyzed in this analysis. A comparison of the Project's impacts and the No Project Alternative impacts is shown in Table 5.0-2. The No Project Alternative would be considered the environmentally superior alternative, as it would avoid or reduce all of the potential impacts associated with construction and operation of the Project. The No Project Alternative would not meet most of the Project objectives including that it would not provide a sustainable domestic source of lithium, a designated critical material identified by the U.S. Department of Energy, (2) produce 49.9MW (net) of geothermal green energy from within CTR's geothermal lease area.; or (3) minimize the distance between the geothermal power plant and lithium extraction plant for production efficiency and to reduce the extent of pipeline required to convey brine and steam to and from the geothermal power facility to the mineral extraction plant, therefore minimizing the overall industrial footprint of the combined power and mineral operations. Furthermore, the No Project Alternative may result in future projects other than and potentially with greater impacts than the Proposed Project.

CEQA Guidelines requires that, if the No Project Alternative is determined to be the environmentally superior alternative, an environmentally superior alternative must also be identified among the remaining alternatives. However, reducing the Project size and relocating the Project to another site in the area were deemed to be infeasible alternatives. Thus, the only environmentally superior alternative identified is the No Project Alternative.

ES.7 TABLE OF SIGNIFICANT IMPACTS AND MITIGATION MEASURES

A summary of the potential environmental impacts of the Proposed Project is provided below for each topic addressed in this Draft EIR. Table ES-1 summarizes the significance of the impacts of the Project based on the information and analysis in Chapter 4.0 of this Draft EIR.

Table ES-1: Summary of Significant Impacts and Mitigation Measures

Project Impacts	Level of Significance before Mitigation	Mitigation	Level of Significance After Mitigation
Aesthetics			
Threshold a) Have a substantial adverse effect on a scenic vista or scenic highway?			
<p>Due to the distance of the Project site from the nearest scenic highway, the Proposed Project is not anticipated to have a substantial adverse effect on a scenic highway. Additionally, as shown in viewpoint 3 in Figure 4.1-4, the Proposed Project would not result in substantial adverse effect on a scenic highway because it would neither be located near a scenic highway nor would its presence interrupt the views seen along Highway 111.</p> <p>Viewpoints 1 and 2 show that the Proposed Project would affect the existing viewshed by partially blocking the mountain ranges to the north of the Project, such as the Orocopia and Chocolate Mountains to the north/northwest. While the mountains within Imperial County provide visual character to the area, the Project site is not a designated scenic viewpoint and therefore, the presence of Project features would not be considered to have a substantial adverse effect on a scenic vista. Furthermore, the Sonny Bono Salton Sea Wildlife Refuge is located 4 miles southwest of the Project site. Due to its distance from the Project site, the construction and operation of the Proposed Project would not result in substantial adverse effect to its use.</p>	Less than Significant	No Mitigation Required.	Less than Significant
Threshold c) In non-urbanized areas, substantially degrade the existing visual character or quality of public views of the site and its surrounding? (Public views are those that are experienced from publicly accessible vantage point.) If the project is in an urbanized area, would the project conflict with applicable zoning and other regulations governing scenic quality?			

Table ES-1: Summary of Significant Impacts and Mitigation Measures

Project Impacts	Level of Significance before Mitigation	Mitigation	Level of Significance After Mitigation
The construction and operation of the Proposed Project would not substantially degrade the existing visual character of the area. While the Project is not designated to contain high visual quality, it would be designed and constructed to be consistent with the existing power plants in the region so as to maintain visual consistency. Furthermore, the proposed uses of the site would be consistent with the permitted uses of the area as the land use ordinance by the County authorizes the development and operation of renewable energy projects with a CUP. Impacts therefore are less than significant.	Less than Significant	No Mitigation Required.	Less than Significant
Air Quality			
Threshold a) Conflict with or obstruct implementation of the applicable air quality plan?			
Both construction and operational emissions created from the Proposed Project would not be within their respective ICAPCD thresholds. According to the ICAPCD Handbook, projects that are within the ICAPCD thresholds are consistent with the regional air quality plans. Furthermore, the standard mitigation measures provided in the ICAPCD Handbook have been incorporated into the Project Description for the Proposed Project as Project Design Features (see Section 2.10), and the Proposed Project will be required to implement all of the ICAPCD Regulation VIII, fugitive dust control measures during construction and operation of the Proposed Project. Furthermore, any stationary sources of emissions operated on site will be required to adhere to ICAPCD Rule 207, New and Modified Stationary Source Review and Rule 201 that require permits to construct and	Potentially Significant	MM-AQ-1 Prior to commencing construction, the Project proponent shall submit a Dust Control Plan to the Imperial County Air Pollution Control District (ICAPCD) for approval identifying all sources of PM10 and PM2.5 emissions and associated mitigation measures during the construction and operational phases of the Project. The Project proponent shall submit a Construction Notification Form to the ICAPCD ten days prior to the commencement of any earthmoving activity. This plan would provide a detailed list of control measures to reduce fugitive emissions from construction and operational activities, including but not limited to watering of unpaved roads, vehicle speed limits, windbreaks, transport container covers, and cleaning and sweeping procedures. The Dust Control Plan submitted to the ICAPCD shall meet all applicable requirements for control of fugitive dust emissions, including the following measures designed to achieve the no greater than 20-percent opacity performance standard for dust control:	Less than Significant

Table ES-1: Summary of Significant Impacts and Mitigation Measures

Project Impacts	Level of Significance before Mitigation	Mitigation	Level of Significance After Mitigation
<p>operate stationary sources. The Proposed Project would have the potential to conflict with or obstruct implementation of the applicable air quality plans. However, the Project would implement mitigation measures AQ-1 and AQ-2 to reduce CO and NOx emissions. Table 4.2 7 shows that once mitigated, all criteria pollutants would be reduced to a level that is less than significant. Therefore, with implementation of the above mitigation measure, impacts to air quality plans would be reduced to a level less than significant.</p>		<ul style="list-style-type: none"> • All disturbed areas, including bulk material storage, that is not being actively used shall be effectively stabilized; and visible emissions shall be limited to no greater than 20 percent opacity for dust emissions by using water, chemical stabilizers, dust suppressants, tarps, or other suitable material, such as vegetative groundcover. Bulk material is defined as earth, rock, silt, sediment, and other organic and/or inorganic material consisting of or containing PM with 5 percent or greater silt content. • All on- and off-site unpaved roadway segments being used for 50 or more average vehicle trips per day shall be effectively stabilized, and visible emissions shall be limited to no greater than 20 percent opacity for dust emissions by the use of restricting vehicle access, paving, chemical stabilizers, dust suppressants, and/or watering. • All unpaved traffic areas one acre or more in size with 75 or more average vehicle trips per day shall be effectively stabilized, and visible emissions shall be limited to no greater than 20 percent opacity for dust emissions by paving, chemical stabilizers, dust suppressants, and/or watering. • All track-out or carry-out, which includes bulk materials that adhere to the exterior surfaces of motor vehicles and/or equipment (including tires) that may then fall onto the pavement on paved public roads, shall be cleaned at the end of each workday or immediately when mud or dirt extends a cumulative distance of 50 linear feet or more onto a paved road in an urban area. • Movement of bulk material handling or transfer shall be stabilized prior to handling or at points of transfer with application of sufficient water or chemical stabilizers, or by sheltering or enclosing the operation and transfer line except, where such material or activity is exempted from stabilization by the rules of ICAPCD. 	

Table ES-1: Summary of Significant Impacts and Mitigation Measures

Project Impacts	Level of Significance before Mitigation	Mitigation	Level of Significance After Mitigation
		<ul style="list-style-type: none"> • Any temporary unpaved road shall be effectively stabilized and visible emissions shall be limited to no greater than 20 percent opacity for dust emission by paving, chemical stabilizers, dust suppressants and/or watering. • Fugitive dust generation during construction would be minimized by watering as needed to meet Imperial County standards for fugitive dust control. To further reduce fugitive dust emissions, vehicle traffic on unpaved roads would be kept below 15 miles per hour. • During grading, the Project would be watering actively disturbed on-site areas at least three times a day as necessary to reduce fugitive dust emissions. • Access to the site would be via Highway 111, McDonald Road, and Davis Road. All workers, vendors and haul trucks would be required to utilize these roadways. • An agreement between County of Imperial Public Works and the applicant would be established requiring the applicant to improve a two-mile section of the unpaved Davis Road adjacent to the site by installing a 12- to 18-inch- thick engineered Class II base section. In addition, at the request of the County, the applicant would utilize the improved section during construction and would wet the site continuously during construction activities. The road would be immediately paved after construction prior to operations of the plant to avoid damaging a new asphalt section. • During construction, the Project would be required to maintain daily dust suppression at the two-mile section of Davis Road adjacent to the site using a water truck operating continuously while vehicles are using the road. • The Project would provide wheel shakers at the exit(s) of the construction site to minimize dust being tracked off the Project site and onto the roadways. 	

Table ES-1: Summary of Significant Impacts and Mitigation Measures

Project Impacts	Level of Significance before Mitigation	Mitigation	Level of Significance After Mitigation
		<ul style="list-style-type: none"> • Operational on-road trips shall not operate on unpaved dirt roads. <p>MM-AQ-2 Prior to commencing construction, the Project proponent shall submit and commit to a Combustion Exhaust Emissions Control Program. This plan would provide a detailed list of control measures to minimize exhaust emissions during Project construction, including but not limited to fuel use, engine maintenance, and procedures:</p> <ul style="list-style-type: none"> • The Exhaust Emission Control Plan shall provide a detailed list of control measures to minimize exhaust emissions during Project construction, including but not limited to fuel use, engine maintenance, and procedures. • The construction contractor shall be required to utilize construction equipment using diesel engines less than 50 horsepower with certified NOx emissions rated as Tier 3 or better. All off-road diesel-powered equipment greater than 50 horsepower that is used on-site during construction of the Project shall meet USEPA Tier 4 offroad emission standards and Level 3 diesel particulate filters. • When commercially available, fossil fueled equipment shall be replaced with electrically driven equivalents (provided they are not run via a portable generator set). • Idling times shall be minimized either by shutting equipment off when not in use or reducing the maximum idling time to five minutes (as required by the California Airborne Toxics Control Measure, Title 13, Section 2485 of California Code of Regulations). Clear signage shall be provided for construction workers at all access points. • All construction equipment shall be maintained and properly tuned in accordance with manufacturer's specifications. 	

Table ES-1: Summary of Significant Impacts and Mitigation Measures

Project Impacts	Level of Significance before Mitigation	Mitigation	Level of Significance After Mitigation
		<p>All equipment shall be checked by a certified mechanic and determined to be running in proper condition prior to operation.</p> <ul style="list-style-type: none"> Where access to alternative sources of power are available, portable diesel engines shall be prohibited. Haul truck shall be 2010 model year trucks or newer (a gross vehicle weight rating of at least 14,001 pounds), or best commercially available equipment, that meet the California Air Resources Board 2010 engine emissions standards at 0.01 g/horsepower-hour of particulate matter and 0.20 g/horsepower-hour of NOx emissions or newer, cleaner trucks. The volatile organic compounds (VOC) architectural coating limits specify that the use paints and solvents with a VOC content of 100 grams per liter or less for interior and 150 grams per liter or less for exterior surfaces shall be required. 	
<p>Threshold b) Result in a cumulatively considerable net increase of any criteria pollutant for which the project region is nonattainment under an applicable federal or State ambient air quality standard?</p>			
<p>During start-up conditions, air emissions of CO and NOx associated with the HKP1 were estimated to exceed the CEQA significance thresholds and air emissions of CO associated with HKP1 were estimated to exceed the Rule 207, Section C.2.g thresholds. ICAPCD Rule 207 Section C.2 requires emissions offsets for sources with pollutant emissions that exceed 137 pounds per day. Pursuant Rule 207, Section C.2.g, the Proposed Project has prepared a CO Air Quality Impact Analysis (Part F of Rule 207), which demonstrates that the HKP1 would not cause or contribute to a violation of the CO NAAQS/CAAQS. The 1-hour and 8-hour CO modeled concentration plus background concentrations are 2,213 and 1,369 micrograms per cubic meter (µg/m³), respectively,</p>	<p>Less Than Significant</p>	<p>None required.</p>	<p>Less than Significant</p>

Table ES-1: Summary of Significant Impacts and Mitigation Measures

Project Impacts	Level of Significance before Mitigation	Mitigation	Level of Significance After Mitigation
which are well below the NAAQS/CAAQS. Therefore, the startup operations associated with the proposed standby/black-start diesel engine generator would have a less than significant impact on CO concentrations.			
Biological Resources			
Threshold a) Have a substantial adverse effect, either directly or through habitat modifications, on any species identified as a candidate, sensitive, or special status species in local or regional plans, policies, or regulations, or by the California Department of Fish and Game or U.S. Fish and Wildlife Service?			
<p>The Project includes removal of cattails and other vegetation that provide potential breeding habitat for Yuma hispid cotton rat, burrowing owl, western snowy plover, Yuma Ridgway's rail, California black rail, least bittern, wood stork, white-faced ibis, and desert pupfish. Yuma hispid cotton rat These species could be impacted by construction activities if the species were to occur in the construction area at the time of construction. In addition, construction activities include excavation of trenches and steep walled foundations where cotton rat could become trapped. Because a qualified biologist would be on site to observe all vegetation removal activities and could relocate these species Yuma hispid cotton rat out of harm's way if one were observed in the area, the impact from vegetation removal activities would be less than significant. In addition, because open trenches will be covered to avoid cotton rats from becoming trapped and a biologist will observe open excavations daily, the impact of open excavations on cotton rats will be less than significant.</p>	Potentially Significant	<p>BIO-1. Designated Biologist: The Applicant shall retain the services of a Qualified Biologist. The Qualified Biologist will be employed during construction and all vegetation removal and ground-disturbing activities. The Qualified Biologist will document compliance with the projects mitigation measures and permits. The Qualified Biologist will have the authority to halt any Project activities that are in violation of the terms and conditions of the Project biological opinion(s) or incidental take permit, as appropriate.</p> <p>BIO-2. Biological Monitors: Biological monitor(s) will be employed to assist the Designated Biologist in conducting preconstruction surveys and monitoring ground disturbance, grading, construction, decommissioning, and restoration activities. The biological monitor(s) will have sufficient education and field experience to understand resident wildlife species biology. To avoid and minimize effects to biological resources, the biological monitor(s) will assist the Designated Biologist with the following:</p> <ul style="list-style-type: none"> Conduct inspections for listed species during ground-disturbing construction activities and document that 	Less Than Significant

Table ES-1: Summary of Significant Impacts and Mitigation Measures

Project Impacts	Level of Significance before Mitigation	Mitigation	Level of Significance After Mitigation
		<p>habitat within the construction zone is not occupied by Yuma Ridgway's rail or desert pupfish.</p> <ul style="list-style-type: none"> Document compliance with all conservation measures, including but not limited to monitoring for presence of listed species; halting construction activity in the area if an individual listed species is found; and checking the staking/flagging of all disturbance areas to be sure that they are intact and that all construction activities are being kept within the staked/flagged limits. If a Yuma Ridgway's rail or desert pupfish is found within a work area, the Biological Monitor(s) will immediately notify the Designated Biologist, who will determine measures to be taken to ensure that the individual is not harmed, such as temporarily halting construction. <p>BIO-3. Worker Environmental Awareness Program Training: A Worker Environmental Awareness Program will be implemented for construction crews prior to the commencement of Project activities. Training materials and briefings will include, but not be limited to, discussion of the federal and State statutes protecting threatened and endangered species, the consequence of noncompliance with these statutes, identification of values of wildlife and natural plant communities, hazardous substance spill prevention and containment measures, and review of all required conservation measures.</p> <p>BIO-4. Flagging of Work Area Limits: All areas to be disturbed by the Project will be flagged prior to construction. All disturbance will be confined to these flagged areas, and all employees will be instructed that their activities must be confined to locations within the flagged areas.</p>	

Table ES-1: Summary of Significant Impacts and Mitigation Measures

Project Impacts	Level of Significance before Mitigation	Mitigation	Level of Significance After Mitigation
		<p>BIO-5. Power Wash Equipment: All equipment used during construction of the Project will be required to be power washed prior to arrival at the Project site to prevent the transportation and establishment of noxious weeds in the area.</p> <p>BIO-6. Sediment and Erosion Control: The Project proponent will acquire the appropriate Clean Water Act regulatory permits, prepare a Stormwater Pollution and Prevention Plan (SWPPP), and implement BMPs prior to construction and site restoration. The SWPPP will identify specific actions and BMPs relating to the prevention of stormwater pollution from Project-related construction sources by identifying a practical sequence for site restoration, BMP implementation, contingency measures, responsible parties, and agency contacts. The SWPPP reflects localized surface hydrological conditions and will be reviewed by the USFWS prior to commencement of work. A SWPPP will be a condition of the contract with each contractor selected to build and decommission the Project. The SWPPP(s) at a minimum will incorporate soil stabilization and erosion control practices (e.g., hydroseeding, erosion control blankets, mulching), dewatering and/or flow diversion practices, sediment control practices (temporary sediment basins, fiber rolls), temporary and post-construction onsite and offsite runoff controls, and special considerations and BMPs for water crossings, wetlands, and drainages. The SWPPP will be prepared by a qualified SWPPP practitioner with BMPs selected to achieve maximum pollutant removal and that represent the best available technology that is economically achievable. Emphasis for BMPs is placed on controlling discharges of oxygen-depleting substances, floating material, oil and grease, acidic or caustic substances or compounds, and turbidity. Performance and effectiveness of these BMPs are determined either by visual means where applicable (i.e., observation of above-normal sediment release), or by actual water</p>	

Table ES-1: Summary of Significant Impacts and Mitigation Measures

Project Impacts	Level of Significance before Mitigation	Mitigation	Level of Significance After Mitigation
		<p>sampling in cases where verification of contaminant reduction or elimination (inadvertent petroleum release) is required to determine adequacy of the measure.</p> <p>BIO-7. Solid Waste Management: Solid waste will be properly contained in designated collection areas on site and regularly disposed of.</p> <p>BIO-8. Desert Pupfish Protection and Relocation Plan: A desert pupfish protection and relocation plan will be prepared prior to construction activities in any suitable habitat for desert pupfish. Its implementation will ensure construction in the drain mouths and channels will be conducted with minimal effects on desert pupfish. The plan will provide the following:</p> <ul style="list-style-type: none"> • Avoidance of construction activities within suitable habitat for desert pupfish during the desert pupfish spawning season (April to October). • Protocols for preconstruction surveys to assess species presence and spawning within or immediately adjacent to work areas (i.e., areas with ponded water). • Protocols for capture (e.g., trapping for construction) and transport methods that will minimize handling and stress as well as exposure to heat, low dissolve oxygen, and crowding. • Identification of locations for release of captured desert pupfish. <p><u>Yuma Ridgway's Rail Measures, Black Rail, and Other Marsh Bird Measures</u></p> <p><u>A desert pupfish protection and relocation plan will be prepared prior to construction activities in any suitable habitat for desert pupfish. Its implementation will ensure construction in any suitable habitat for desert pupfish will</u></p>	

Table ES-1: Summary of Significant Impacts and Mitigation Measures

Project Impacts	Level of Significance before Mitigation	Mitigation	Level of Significance After Mitigation
		<p><u>be conducted with minimal effects on desert pupfish. This plan will be submitted to the Service and the CDFW for review and approval prior to any ground-disturbing activities that have a water component. This plan will provide:</u></p> <ol style="list-style-type: none"> <u>1. Protocols for pre-construction or pre-maintenance surveys to assess species presence and spawning within or immediately adjacent to work areas (e.g., in, or at the end of, the irrigation drains/drain canals, open water areas, and around the open water margins). The protocols will also outline the qualifications required for biologists to conduct desert pupfish survey, capture, and relocation activities and the process for biologist approval.</u> <u>2. Capture (e.g., trapping in the irrigation drains for construction and maintenance; or trapping, dip netting, and seining in open water areas that are drained or if the water level is dropped) and transport methods to minimize handling and stress as well as exposure to heat, low dissolved oxygen (DO), and crowding.</u> <u>3. Identification of locations for release of captured desert pupfish.</u> <u>4. Timing windows when construction or maintenance in open water areas and in the irrigation drain mouths/canals may be conducted with minimal effects on desert pupfish spawning.</u> 	

Table ES-1: Summary of Significant Impacts and Mitigation Measures

Project Impacts	Level of Significance before Mitigation	Mitigation	Level of Significance After Mitigation
		<p><u>5. Adaptive management procedures that include assessment of mitigation measure effectiveness, development of revised measures to improve effectiveness, and similar assessment of revised measures to verify effectiveness. Yuma Ridgway's Rail Measures, Black Rail, and Other Marsh Bird Measures.</u></p> <p>BIO-9. Construction Timing: Construction activities within habitat for Yuma Ridgway's rail (i.e., cattail marsh) will be scheduled to avoid the nesting and molting flightless season (i.e., February 15 – September 15). Pile driving activities adjacent to Yuma Ridgway's rail habitat will avoid Yuma Ridgway's rail nesting season.</p> <p>BIO-10. Pre-Construction Surveys and Construction Monitoring for Yuma Ridgway's Rail and Black Rail: Pre-construction surveys for Yuma Ridgway's rail and black rail and construction monitoring will be conducted within all Project development areas within suitable habitat and a 500-foot buffer from suitable habitat. In the event that Yuma Ridgway's rail(s) or black rail(s) are detected within the work area (the area of active equipment use), all construction activities in the area will halt and the USFWS and CDFW will be notified no later than noon of the next business day. Project activities in the area may not proceed until the birds have left the work area. The USFWS and CDFW will also be notified if any Yuma Ridgway's rail are detected within 500 feet of the construction area. Project activities may proceed with caution in this buffer area under the direction of the Designated Biologist.</p>	

Table ES-1: Summary of Significant Impacts and Mitigation Measures

Project Impacts	Level of Significance before Mitigation	Mitigation	Level of Significance After Mitigation
		<p>BIO-11. Reduced Vehicle Speed Adjacent to Rail Habitat: Vehicle speeds will be reduced to 15 miles per hour (mph) on access roads adjacent to Yuma Ridgway's rail habitat. These areas will be appropriately signed to identify the speed limit.</p> <p>BIO-12. Noise Attenuation: The following noise attenuation measures will be implemented to minimize noise impacts on Yuma Ridgway's rail during the nesting season:</p> <ul style="list-style-type: none"> • At least 30 days prior to activities within 500 feet of Yuma Ridgway's rail habitat, the Applicant will conduct a noise study to evaluate the maximum predicted noise level within rail habitat. • If the maximum predicted noise is less than 60 A-weighted decibel scale (dBA) equivalent continuous sound level (Leq), no additional measures are required. • If the maximum predicted noise level exceeds 60 dBA Leq in rail habitat, noise attenuation measures such as noise walls or hay bales will be installed between the noise source and the suitable habitat. Noise monitors will be installed at the edge of the nearest Yuma Ridgway's rail habitat to assess the noise levels and verify that attenuation measures are successful. If necessary, additional noise reduction measures will be implemented to reduce the noise level to below 60 dBA at the edge of occupied habitat. <p>BIO-13. Habitat Conservation: To offset the loss of Yuma Ridgway's rail habitat, the Project proponent will preserve, create, or enhance habitat near the Project site for Yuma Ridgway's rail. The Project proponent will provide funding for construction and long-term management of the created habitat and will provide financial assurance for the construction of the wetland habitat in the form of performance bonds, escrow accounts, casualty insurance, or letters of credit. The performance bond, escrow account,</p>	

Table ES-1: Summary of Significant Impacts and Mitigation Measures

Project Impacts	Level of Significance before Mitigation	Mitigation	Level of Significance After Mitigation
		<p>casualty insurance, or letter of credit shall be of sufficient value to cover all construction, monitoring and reporting costs until the habitat is fully established. The financial assurance shall be in place prior to ground disturbance. Long-term management funding will be provided sufficient to cover, at a minimum, the management costs related to procurement of water from IID, weed control, levee and control structure maintenance, and control structure repair or replacement. The Applicant will prepare a detailed Habitat Enhancement Mitigation and Mitigation Monitoring Plan for review and approval by the USFWS, Corps, and CDFW prior to Project construction. Habitat creation activities will be conducted outside of the bird breeding season (February 15 – September 15) to avoid potential noise impacts on Yuma Ridgway's rail.</p> <p>BIO-14. Burrowing Owl. A pre-construction survey will be conducted for burrowing owls. The survey will be conducted during peak activity period (one hour before to two hours after sunrise or two hours before to one hour after sunset) no more than 14 days prior to the start of construction and within 500 feet surrounding the construction area. If owls are located during the pre-construction survey between February 1 and August 31 (nesting season), a buffer area will be established according to the guidelines in the 2012 Staff Report. A modified buffer reduction may be used with CDFW concurrence. If burrowing owls are located during the nonbreeding season, owls may be passively relocated in coordination with CDFW, by a qualified biologist according to the procedures outlined in the 2012 Staff Report on Burrowing Owl Mitigation. If burrowing owls are found on site during pre-construction</p>	

Table ES-1: Summary of Significant Impacts and Mitigation Measures

Project Impacts	Level of Significance before Mitigation	Mitigation	Level of Significance After Mitigation
		<p>surveys, the Project proponent shall contact CDFW to prepare a plan of action for buffers or passive relocation.</p> <p>BIO-15. Lighting. Except as necessary for safety or security purposes, no lighting shall be allowed to impact wetland or riparian habitats.</p> <p>BIO-16. Nesting Bird Plan. A Nesting Bird Plan will be prepared that defines procedures for avoidance of nesting birds during Project construction. The Project will be scheduled to start construction activities outside the nesting season (February 1 through August 31), to the extent feasible. In the event that construction has to start during the nesting season, a qualified biologist will conduct surveys of the Project development area no more than 72 hours before any ground disturbance. If an active nest is observed in the Project development area, the qualified biologist will employ appropriate procedures for nest avoidance, and construction activities will not begin in the area of the active nest until all nesting activities have ceased and the young have fledged the nest. <u>Construction activities shall take place outside the general bird breeding season (February 15 to September 30), to the maximum extent practicable. Regardless of the time of year, prior to ground-disturbing activities, a qualified biologist shall conduct a nesting bird survey to comply with CDFW Code 3503 and 3503.5 and the Migratory Bird Treaty Act. The survey shall occur no more than three (3) days prior to initiation of proposed Project activities and shall include any potential habitat (including trees, shrubs, the ground, or nearby structures). Any occupied passerine and/or raptor nests occurring within the proposed Project area or the Project's zone of influence (generally 100-300 feet) shall be delineated and a no-disturbance buffer zone (as determined by the avian</u></p>	

Table ES-1: Summary of Significant Impacts and Mitigation Measures

Project Impacts	Level of Significance before Mitigation	Mitigation	Level of Significance After Mitigation
		<p><u>biologist) shall be established and maintained during Project activities. Additional follow-up surveys may be required by the resource agencies and Imperial County. The buffer zone shall be sufficient in size to prevent impacts to the nest. A qualified biologist shall monitor active nests to determine whether construction activities are disturbing nesting birds or nestlings. If the qualified biologist determines that construction activities pose a disturbance to nesting, construction work shall be stopped in the area of the nest and the no disturbance buffer shall be expanded. Once nesting has ceased and the fledglings are no longer using the nest area as confirmed by a qualified biologist, the buffer may be removed. A nesting bird survey report shall be provided to Imperial County and CDFW. If an active nest is encountered during construction, construction shall stop immediately until a qualified biologist can determine the status of the nest and when work can proceed without risking violation to state or federal laws.</u></p> <p>BIO-17. Bird Flight Diverters. Bird flight diverters will be installed on any new transmission and power lines serving the Project, to limit bird mortality associated with introducing new transmission lines in bird flyways. Flight diverters make transmission lines more visible to birds. The transmission and power lines will be designed to meet Avian Power Line Interaction Committee (APLIC) guidelines.</p> <p>BIO-18. Excavation Areas. Any open trench or excavated area shall be securely covered anytime Project activities within the excavated/trenched rea have ceased. The designated biologist shall oversee the covering of all excavated, steep-walled holes or trenches by placing plywood or other barrier materials such that animals are unable to enter and</p>	

Table ES-1: Summary of Significant Impacts and Mitigation Measures

Project Impacts	Level of Significance before Mitigation	Mitigation	Level of Significance After Mitigation
		become entrapped. The use of temporary fencing around the perimeter or trenches or holes may be an acceptable minimization measure, if deemed appropriate by the biological monitor. Before holes or trenches are filled, the Biological Monitors shall thoroughly inspect the areas for trapped animals. If any worker discovers that any animal has become trapped, they shall halt Project-related activities and notify the biological monitor immediately.	
<p>Threshold b) Have a substantial adverse effect on any riparian habitat or other sensitive natural community identified in local or regional plans, policies, regulations or by the California Department of Fish and Wildlife or U.S. Fish and Wildlife Service?</p>			
<p>The Project study area contains wetlands and riparian habitats that are potentially subject to RWQCB, CDFW, and USACE jurisdiction. The removal of vegetation and discharge of fill to these wetland and riparian resources from temporary construction activities, or permanent conversion to a developed land use during operation of the proposed Project, could be a significant impact. Hell's Kitchen PowerCo 1 LLC and Hell's Kitchen LithiumCo 1 LLC will obtain all required USACE, CDFW, and RWQCB permits for impacts to wetlands and riparian areas prior to construction in any jurisdictional wetland or riparian area. The agencies permit processes requires compensatory mitigation for impacts to jurisdictional water resources. Because the Project will comply with all permit requirements, including development of compensatory wetland and riparian mitigation, the impacts on wetlands and riparian areas would be less than significant. Further details on the proposed wetland mitigation plan can be found in Section 4.3.8, Mitigation Measure BIO-19.</p>	<p>Less than Significant <u>Potentially Significant</u></p>	<p>BIO-19. Wetland and Riparian Area Restoration/Compensation. The Project will provide restoration/compensation for all unavoidable impacts on areas under the jurisdiction of USACE, RWQCB, and CDFW. Impacts on jurisdictional areas will be avoided to the extent feasible. Where avoidance of jurisdictional areas is not feasible, the Project applicant will provide the necessary mitigation required as part of wetland permitting, by creation, restoration, or preservation of suitable jurisdictional or equivalent habitat along with adequate buffers to protect the function and values of jurisdictional areas. The Mitigation ratio will be 1:1 or as approved by the permitting agencies. The proposed Mitigation Plan area is located in Section 35 approximately 2 miles north of the HKP1 and HKL1 Projects at the corner of Beach Road and Access Road. The proposed mitigation area will total 159.61 acres; approximately 152 acres will be created native wetland/open water habitat and approximately 7 acres will be enhanced native upland habitat. Proposed native wetland communities include Willow Scrub Shrub, Cattail Bullrush Marsh and Desert</p>	<p>Less than Significant</p>

Table ES-1: Summary of Significant Impacts and Mitigation Measures

Project Impacts	Level of Significance before Mitigation	Mitigation	Level of Significance After Mitigation
		Riparian Woodlands. Proposed upland communities include Sonoran Desert Scrub/Alkali Sink.	
Threshold c) Have a substantial adverse effect on state or federally protected wetlands (including, but not limited to, marsh, vernal pool, coastal, etc.) through direct removal, filling, hydrological interruption, or other means?			
<p>Project construction would occur within a relatively small area of comparatively low habitat quality along the roadside adjacent to the large, contiguous wetlands to the east. Following construction completion, vegetated areas and unvegetated open space would be converted permanently to developed land uses. The conversion of these vegetated and unvegetated open space areas would not result in a noteworthy loss of habitat compared to the large contiguous wetlands and open space areas to the north, west, and east, and would not impede wildlife access to foraging habitat, breeding habitat, water sources, or other areas necessary for their movement or reproduction. The Project impacts are collocated adjacent to Davis Road, IID's existing power line, and other infrastructure. As discussed in Section 4.3.4, the Project study area does not contain any wildlife nursery sites. The impact would be less than significant.</p>		<p>BIO-19. Wetland and Riparian Area Restoration/Compensation. The Project will provide restoration/compensation for all unavoidable impacts on areas under the jurisdiction of USACE, RWQCB, and CDFW. Impacts on jurisdictional areas will be avoided to the extent feasible. Where avoidance of jurisdictional areas is not feasible, the Project applicant will provide the necessary mitigation required as part of wetland permitting, by creation, restoration, or preservation of suitable jurisdictional or equivalent habitat along with adequate buffers to protect the function and values of jurisdictional areas. The Mitigation ratio will be 1:1 or as approved by the permitting agencies. The proposed Mitigation Plan area is located in Section 35 approximately 2 miles north of the HKP1 and HKL1 Projects at the corner of Beach Road and Access Road. The proposed mitigation area will total 159.61 acres; approximately 152 acres will be created native wetland/open water habitat and approximately 7 acres will be enhanced native upland habitat. Proposed native wetland communities include Willow Scrub Shrub, Cattail Bullrush Marsh and Desert Riparian Woodlands. Proposed upland communities include Sonoran Desert Scrub/Alkali Sink.</p>	<p>Less than Significant</p>
Threshold d) Interfere substantially with the movement of any native resident or migratory fish or wildlife species or with established native resident or migratory wildlife corridors, or impede the use of native wildlife nursery sites?			

Table ES-1: Summary of Significant Impacts and Mitigation Measures

Project Impacts	Level of Significance before Mitigation	Mitigation	Level of Significance After Mitigation
Project construction would occur within a relatively small area of comparatively low habitat quality along the roadside adjacent to the large, contiguous wetlands to the east. Following construction completion, vegetated areas and unvegetated open space would be converted permanently to developed land uses. The conversion of these vegetated and unvegetated open space areas would not result in a noteworthy loss of habitat compared to the large contiguous wetlands and open space areas to the north, west, and east, and would not impede wildlife access to foraging habitat, breeding habitat, water sources, or other areas necessary for their movement or reproduction. The Project impacts are collocated adjacent to Davis Road, IID's existing power line, and other infrastructure. As discussed in Section 4.3.4, the Project study area does not contain any wildlife nursery sites. The impact would be less than significant.	Less than Significant	No Mitigation Required.	Less than Significant
Threshold e) Conflict with any local policies or ordinances protecting biological resources, such as a tree preservation policy or ordinance?			
In accordance with the consistency analysis provided in Table 4.3-1, the proposed Project is not anticipated to conflict with the Imperial County General Plan. There are no other local policies or ordinances protecting biological resources that apply to the proposed Project. Therefore, construction and operation of the proposed Project is anticipated to have a less-than-significant impact with respect to conflicting with any local policies or ordinances protecting biological resources. However, the Imperial County Board of Supervisors provides the ultimate	Less than Significant	No Mitigation Required.	Less than Significant

Table ES-1: Summary of Significant Impacts and Mitigation Measures

Project Impacts	Level of Significance before Mitigation	Mitigation	Level of Significance After Mitigation
determination regarding the proposed Project's consistency with the Imperial County General Plan.			
Cultural Resources			
Threshold a) Would the project cause a substantial adverse change in the significance of a historical resource pursuant to §15064.5?			
Threshold b) Would the project cause a substantial adverse change in the significance of an archaeological resource pursuant to §15064.5?			
<p>The intensive pedestrian survey resulted in identification of a newly recorded resources which consists of a remnant of a historic-era house dating back to 1953(TES-HK-001H). The structure is comprised of adobe brick. However, the structure has been altered over the years. The structure no longer contains walls, windows, doors, and room, and shows evidence of damage, graffiti, and other modern effects such as furniture and refuse. Based on the condition of the structure, there is not enough original structure remaining to understand the original appearance of the structure. Standard DPR site records have been completed for this resource and are waiting permanent designation from the information center. Its severely dilapidated condition does not allow for the structure to meet the criteria needed for listing on the CRHR and is not known to be affiliated with anyone of significance or contribute to local cultural heritage or yield additional information to local history. Therefore, the Proposed Project would not result in significant impact to a historical</p>	Less than Significant	<p>CUL-1 The Applicant shall retain the services of a Qualified Archaeologist, meeting the Secretary of the Interior Standards or County standards, whichever is greater, and require that all initial ground-disturbing work be monitored by archaeological specialist (monitor) proficient in artifact and feature identification in monitoring contexts. The Consultant (Qualified Archaeologist and/or monitor) shall be present at the Project construction phase kickoff meeting.</p> <p>CUL-2 Prior to commencing construction activities and thus prior to any ground disturbance in the Proposed Project site, the Consultant shall conduct initial Worker Environmental Awareness Program (WEAP) training to all construction personnel, including supervisors, present at the outset of the Project construction work phase, for which the Lead Contractor and all subcontractors shall make their personnel available. A tribal monitor shall be provided an opportunity to attend the preconstruction briefing, if requested. This WEAP training will educate construction personnel on how to work with the monitor(s) to identify and minimize impacts to archaeological resources and maintain environmental compliance. This WEAP training will educate the monitor(s) of construction procedures to avoid construction-related injury or harm. This training may be performed periodically, such as for new personnel coming on to the Project as needed.</p>	Less than Significant

Table ES-1: Summary of Significant Impacts and Mitigation Measures

Project Impacts	Level of Significance before Mitigation	Mitigation	Level of Significance After Mitigation
<p>resource. Impacts would be less than significant. An archaeological investigation was conducted for the Project to determine if there are any impacts that would occur that would disrupt or adversely affect a prehistoric or historic-era archaeological site to a community, ethnic or social group. The investigation resulted in resources being found within the Project area. However, because of the conditions of these resources, these have not been determined to be significantly impacted by the Proposed Project. However, given the largely undeveloped nature of the Project site with no previous development, there remains potential that the Project's ground disturbing activity would impact undiscovered resources. These resources could include but not limited to lithic materials, faunal, pottery, ceramics, building materials, or glassware. Therefore, mitigation measure CUL-1 through CUL-5 would be implemented to ensure that impacts would be less than significant.</p>		<p>CUL-3 The Contractor shall provide the Consultant with a schedule of initial potential ground-disturbing activities. A minimum of 48 hours will be provided to the Consultant of commencement of any initial ground-disturbing activities such as vegetation grubbing or clearing, grading, trenching, or mass excavation. A monitor shall be present on-site at the commencement of ground-disturbing activities related to the Project. The monitor, in consultation with the Qualified Archaeologist, shall observe initial ground-disturbing activities and, as they proceed, adjust the number of monitors as needed to provide adequate observation and oversight. All monitors will have stop-work authority to allow for recordation and evaluation of finds during construction. The monitor will maintain a daily record of observations to serve as an ongoing reference resource and to provide a resource for final reporting upon completion of the Project. The Consultant and the Lead Contractor and subcontractors shall maintain a line of communication regarding schedule and activity such that the monitor is aware of all ground-disturbing activities in advance to provide appropriate oversight.</p> <p>CUL-4 In the event of the discovery of previously unidentified archaeological materials, the Contractor shall immediately cease all work activities within an area of no less than 100 feet of the discovery. After cessation of excavation, the Contractor shall immediately contact the County. Except in the case of cultural items that fall within the scope of the Native American Grave Protection and Repatriation Act (NAGPRA), California Health and Safety Code 7050.5, CEQA 15064.5, or California Public Resources Code 5097.98, the discovery of any cultural resource within the Project area shall not be grounds for a Project-wide "stop work" notice or otherwise interfere with the Project's continuation except as set forth in this paragraph. Additionally, all consulting Native American Tribal</p>	

Table ES-1: Summary of Significant Impacts and Mitigation Measures

Project Impacts	Level of Significance before Mitigation	Mitigation	Level of Significance After Mitigation
		<p>groups that requested notification of any unanticipated discovery of archaeological resources on the Project shall be notified appropriately. If a discovery results in the identification of cultural items that fall within the scope of NAGPRA, the Contractor shall immediately cease all work activities within an area of no less than 100 feet (30 meters) of the discovery. In the event of an unanticipated discovery of archaeological materials during construction, the Applicant-retained Qualified Professional Archaeologist shall be contacted to evaluate the significance of the materials prior to resuming any construction-related activities near the find. If the Qualified Archaeologist determines that the discovery constitutes a significant resource under CEQA and it cannot be avoided, the Applicant shall implement an archaeological data recovery program.</p> <p>CUL-5 At the completion of all ground-disturbing activities, the Consultant shall prepare an Archaeological Resources Monitoring Report summarizing all monitoring efforts and observations, as performed, and any and all prehistoric or historic archaeological finds as well as providing follow-up reports of any finds to the SCCIC, as required.</p> <p>In the event unanticipated, buried prehistoric archaeological resources (lithic material, faunal, pottery, etc.) or historical archaeological resources (ceramics, building materials, glassware, etc.) are unearthed during construction or any ground disturbing activities within the Project area, additional resource treatments would become necessary. Once a potential resource has been identified, all work within 100 feet must be halted until the find can be assessed by a qualified archaeologist.</p>	
<p>Threshold c) Would the project disturb any human remains, including those interred outside of formal cemeteries?</p>			

Table ES-1: Summary of Significant Impacts and Mitigation Measures

Project Impacts	Level of Significance before Mitigation	Mitigation	Level of Significance After Mitigation
Construction of the Proposed Project would involve grading, which may have the potential to uncover unknown human remains. However, if human remains are encountered during the proposed work, no further excavation or disturbance may occur near the find until the County coroner has been contacted. HSC 7050.5 states (a) Every person who knowingly mutilates or disinters, wantonly disturbs, or willfully removes any human remains in or from any location other than a dedicated cemetery without authority of law is guilty of a misdemeanor, except as provided in Section 5097.99 of the Public Resources Code. (b) In the event of discovery or recognition of any human remains in any location other than a dedicated cemetery, there shall be no further excavation or disturbance of the site or any nearby area reasonably suspected to overlie adjacent remains until the coroner of the county in which the human remains area discovered has determined that the remains are not subject to the provisions of Section 27481. The coroner shall make his or her determination within two working days from the time the person responsible for the excavation, or to his or her authorized representative, notifying the coroner of the discovery if recognition of human remains. (c) If the coroner determines that the remains are not subject to his or her authority and if the coroner recognizes the human remains to be those of a Native American, or has reason to believe that they are those of a Native American, he or she shall contact, by telephone within 24 hours, the Native American Heritage Commission. Compliance with these	Less than Significant	No Mitigation Required.	Less than Significant

Table ES-1: Summary of Significant Impacts and Mitigation Measures

Project Impacts	Level of Significance before Mitigation	Mitigation	Level of Significance After Mitigation
regulations would ensure impacts to human remains resulting from the Project would be less than significant.			
Energy			
Threshold a) Result in potentially significant environmental impact due to wasteful, inefficient, or unnecessary consumption of energy resources, during project construction or operation?			
<p>The off-road construction equipment fuel usage was calculated through use of the off-road equipment assumptions and fuel use assumptions provided in Appendix H, which found that the off-road equipment utilized during construction of the Project would consume 636,310 gallons of diesel fuel. The on-road fuel consumption during construction was calculated through use of the construction vehicle trip assumptions and fuel use assumptions provided in Appendix H, which found that the on-road trips generated from construction of the Project would consume 8,554,787 gallons of fuel. As such, the combined fuel used from off-road construction equipment and on-road construction trips for the Project would result in the consumption of 9,191,096 gallons of diesel fuel.</p> <p>Construction activities associated with the Project would be required to adhere to all State and Imperial County Air Pollution Control District regulations for off-road equipment and on-road trucks, which provide minimum fuel efficiency standards. Construction activities for the Project would not result in the wasteful, inefficient, and unnecessary consumption of</p>	Less than Significant	No Mitigation Required.	Less than Significant

Table ES-1: Summary of Significant Impacts and Mitigation Measures

Project Impacts	Level of Significance before Mitigation	Mitigation	Level of Significance After Mitigation
<p>energy resources. In addition, the operation of the Project would result in a net increase of 147,732,2kilowatt-hours (kWh) per year.</p> <p>Operation of the Project would result in increased consumption of petroleum-based fuels related to vehicular travel to and from the Project site. Operations related to fuel consumption were calculated using information related to the estimated number of employees, their estimated vehicle miles traveled per day, and the number of operational days per year. The Based on these assumptions, the Project would consume 25,217,394 gallons of transportation fuel per year (diesel and gasoline).</p> <p>Additionally, the Project would comply with all federal, State, and County requirements related to the consumption of transportation energy, including CCR Title 24, Part 11, the CALGreen Code, which requires all new parking lots to provide preferred parking for clean air vehicles. Therefore, it is anticipated the Project will be designed and built to minimize transportation energy through the promotion of the use of electric-powered vehicles and that existing and planned capacity and supplies of transportation fuels would be sufficient to support the Project's demand. Thus, impacts regarding transportation energy supply and infrastructure capacity would be less than significant, and no mitigation measures would be required.</p>			

Threshold b) Conflict with or obstruct a state or local plan for renewable energy or energy efficiency?

Table ES-1: Summary of Significant Impacts and Mitigation Measures

Project Impacts	Level of Significance before Mitigation	Mitigation	Level of Significance After Mitigation
The Project would not conflict with or obstruct a State or local plan for renewable energy or energy efficiency. The applicable Renewable Energy and Transmission Element for the Project is included in the County's General Plan. The Proposed Project's consistency with the applicable energy-related policies in the Renewable Energy and Transmission Element of the General Plan are shown in Table 4.4-1.	Less than Significant	No Mitigation Required.	Less than Significant
Geology and Soils			
<p>Threshold a) i) Directly or indirectly cause potential substantial adverse effects, including the risk of loss, injury, or death involving rupture of a known earthquake fault, as delineated on the most recent Alquist-Priolo Earthquake Fault Zoning Map issued by the State Geologist for the area or based on other substantial evidence of a known fault? Refer to Division of Mines and Geology Special Publication 42.</p> <p>ii) Directly or indirectly cause potential substantial adverse effects, including the risk of loss, injury, or death involving strong seismic ground shaking?</p>			
The CBC requires that a site-specific ground motion hazard analysis be performed in accordance with American Society of Civil Engineers (ASCE) 7-16 Section 11.4.8 for structures. The parameters were determined and provided in the Geohazard Evaluation Report. General earthwork considerations pertaining to the Project include remedial grading/over excavation, excavatability, and fill materials. Design considerations would take into account expansion potential, collapse potential, and corrosivity. The Geohazard Evaluation Report notes that based on the	Less than Significant	GEO-1: A complete geotechnical engineering investigation shall be completed, with a Final Geotechnical Report to be prepared prior to submittal of a grading permit. The Final Geotechnical Report shall be prepared by a qualified consultant and be submitted to the County for review and approval. The investigation will include soil test borings; specific and detailed recommendations; soil and sediment analysis; detailed analysis and design standards; geotechnical design criteria; and detailed design recommendations.	Less than Significant

Table ES-1: Summary of Significant Impacts and Mitigation Measures

Project Impacts	Level of Significance before Mitigation	Mitigation	Level of Significance After Mitigation
preliminary site plans, no conditions on the Project site would preclude development of the Proposed Project, provided that Mitigation Measures GEO-1 and GEO-2 would be implemented. Therefore, the Proposed Project would be less than significant and is considered feasible from a geotechnical standpoint.		GEO-2: All grading operations and construction shall be conducted in conformance with the recommendations included in the Geohazard Evaluation Report prepared on August 17, 2022, and Final Geotechnical Report on the Project site. Design, grading, and construction shall be performed in accordance with the recommendations of the project geotechnical consultant and corrosion engineer, subject to review by the County, prior to commencement of grading activities.	
iii) Directly or indirectly cause potential substantial adverse effects, including the risk of loss, injury, or death involving seismic-related ground failure, including liquefaction?			
As discussed, based on the presence of shallow groundwater and the nature of subsurface soils, the potential for liquefaction is high. As such, site-specific liquefaction and dynamic settlement shall be evaluated with data obtained through the soils borings during the Project's geotechnical investigation phase. Implementation of Mitigation Measures GEO-1 and GEO-2, in addition to compliance with the CBC, would result in less than significant impacts.	Less than Significant	GEO-1: A complete geotechnical engineering investigation shall be completed, with a Final Geotechnical Report to be prepared prior to submittal of a grading permit. The Final Geotechnical Report shall be prepared by a qualified consultant and be submitted to the County for review and approval. The investigation will include soil test borings; specific and detailed recommendations; soil and sediment analysis; detailed analysis and design standards; geotechnical design criteria; and detailed design recommendations. GEO-2: All grading operations and construction shall be conducted in conformance with the recommendations included in the Geohazard Evaluation Report prepared on August 17, 2022, and Final Geotechnical Report on the Project site. Design, grading, and construction shall be performed in accordance with the recommendations of the project geotechnical consultant and corrosion engineer, subject to review by the County, prior to commencement of grading activities.	Less than Significant
Threshold c) Be located on a geologic unit or soil that is unstable, or that would become unstable as a result of the project, and potentially result in on- or off-site landslide, lateral spreading, subsidence, liquefaction or collapse?			
Threshold d) Be located on expansive soil, as defined in Table 18-1-B of the Uniform Building Code (1994), creating substantial direct or indirect risks to life or property?			

Table ES-1: Summary of Significant Impacts and Mitigation Measures

Project Impacts	Level of Significance before Mitigation	Mitigation	Level of Significance After Mitigation
Based on the Project's topography and relatively flat nature of the Project site, the risk of landslides is considered remote. However, unstable soils could result in subsidence, expansive soil, liquefaction and lateral spreading. Therefore, site-specific potential for these instabilities shall be evaluated with data from the soil borings during the geotechnical investigation phase. Implementation of Mitigation Measures GEO-1 and GEO-2, as well as the considerations provided in the Geohazard Evaluation Report, would ensure that construction of the Proposed Project would not result in significant impacts due to subsidence, expansive soil, liquefaction and lateral spreading.. Impacts would be less than significant with mitigation incorporated.	Less than Significant	GEO-1: A complete geotechnical engineering investigation shall be completed, with a Final Geotechnical Report to be prepared prior to submittal of a grading permit. The Final Geotechnical Report shall be prepared by a qualified consultant and be submitted to the County for review and approval. The investigation will include soil test borings; specific and detailed recommendations; soil and sediment analysis; detailed analysis and design standards; geotechnical design criteria; and detailed design recommendations. GEO-2: All grading operations and construction shall be conducted in conformance with the recommendations included in the Geohazard Evaluation Report prepared on August 17, 2022, and Final Geotechnical Report on the Project site. Design, grading, and construction shall be performed in accordance with the recommendations of the project geotechnical consultant and corrosion engineer, subject to review by the County, prior to commencement of grading activities.	Less than Significant
Threshold e) Have soils incapable of adequately supporting the use of septic tanks or alternative waste water disposal systems where sewers are not available for the disposal of waste water?			
The Proposed Project would include a septic system that would be constructed to handle wastewater generated during Project operation. The Geohazard Evaluation Report notes that based on the anticipated soil types, Project site soils are expected to be moderately to severely corrosive to ferrous metals in contact. Therefore, the Proposed Project's soils shall be evaluated with data from the soil borings during the geotechnical investigation phase and will include consultation with a corrosion engineer to identify the appropriate protective measures based on the soils samples. Therefore, impacts would be less than	Potentially Significant	GEO-1: A complete geotechnical engineering investigation shall be completed, with a Final Geotechnical Report to be prepared prior to submittal of a grading permit. The Final Geotechnical Report shall be prepared by a qualified consultant and be submitted to the County for review and approval. The investigation will include soil test borings; specific and detailed recommendations; soil and sediment analysis; detailed analysis and design standards; geotechnical design criteria; and detailed design recommendations. GEO-2: All grading operations and construction shall be conducted in conformance with the recommendations included in the Geohazard Evaluation Report prepared on August 17, 2022, and Final Geotechnical Report on the Project site. Design, grading, and construction shall be performed in accordance with the	Less than Significant

Table ES-1: Summary of Significant Impacts and Mitigation Measures

Project Impacts	Level of Significance before Mitigation	Mitigation	Level of Significance After Mitigation
significant with mitigation measures GEO-1 and GEO-2 incorporated.		recommendations of the project geotechnical consultant and corrosion engineer, subject to review by the County, prior to commencement of grading activities.	
Threshold f) Directly or indirectly destroy a unique paleontological resource or site or unique geological feature?			
Based on information in the Geohazards Evaluation Report, sensitive Late Pleistocene- to Holocene-age Lake Cahuilla Beds exist within the Proposed Project area, and subsurface ground-disturbing activities have the potential to impact sensitive paleontological resources. Therefore, Mitigation Measures PALEO-1 through PALEO-5 would be implemented to reduce impacts to a less than significant level.	Potentially Significant	<p>PALEO-1: The Applicant shall retain the services of a Qualified Paleontologist and require that all initial ground-disturbing work be monitored by someone trained in fossil identification in monitoring contexts. The Qualified Paleontologist shall prepare a Paleontological Resource Mitigation Plan to be implemented during ground-disturbing activity for the proposed Project. This program should outline the procedures for paleontological monitoring, including extent and duration; protocols for salvage and preparation of fossils; and the requirements for a final mitigation and monitoring report. The Qualified Paleontologist and a paleontological monitor shall be present at the Project construction-phase kickoff meeting.</p> <p>PALEO-2: Prior to commencing construction activities and, thus, prior to any ground disturbance in the Proposed Project site, the Qualified Paleontologist and paleontological monitor shall conduct initial Worker Environmental Awareness Program (WEAP) training to all construction personnel, including supervisors, present at the start of the Project construction work phase, for which the Applicant, or their designated Contractor, and all subcontractors shall make their personnel available. This WEAP training will educate construction personnel on how to work with the monitor(s) to identify and minimize impacts to paleontological resources and maintain environmental compliance, and it shall be</p>	Less than Significant

Table ES-1: Summary of Significant Impacts and Mitigation Measures

Project Impacts	Level of Significance before Mitigation	Mitigation	Level of Significance After Mitigation
		<p>performed periodically for new personnel coming on to the Project as needed.</p> <p>PALEO-3: The Applicant, or their designated Contractor, shall provide the Qualified Paleontologist with a schedule of initial potential ground-disturbing activities. A minimum of 48 hours will be provided to the consultant prior to the commencement of any initial ground-disturbing activities, such as vegetation grubbing or clearing, grading, trenching, or mass excavation.</p> <p>As detailed in the schedule provided, a paleontological monitor shall be present on-site at the commencement of ground-disturbing activities related to the Project. The monitor, in consultation with the Qualified Paleontologist, shall observe initial ground-disturbing activities and, as they proceed, make adjustments to the number of monitors as needed to provide adequate observation and oversight. All monitors will have stop-work authority to allow for recordation and evaluation of finds during construction. The monitor will maintain a daily record of observations as an ongoing reference resource and to provide a resource for final reporting upon completion of the Project.</p> <p>The Qualified Paleontologist, paleontological monitor, and the Applicant, or their designated Contractor, and subcontractors shall maintain a line of communication regarding schedule and activity such that the monitor is aware of all ground-disturbing activities in advance to provide appropriate oversight.</p> <p>PALEO-4: If paleontological resources are discovered, construction shall be halted within 50 feet of any paleontological finds and shall not resume until the Qualified Paleontologist can determine the significance of the find</p>	

Table ES-1: Summary of Significant Impacts and Mitigation Measures

Project Impacts	Level of Significance before Mitigation	Mitigation	Level of Significance After Mitigation
		and/or the find has been fully investigated, documented, and cleared. PALEO-5: At the completion of all ground-disturbing activities, the Qualified Paleontologist shall prepare a Paleontological Resources Monitoring Report summarizing all monitoring efforts and observations, as performed, and any and all paleontological finds and shall provide follow-up reports of any finds to the preferred paleontological repository, as required.	
Greenhouse Gases			
Threshold a) Generate greenhouse gas emissions, either directly or indirectly, that may have a significant impact on the environment?			
The GHG emissions are based on the proposed design detailed in the Project Description as well as IID's adherence to the State's Renewable Portfolio Standards (RPS) that require 60 percent of electricity provided by IID to be from zero-carbon emissions sources by the year 2030. Table 4.7 3 shows that the operational GHG emissions do not exceed either the USEPA's 25,000 MTCO ₂ e emissions threshold or ICAPCD Rule 903 – 20,000 MTCO ₂ e emissions threshold, where exceedance of either threshold would require the Project to perform additional GHG emissions recordkeeping and reporting. Therefore, the Project would offset greenhouse gas emissions. and a less than significant impact would occur.	Less than Significant	No Mitigation Required.	Less than Significant
Threshold b) Conflict with an applicable plan, policy, or regulation adopted for the purpose of reducing the emissions of greenhouse gases?			
with implementation of the Project Design Features committed to by the Project applicant and Statewide regulatory requirements including the CALGreen building standards, the Proposed Project would be	Less than Significant	No Mitigation Required.	Less than Significant

Table ES-1: Summary of Significant Impacts and Mitigation Measures

Project Impacts	Level of Significance before Mitigation	Mitigation	Level of Significance After Mitigation
consistent with all feasible mitigation measure for individual projects provided in the CARB's 2017 Scoping Plan. Therefore, implementation of the Proposed Project would not conflict with any applicable plan that reduces GHG emissions. Impacts would be less than significant.			
Hazards and Hazardous Materials			
Threshold a) Create a significant hazard to the public or the environment through the routine transport, use, or disposal of hazardous materials?			
During construction and operations of the Project, hazardous materials would be transported to and from the Project site. Traffic barriers would protect piping and tanks on the site from potential traffic hazards. The Project Applicant would be required to follow all applicable federal, State, and local laws and regulations. Further, transportation would be subject to licensing and inspection by the CHP. With adherence to the regulatory measures and requirements for hazardous materials, impacts would be less than significant.	Less than Significant	No Mitigation Required.	Less than Significant
Threshold b) Create a significant hazard to the public or the environment through reasonably foreseeable upset and accident conditions involving the release of hazardous materials into the environment?			
Based on the assessment conducted at the Project site, further investigations may be required if the areas containing RECs cannot be avoided by future development. Therefore, for the Project to not have a significant impact to the public and environment, the Project shall comply with local, State and federal guidelines and to the Mitigation Measures HAZ-1 and HAZ-2 to ensure the any accidental releases would be mitigated to a less than significant impact.	Less than Significant	MM HAZ-1: To avoid health risks to construction workers, the Applicant shall require the contractor to prepare and implement a site Health and Safety Plan (HSP) if areas containing hazardous materials are to be disturbed. This plan will outline measures that will be employed to protect construction workers and the public from exposure to hazardous materials during construction activities. This plan shall be prepared prior to any ground-disturbing activities and shall be reviewed and approved by the Project	Less than Significant

Table ES-1: Summary of Significant Impacts and Mitigation Measures

Project Impacts	Level of Significance before Mitigation	Mitigation	Level of Significance After Mitigation
		Applicant. Workers shall review and sign the site HSP prior to proceeding with the assigned work. MM HAZ-2: For any gen-tie structures or other areas of project ground disturbance that are close to a REC, a Phase 2 limited soil sampling shall be conducted to determine if there are any hazardous materials present on-site. The soil sampling shall be conducted during final design and prior to construction. Soil sampling will determine the California Human Health Screening Levels (CHHSL) of the testing protocol (CAM 17 metals, a list of 17 metals found typically in hazardous materials and mining sites). The CHHSLs are a list of 54 hazardous chemicals in soil or soil gas that the California Environmental Protection Agency (CalEPA) considers to be below thresholds for risks to human health. The Imperial County Public Health Department, Division of Environmental Health (DEH) shall review the soil sampling results. If the results are above the CHHSLs, then the DEH would refer the project to the California Department of Toxic Substances Control for proper soil handling and removal procedures.	
Threshold g) Expose people or structures, either directly or indirectly, to a significant risk of loss, injury or death involving wildland fires?			
During operations, a brush control program would be prepared and implemented on those portions of the Project site that will not be developed. The Imperial County Fire District would be consulted to review and approve all proposed fire equipment, apparatus, and related fire prevention plans. Due to compliance with the measures identified above, and the distance from an identified area of high fire hazard risk, the Project would result in a less than significant impact associated with wildfires.	Less than Significant	No Mitigation Required.	Less than Significant
Hydrology and Water Quality			

Table ES-1: Summary of Significant Impacts and Mitigation Measures

Project Impacts	Level of Significance before Mitigation	Mitigation	Level of Significance After Mitigation
Threshold a) Violate any water quality standards or waste discharge requirements, or otherwise substantially degrade surface or ground water quality?			
<p>Due to the size of the Project, Postconstruction Standards from the Phase II Small MS4 Permit will be applied to the Project. The proposed Project will implement site-design BMPs, source-control measures, low-impact development (LID) BMPs, and hydromodification-management BMPs to meet the permit criteria. The Project owner will maintain all on-site site-design BMPs, source-control measures, postconstruction BMPs, and retention basins during the lifetime of the Project. A full list of postconstruction BMPs is provided in Appendix I. With implementation of Mitigation Measures HWQ-1 and HWQ-2 impacts to water quality standards and waste discharge requirements would be less than significant.</p>	<p>Less than Significant</p>	<p>HWQ-1 Prepare SWPPP and Implement BMPs Prior to Construction and Site Restoration. The Project applicant or its contractor shall prepare a Storm Water Pollution Prevention Plan (SWPPP) specific to the Project and be responsible for securing coverage under the State Water Resources Control Board's National Pollution Discharge Elimination System stormwater permit for general construction activity (Order 2009-0009-DWQ). The SWPPP shall identify specific actions and best management practices (BMPs) related to the prevention of stormwater pollution from Project-related construction sources by identifying a practical sequence for site restoration, BMP implementation, contingency measures, responsible parties, and agency contacts. The SWPPP shall reflect localized surface hydrological conditions and shall be reviewed and approved by the appropriate agency prior to commencement of work and shall be made conditions of the contract with the contractor selected to build and decommission the Project. The SWPPP shall incorporate control measures in the following categories:</p> <ul style="list-style-type: none"> - Soil stabilization and erosion control practices - Sediment control practices - Temporary and postconstruction on- and off-site runoff controls - Special considerations and BMPs for water crossings and drainages - Monitoring protocols for discharge(s) and receiving waters, with emphasis place on the following water quality objectives: dissolved oxygen, floating material, oil and grease, potential of hydrogen (pH), and turbidity - Waste management, handling, and disposal control practices 	<p>Less than Significant</p>

Table ES-1: Summary of Significant Impacts and Mitigation Measures

Project Impacts	Level of Significance before Mitigation	Mitigation	Level of Significance After Mitigation
		<ul style="list-style-type: none"> - Corrective action and spill contingency measures - Agency and responsible party contact information - Training procedures that shall be used to ensure that workers are aware of permit requirements and proper installation methods for BMPs specified in the SWPPP <p>The SWPPP shall be prepared by a Qualified SWPPP Practitioner and/or Qualified SWPPP Developer, with BMPs selected to achieve maximum pollutant removal and representative of the best available technology that is economically achievable. Emphasis for BMPs shall be placed on controlling discharges of oxygen-depleting substances; floating material; oil and grease; acidic or caustic substances or compounds; and turbidity. BMPs for soil-stabilization, erosion-control, and sediment-control practices will also be required. Performance and effectiveness of these BMPs shall be determined either by visual means where applicable (i.e., observation of above-normal sediment release), or by actual water sampling in cases where verification of contaminant reduction or elimination, (inadvertent petroleum release) is required to determine adequacy of the measure.</p> <p>HWQ-2 Incorporate Postconstruction Runoff BMPs into Project Drainage Plan. The Project Drainage Plan shall adhere to the County's Engineering Guidelines Manual, IID Draft Hydrology Manual or other recognized source with approval by the County Engineer to control and manage the on- and off-site discharge of stormwater to existing drainage systems. Infiltration basins will be integrated into the Drainage Plan to the maximum extent practical. The Drainage Plan shall provide both short and long-term drainage solutions to ensure the proper sequencing of drainage facilities and management of runoff generated from Project-related impervious surfaces as necessary.</p>	

Table ES-1: Summary of Significant Impacts and Mitigation Measures

Project Impacts	Level of Significance before Mitigation	Mitigation	Level of Significance After Mitigation
Noise			
Threshold a)	Result in generation of a substantial temporary or permanent increase in ambient noise levels in the vicinity of the project in excess of standards established in the local general plan or noise ordinance, or applicable standards of other agencies?		
Implementation of the Project would not result in a substantial increase in ambient noise levels at off-site noise-sensitive receptors or exceed the County of Imperial Property Line Noise Standards (70 dBA anytime for Light Industrial/Industrial Park Zones) and the applicable Noise/Land Use Compatibility criteria. Based on reported noise levels from similar operations, it is anticipated that noise levels would not exceed the County property line noise limits at the closest sensitive receptors. Therefore, operational noise impacts would be less than significant.	Less than Significant	No Mitigation Required.	Less than Significant
Transportation			
Threshold a)	Conflict with a program, plan, ordinance or policy addressing the circulation system, including transit, roadways, bicycle and pedestrian facilities?		
Threshold b)	Conflict or be inconsistent with CEQA Guidelines section 15064.3, subdivision (b)?		
The Project's traffic analysis zone (TAZ 5600) has an estimated VMT per employee of 20.84, which is approximately 82.5% of the Countywide average of 25.25 and falls below the 85% threshold of 21.46. Therefore, based on the VMT analysis presented above, the Proposed Project represents a less than significant transportation impact and no further VMT analysis is required.	Less than Significant	No Mitigation Required.	Less than Significant

Table ES-1: Summary of Significant Impacts and Mitigation Measures

Project Impacts	Level of Significance before Mitigation	Mitigation	Level of Significance After Mitigation
<i>Tribal Cultural Resources</i>			
Threshold a)	<p>Cause a substantial adverse change in the significance of a tribal cultural resource, defined in Public Resources Code Section 21074 as either a site, feature, place, cultural landscape that is geographically defined in terms of the size and scope of the landscape, sacred place or object with cultural value to a California Native American tribe, and that is:</p> <p style="padding-left: 40px;">Listed or eligible for listing in the California Register of Historical Resources, or in a local register of historical resources as defined in Public Resources Code Section 5020.1(k), or</p> <p style="padding-left: 40px;">A resource determined by the lead agency, in its discretion and supported by substantial evidence, to be significant pursuant to criteria set forth in subdivision (c) of Public Resources Code Section 5024.1. In applying the criteria set forth in subdivision (c) of Public Resource Code Section 5024.1, the lead agency shall consider the significance of the resource to a California Native American Tribe.</p>		
Based on the results of the Cultural Resources Survey and in consultation with the tribes, the County has determined there are no known tribal cultural resources within the Project site. However, the potential remains for the Project's ground-disturbing activity to impact undiscovered resources. These resources could include but not be limited to lithic materials, faunal, pottery, ceramics, building materials, or glassware. Impacts would be considered less than significant with implementation of the mitigation measures outlined in Section 4.4.	Less than Significant	<p>CUL-1 The Applicant shall retain the services of a Qualified Archaeologist meeting the Secretary of the Interior Standards or County standards, whichever is greater, and require that all initial ground-disturbing work be monitored by archaeological specialist (monitor) proficient in artifact and feature identification in monitoring contexts. The Consultant (Qualified Archaeologist and/or monitor) shall be present at the Project construction phase kickoff meeting.</p> <p>CUL-2 Prior to commencing construction activities and thus prior to any ground disturbance in the Proposed Project site, the Consultant shall conduct initial Worker Environmental Awareness Program (WEAP) training to all construction personnel, including supervisors, present at the outset of the Project construction work phase, for which the Lead Contractor and all subcontractors shall make their personnel available. A tribal monitor shall be provided an opportunity to attend the preconstruction briefing, if requested. This WEAP training will educate construction personnel on how to work with the monitor(s) to identify and minimize impacts to</p>	Less than Significant

Table ES-1: Summary of Significant Impacts and Mitigation Measures

Project Impacts	Level of Significance before Mitigation	Mitigation	Level of Significance After Mitigation
		<p>archaeological resources and maintain environmental compliance. This WEAP training will educate the monitor(s) of construction procedures to avoid construction-related injury or harm. This training may be performed periodically, such as for new personnel coming on to the Project as needed.</p> <p>CUL-3 The Contractor shall provide the Consultant with a schedule of initial potential ground-disturbing activities. A minimum of 48 hours will be provided to the Consultant of commencement of any initial ground-disturbing activities, such as vegetation grubbing or clearing, grading, trenching, or mass excavation. A monitor shall be present on-site at the commencement of ground-disturbing activities related to the Project. The monitor, in consultation with the Qualified Archaeologist, shall observe initial ground-disturbing activities and, as they proceed, adjust the number of monitors as needed to provide adequate observation and oversight. All monitors will have stop-work authority to allow for recordation and evaluation of finds during construction. The monitor will maintain a daily record of observations to serve as an ongoing reference resource and to provide a resource for final reporting upon completion of the Project.</p> <p>The Consultant and the Lead Contractor and subcontractors shall maintain a line of communication regarding schedule and activity such that the monitor is aware of all ground-disturbing activities in advance to provide appropriate oversight.</p> <p>CUL-4 In the event of the discovery of previously unidentified archaeological materials, the Contractor shall immediately cease all work activities within an area of no less than 100 feet of the discovery. After cessation of excavation, the Contractor shall immediately contact the County. Except in the case of cultural items that fall within the scope of the Native American Grave Protection and Repatriation Act (NAGPRA), the California Health and Safety Code 7050.5, CEQA Section 15064.5, or California Public Resources</p>	

Table ES-1: Summary of Significant Impacts and Mitigation Measures

Project Impacts	Level of Significance before Mitigation	Mitigation	Level of Significance After Mitigation
		<p>Code Section 5097.98, the discovery of any cultural resource within the Project area shall not be grounds for a Project-wide “stop work” notice or otherwise interfere with the Project’s continuation except as set forth in this paragraph. Additionally, all consulting Native American tribal groups that requested notification of any unanticipated discovery of archaeological resources on the Project shall be notified appropriately. If a discovery results in the identification of cultural items that fall within the scope of NAGPRA, the Contractor shall immediately cease all work activities within an area of no less than 100 feet (30 meters) of the discovery. In the event of an unanticipated discovery of archaeological materials during construction, the Applicant-retained Qualified Professional Archaeologist shall be contacted to evaluate the significance of the materials prior to resuming any construction-related activities in the vicinity of the find. If the Qualified Archaeologist determines that the discovery constitutes a significant resource under CEQA and it cannot be avoided, the Applicant shall implement an archaeological data recovery program.</p> <p>CUL-5 At the completion of all ground-disturbing activities, the Consultant shall prepare an Archaeological Resources Monitoring Report summarizing all monitoring efforts and observations, as performed, and any and all prehistoric or historic archaeological finds as well as providing follow-up reports of any finds to the SCCIC, as required.</p> <p>In the event unanticipated, buried prehistoric archaeological resources (lithic material, faunal, pottery, etc.) or historical archaeological resources (ceramics, building materials, glassware, etc.) are unearthed during construction or any ground disturbing activities within the Project area, additional resource treatments would become necessary. Once a potential resource has been identified, all work within 100 feet must be halted until the find can be assessed by a qualified archaeologist.</p>	

Table ES-1: Summary of Significant Impacts and Mitigation Measures

Project Impacts	Level of Significance before Mitigation	Mitigation	Level of Significance After Mitigation
Utilities and Service Systems			
Threshold a) Require or result in the relocation or construction of new or expanded water, wastewater treatment or stormwater drainage, electric power, natural gas, or telecommunications facilities, the construction of which could cause significant environmental effects?			
New facilities would be constructed for the purpose of water, wastewater treatment, stormwater drainage, electric power, natural gas, and telecommunications. Expansion of these facilities would utilize existing infrastructure no limited to existing irrigation canals and power/telephone lines which would minimize damage to existing facilities. Therefore, no significant environmental effects are expected to result. Impacts would be less than significant.	Less than Significant	No Mitigation Required.	Less than Significant
Threshold b) Have sufficient water supplies available to serve the project from existing and reasonably foreseeable future development during normal, dry and multiple dry years?			
When drought conditions exist within the IID water service area, as has been the case for the past decade or so, the water supply available to meet agricultural and nonagricultural water demands remains the same as normal year water supply because IID continues to rely on its entitlement for Colorado River water. Due to the priority of water rights and other agreements, drought affecting Colorado River water supplies causes shortages for Arizona, Nevada, and Mexico, but not California or IID. Therefore, the likelihood that IID	Potentially Significant	UTIL-1: If the IID does not receive its annual 3.1 maf water apportionment according to the QSA obligations of Colorado River water during the Project's 30-year lifespan, the Applicant shall work with IID to ensure any reduction in water availability can be managed by the Project.	Less than Significant

Table ES-1: Summary of Significant Impacts and Mitigation Measures

Project Impacts	Level of Significance before Mitigation	Mitigation	Level of Significance After Mitigation
<p>will not receive its annual 3.1 million AF apportionment under the QSA obligations of Colorado River water is low due to the high priority of the IID entitlement relative to other Colorado River contractors (see Appendix J for further details on the IID's water rights). If such reductions were to come into effect within the life of the 30-year Project, a significant impact would occur. If such reductions do occur, Mitigation Measure (MM) UTIL-1 would be implemented, requiring the Applicant to work with IID to ensure any reduction in water availability during the life of the Project can be managed. Therefore, with implementation of MM UTIL-1, impacts would remain less than significant.</p>			
<p>Threshold d) Generate solid waste in excess of State or local standards, or in excess of the capacity of local infrastructure, or otherwise impair the attainment of solid waste reduction goals?</p>			
<p>it is estimated that 90 percent of filter cakes would fall below California thresholds for soluble threshold limit concentration (STLC) and total threshold limit concentration (TTLC). The remaining 10 percent, or approximately 4,178 cy, would exceed these standards and would be trucked to the Copper Mountain Landfill located at 34853 County 12th Street in Wellton, Arizona, approximately 96 miles southeast of the Project site. This landfill has a design capacity for 2.5 million megagrams. Although the remaining landfill capacity is not available, the amount of solid waste sent to this facility would be minimal. If the filter cakes were to exceed Arizona's toxicity standards which is not expected to occur, the Applicant will</p>	<p>Less than Significant</p>	<p>No Mitigation Required.</p>	<p>Less than Significant</p>

Table ES-1: Summary of Significant Impacts and Mitigation Measures

Project Impacts	Level of Significance before Mitigation	Mitigation	Level of Significance After Mitigation
<p>arrange for hazardous materials to be trucked to Idaho or Nevada.</p> <p>As mentioned in Chapter 2: Project Description, approximately every three years the Project facilities will be shut down for about three weeks to complete a facility cleaning. This process would remove mineral scale from Project plant piping. The scale removed during this process has the potential to exceed STLC and TTLC standards for Arizona, in which case solid waste would be required to be trucked to Nevada. However, this is an extremely rare occurrence, and in the past 10 years only two truckloads have needed to be transported to Nevada. The implementation of the Proposed Project would not increase the amount of solid waste needing to go out of state.</p> <p>Therefore, solid waste facilities have adequate permitted capacity for solid waste materials generated by the Project. Impacts would be less than significant.</p>			
<p>Threshold e) Comply with federal, state, and local management and reduction statutes and regulations related to solid waste?</p>			
<p>Disposal of solid/hazardous wastes generated during Project construction and operations would be in compliance with local federal, State, and County regulations and disposed of at authorized facilities. Therefore, a less than significant impact would occur.</p>	<p>Less than Significant</p>	<p>No Mitigation Required.</p>	<p>Less than Significant</p>

CHAPTER 1.0 – INTRODUCTION

The Proposed Project is the construction and operation of a geothermal power facility (HKP1) and commercial lithium hydroxide production plant (HKL1) within the Salton Sea geothermal field in Imperial County (County), California (Project). HKP1 involves the development of a geothermal power plant that will produce up to 49.9 megawatts (MW) net of geothermal power. HKL1 proposes to develop mineral extraction and processing facilities capable of producing lithium hydroxide, silica, bulk sulfide, and polymetallic products for commercial sale.

The Proposed Project would consist of the following activities:

- Construction and operation of a 49.9 MW geothermal power plant;
- Construction of well pads with geothermal production and injection wells;
- Construction of pipelines between HKP1 and HKL1 to facilitate the movement of brine between the facilities;
- Construction and operation of a mineral-extraction facility to extract lithium salt and chemically convert that lithium salt to battery-grade lithium hydroxide monohydrate, silica, polymetallic products, and possibly boron containing compounds from the geothermal brine;
- Construction and operation of minerals handling and packaging facilities;
- Construction of ingress and egress to the Project site from Davis Road;
- Paving of Davis Road from McDonald Road to Noffsinger Road (approximately 2 miles);
- Construction of a 230-kV gen-tie line and collocated power line (approximately 2 miles south and 0.3 miles east) ultimately deeding this gen-tie line and its appurtenances to the Imperial Irrigation District for operation; and
- Construction of shared administrative facilities, offices, repair facilities, shipping and receiving facilities, and other infrastructure components.

This section of the Draft Environmental Impact Report (EIR) will discuss the purpose of the Draft EIR, scope, content, and environmental review process. The Project is described in further detail in Chapter 2.0: Project Description.

1.1 PURPOSE OF THE ENVIRONMENTAL IMPACT REPORT

The Proposed Project requires discretionary approval of the County Environmental Evaluation Committee and Board of Supervisors and is subject to environmental review requirements in accordance with the California Environmental Quality Act (CEQA). All construction projects within the State of California are required to undergo environmental review to determine any potential environmental impacts associated with project implementation (Section 15021).

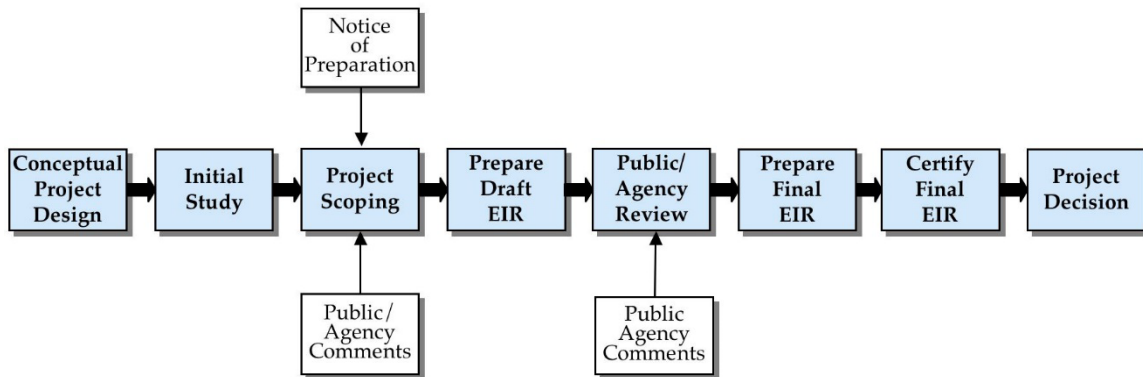
CEQA was enacted in 1970 by the California Legislature to disclose to decision-makers and the public the significant environmental effects of a proposed project and to identify possible ways to avoid or minimize

significant environmental effects of a project by requiring implementation of mitigation measures or recommending feasible alternatives. CEQA applies to all California agencies at all levels, including local, regional, and State governments, as well as boards, commissions, and special districts. As the Lead Agency for the Project, the County is required to conduct an environmental review to analyze any potential environmental effects associated with project implementation.

An EIR has been prepared to evaluate impacts of the Proposed Project. Section 15161 of the CEQA Guidelines states that a project EIR “examines the environmental impacts of a specific development project. This type of EIR should focus primarily on the changes in the environment that would result from the development project. The EIR shall examine all phases of the project including planning, construction, and operation.”

The Draft EIR is then circulated to the public and affected agencies for review and comment. One of the primary objectives of CEQA is to enhance public participation in the planning process. Community members are encouraged to participate in the environmental review process, request to be notified, monitor newspapers for formal announcements, and submit substantive comments at every possible opportunity afforded by the Lead Agency. The environmental review process provides ample opportunity for the public to participate through scoping, public notice, and public review of CEQA documents. A diagram illustrating the CEQA process is shown in Figure 1.0-1 below. Additionally, a Lead Agency is required to respond to public comments in Final EIRs and consider comments from the scoping process in the preparation of the Draft EIR.

Figure 1.0-1: The Environmental Review Process



1.2 ENVIRONMENTAL REVIEW PROCESS

1.2.1 Scoping Process

In compliance with Section 15201 of the State CEQA Guidelines, the County has taken steps to provide opportunities for public participation in the environmental process. An Initial Study (IS) and Notice of Preparation (NOP) were distributed on March 31, 2022, to State, regional, local government agencies, and interested parties for a 35-day public review period to solicit comments and to inform agencies and the public of the Project. The proposed Project was described, potential environmental effects associated with Project implementation were identified, and agencies and the public were invited to review and comment on the IS and NOP.

The County received comments from the following local and State Agencies:

- Air Pollution Control District
- California Department of Fish and Wildlife
- Native American Heritage Commission
- County Executive Offices
- Office of Agricultural Commissioner
- Imperial Irrigation District

The County also received comment letters from the following businesses and organizations:

- CalEnergy
- Comite Civico del Valle (two letters)
- Cyrq Energy
- Energy Source
- Leadership Counsel for Justice and Accountability

In addition, the County received a letter received from multiple agencies (Sierra Club, Audubon Society, Leadership Counsel for Justice and Accountability, Pacific Institute, Unite for Justice Inc., and Alianza Coachella Valley).

The County also received comment letters from six individuals. The IS, NOP, and received comments are contained in Appendix A of this Draft EIR. The purpose of the NOP was to formally convey to the public that the County was preparing a Draft EIR for the proposed Project and to solicit input regarding the scope and content of the environmental information to be included in this Draft EIR. Additionally, the Project was presented to the Environmental Evaluation Committee (EEC) and a scoping meeting was held, both on April 28, 2022.

Topics evaluated in this Draft EIR have been identified based on the IS prepared for the Project, the responses to the NOP, the review of the proposed Project by County staff, and the comments made during the EEC meeting. Specific comments regarding silica as a hazardous substance were noted during the EEC meeting, which are addressed in Section 4.8: Hazards and Hazardous Materials. The County determined through this initial review process that impacts related to the following environmental topics are potentially significant and require an assessment in this Draft EIR:

1. Aesthetics
2. Air Quality
3. Biological Resources
4. Cultural Resources
5. Energy
6. Geology and Soils
7. Greenhouse Gas Emissions

8. Hazards and Hazardous Materials
9. Hydrology and Water Quality
10. Noise
11. Transportation
12. Tribal Cultural Resources
13. Utilities and Service Systems

Mitigation measures to reduce impacts to a less than significant level are proposed whenever feasible. Table 1.0-1 contains this list of sections required under CEQA Guidelines, along with reference to the chapter where these items can be found.

Table 1.0-1: Required EIR Contents

Chapter Title (CEQA Guidelines)	Location
Table of Contents (Section 15122)	Table of Contents
Summary (Section 15123)	Executive Summary
Introduction (Section 15122)	Chapter 1
Project Description (Section 15124)	Chapter 2
Environmental Setting (Section 15125)	Chapter 3
Consideration and Discussion of Environmental Impacts (Section 15126)	Chapter 4
Mitigation Measures (Section 15126.4)	Chapters 4.1-4.13
Cumulative Impacts (Section 15130)	Chapters 4.1-4.13
Alternatives to the Proposed Project (Section 15126.6)	Chapter 5
Growth-inducing Impacts (Section 15126.2)	Chapter 6
Effects Found Not to Be Significant (Section 15128)	Chapter 6
Organizations and Persons Consulted (Section 15129)	Chapter 8
List of Preparers	Chapter 8
Acronyms/Abbreviations	Chapter 9

1.2.2 Review and Comment on the Draft Environmental Impact Report

The Draft EIR for the Project is being distributed directly to numerous agencies, organizations, and interested groups and persons for comment during the formal review period. The Draft EIR is also available for review at the following locations in the County:

- City of El Centro Public Library, 539 State Street, El Centro, California

This document is available for review online at the Imperial County Planning and Development Services Department (ICPDS) website: <http://www.icpds.com>.

Interested individuals, organizations, responsible agencies, and other agencies can address written comments about the Draft EIR to:

David Black, Planner
Imperial County Planning & Development Services Department
801 Main Street
El Centro, CA 92243

Agency responses to the Draft EIR should include the name of a contact person within the commenting agency. Due to the time limits mandated by State law (CEQA Guidelines Section 15205[d]), comments must be sent to the County at the earliest possible date but not later than close of business on October 18, 2023, which is 50 days after publication of this notice.

1.3 ORGANIZATION OF THE DRAFT EIR

The Draft EIR is organized into the following chapters so the reader can easily obtain information about the Proposed Project and related environmental issues:

- Executive Summary – Presents a summary of the Proposed Project and alternatives, potential impacts and mitigation measures, and impact conclusions regarding growth inducement and cumulative impacts.
- Chapter 1: Introduction – Describes the purpose and use of the Draft EIR, provides a brief overview of the Proposed Project, and outlines the organization of the Draft EIR.
- Chapter 2: Project Description – Describes the Project location, Project details, and the County's overall objectives for the Project.
- Chapter 3: Environmental Setting – Describes the baseline environmental setting and existing physical conditions, including related projects in the area.
- Chapter 4: Environmental Analysis – Describes the existing conditions, or setting, before Project implementation; methods and assumptions used in impact analysis; thresholds of significance; impacts that would result from the Proposed Project; and applicable mitigation measures that would eliminate or reduce significant impacts for each environmental issue.
- Chapter 5: Alternatives Analysis – Evaluates the environmental effects of Project alternatives, including the No Project Alternative and Environmentally Superior Project Alternative.
- Chapter 6: Other CEQA Considerations – Includes a discussion of issues required by CEQA that are not covered in other chapters. This includes unavoidable adverse impacts, impacts found not to be significant, irreversible environmental changes, and growth-inducing impacts.
- Chapter 7: References – Identifies the documents and individuals consulted in preparing the Draft EIR.
- Chapter 8: Report Preparation – Lists the individuals involved in preparing the Draft EIR and organizations and persons consulted.
- Chapter 9: Acronyms/Abbreviations – Presents a list of the acronyms and abbreviations.

Appendices – Present data supporting the analysis or contents of this Draft EIR. The Appendices include the following:

- **APPENDIX A** – Initial Study and Environmental Analysis for the Hell's Kitchen PowerCo 1 and LithiumCo Project, March 2022, Chambers Group, Inc.; NOP; and NOP Comment Letters.

- **APPENDIX B** – DRAFT Air Quality Technical Report for the Hell's Kitchen Geothermal Power Plant and Lithium Production Plant, May 6, 2022, Panorama Environmental, Inc.
- **APPENDIX C** – Biological Resources Technical Report Hell's Kitchen PowerCo 1 and Hell's Kitchen LithiumCo 1 Projects, November 2021, Panorama Environmental, Inc.
- **APPENDIX D1** – Aquatic Resources Delineation Report Hell's Kitchen Geothermal Project Well Pad 4, November 2022, Great Ecology.
- **APPENDIX D1** – Aquatic Resources Delineation Report Hell's Kitchen Geothermal Project Stage 1, December 2022, Great Ecology.
- **APPENDIX E** – Cultural Resource Survey for the Hell's Kitchen PowerCo 1 and Hell's Kitchen LithiumCo 1 Projects Imperial County, California, October 22, 2021, Revised June 7, 2022, Tierra Environmental Services, Inc.
- **APPENDIX F** – Revised Geohazard Evaluation Report Hell's Kitchen PowerCo & Lithium PowerCo, LLC's Projects Section 10, 11, and 12; Township 11 North; Range 13 East Imperial County, California, July 26, 2022, Converse Consultants.
- **APPENDIX G** – Phase I ESA Report Proposed CTR Development Area NWC Davis Road and Alcott Road Calipatria, California, August 2021, GS Lyon.
- **APPENDIX H** – Conceptual Hydrology Study: Hell's Kitchen PowerCo 1 and LithiumCo 1 Project County of Imperial, California, June 7, 2022, Q3 Consulting.
- **APPENDIX I** – Conceptual Storm Water Quality Analysis: Hell's Kitchen PowerCo 1 and LithiumCo 1 Project County of Imperial, California, June 7, 2022, Q3 Consulting.
- **APPENDIX J** – Noise Assessment Hell's Kitchen Geothermal Project County of Imperial, CA, June 17, 2022, Ldn Consulting, Inc.
- **APPENDIX K** – Hell's Kitchen Geothermal Project VMT Analysis, December 3, 2021, DKS Associates.
- **APPENDIX L** - Assembly Bill (AB) 52 Tribal Consultation
- **APPENDIX M** – Water Supply Assessment

CHAPTER 2.0 – PROJECT DESCRIPTION

2.1 PROJECT OVERVIEW

Controlled Thermal Resources (US) Inc. via its subsidiary Hell’s Kitchen Geothermal, LLC is proposing the Hell’s Kitchen PowerCo 1 (HKP1), and Hell’s Kitchen LithiumCo 1 LLC is proposing the Hell’s Kitchen LithiumCo 1 (HKL1) in Imperial County, California. HKP1 involves the development of a geothermal power plant that will produce up to 49.9 megawatts (MW) net of geothermal green energy. HKL1 involves development of mineral extraction and processing facilities capable of producing lithium hydroxide, silica and polymetallic products, and possibly boron compounds, for commercial sale. HKP1 and HKL1 (together referred to as the Proposed Project) will be constructed by Hell’s Kitchen PowerCo 1 LLC and Hell’s Kitchen LithiumCo 1 LLC respectively, both subsidiaries of Controlled Thermal Resources (US) Inc. (CTR) and will have shared facilities. Hell’s Kitchen Operating Services LLC, also a subsidiary of Controlled Thermal Resources (US) Inc. will operate and maintain these facilities.

2.2 PROJECT LOCATION

The Project is located within undeveloped land and a right-of-way (ROW) corridor for the gen-tie transmission line to the IID interconnect station near Hudson Ranch (HR1). The Project would be located within Sections 11 and 12, Township 11 South, Range 13 East in Imperial County near the eastern shore of the Salton Sea (Project site; Figure 2.0-1, Project Site Location). The Project is approximately 3.6 miles west of the town of Niland. A list of the parcels included in the Project are shown in Table 2.0-1: Project Assessor Parcel Numbers (APNs). The majority of the proposed HKP1 and HKL1 facilities are located immediately west of Davis Road, with administrative buildings and warehouses located east of Davis Road. The 230-kilovolt (kV) gen-tie line for HKP1 will run from Noffsinger Road approximately 2 miles south to McDonald Road and then will run approximately 0.3 miles east to Hudson Ranch. The gen-tie line would be located east of Davis Road and north of McDonald Road, within the IID’s transmission ROW and within new ROW. Powering HK1 facilities would occur through a cable tray between HK1 And HKL1 facilities.. The layout of the Project is shown in the Project Site Plan (Figure 2.0-2, Project Site Plan).

Table 2.0-1: Project Assessor Parcel Numbers (APNs)

APN	Project Component	Zoning Designation
020-010-012	HKP1 and HKL1 Shared Facilities	S-1-G and S-2-G
020-010-013	HKP1 and HKL1 Shared Facilities	S-1-G
020-070-060	HKP1 and HKL1 Shared Facilities	S-1-G
020-010-042	Gen-Tie and Power Line	S-1-G
020-060-001	Gen-Tie and Power Line	S-1-G
020-060-002	Gen-Tie and Power Line	S-1-G
020-060-039	Gen-Tie and Power Line	S-1-G
020-060-040	Gen-Tie and Power Line	S-1-G
020-070-026	Gen-Tie and Power Line	S-1-G
020-070-025	Gen-Tie and Power Line	S-1-G
020-070-029	Gen-Tie and Power Line	S-1-G
020-070-055	Gen-Tie and Power Line	S-1-G

020-010-031	Gen-Tie and Power Line	S-1-G
020-010-032	Gen-Tie and Power Line	S-1-G
020-010-035	Gen-Tie and Power Line	M-2-G-PE
020-100-044	Gen-Tie and Power Line	M-2-G-PE

Notes: S-1-G (open space/geothermal overlay); S-2-G (open space/preservation/geothermal overlay); M-2-G-PE (medium industrial/geothermal overlay)

As shown in Table 2.0-1, the majority of the development area is zoned S-1-G (open space/geothermal overlay zone) with a portion zoned S-2-G (open space/preservation/geothermal overlay) and is entirely within the renewable energy/geothermal map overlay zone in the 2015 Renewable Energy and Transmission Element update to the County General Plan (Figure 2.0-3, Zoning Map). The gen-tie and power line ROW is zoned S-1-G and M-2-G-PE (medium industrial/geothermal overlay). The General Plan Land Use designation for the entire Project is Agriculture (County, 2007, Figure 2.0-4, Land Use Designation Map).

The Project will be accessed from Davis Road via new ingress/egress driveways. Project traffic will access the site from Highway 111 via McDonald Road and Davis Road. County road ingress/egress points will be constructed in conformance with Imperial County Public Works Department and Fire Department requirements. Road access will be restricted during construction, and appropriate traffic controls will be in place during construction of the Project. Following construction, Davis Road will be paved from McDonald Road to Noffsinger Road.

2.3 CURRENT USE OF THE PROJECT SITE AND SURROUNDING AREAS

The Project is located on vacant land that is generally undeveloped. On June 14, 2017, the County authorized Geothermal CUP #16-0001, which allowed construction of up to four well pads as well as drilling and maintenance of up to six separate geothermal exploratory wells on the Project site. A well pad, Well Pad 1, north of Alcott Road and west of Davis Road, and two geothermal wells were constructed on the site in 2021. Rough grading for Well Pad 3, south of Noffsinger Road and east of Davis Road began in November 2021. The remaining Project site is undeveloped.

Areas to the north and south of the Project site consist of undeveloped open space. Area to the west is open space followed by the Salton Sea. The State of California manages a wildlife management area, including waterfowl ponds to the east of the Project site.

Figure 2.0-1: Project Site Location

Figure 2.0-2: Project Site Plan

Figure 2.0-3: Zoning Map

Figure 2.0-4: Land Use Designation Map

2.4 PROJECT OBJECTIVES

The Proposed Project has the following objectives:

The HKP1 objectives include the following:

- To produce 49.9MW (net) of geothermal green energy from within CTR's geothermal lease area.
- To provide power to the Imperial Irrigation District and other potential off takers.
- To minimize and mitigate potential impacts to sensitive environmental resources while producing renewable energy and creating jobs.

The HKL1 objectives include the following:

- To provide a sustainable domestic source of lithium, a designated critical material identified by the U.S. Department of Energy.
- To extract and produce lithium hydroxide, silica, bulk sulfide, and polymetallic products for commercial sale from the geothermal brine within the Hell's Kitchen lease area
- To minimize the distance between the geothermal power plant and lithium extraction plant for production efficiency and to reduce the extent of pipeline required to convey brine and steam to and from the geothermal power facility to the mineral extraction plant, therefore minimizing the overall industrial footprint of the combined power and mineral operations
- To minimize and mitigate potential impacts to sensitive environmental resources within the Project area.

2.5 PROJECT SUMMARY

The Project will consist of the following activities:

- construction and operation of a 49.9-MW geothermal power plant;
- construction of well pads with geothermal production and injection wells;
- construction of pipelines between HKP1 and HKL1 to facilitate the movement of brine between the facilities;
- construction and operation of a mineral-extraction facility to extract lithium hydroxide, silica, and polymetallic products, and possibly boron compounds from the geothermal brine;
- construction and operation of minerals handling and packaging facilities;
- construction of ingress and egress to the Project site from Davis Road;
- paving of Davis Road from McDonald Road to Noffsinger Road (approximately 2 miles);
- construction and operation of a 230-kV gen-tie line (approximately 2 miles south and 0.3 miles east); and
- construction of shared administrative facilities, offices, repair facilities, shipping and receiving facilities, and other infrastructure components.

The development area for the Project would be approximately 68 acres. The Project site layout is illustrated in Figure 2.0-2. The Project does not include any work within the P, Q, R, and S Drains. Any such future work will require a separate approval and environmental review.

2.5.1 Structures

HKP1 will include construction of the following structures:

- production and injection wells and well pads
- geothermal fluid production and injection pipelines
- a brine processing facility
- a brine pond
- 49.9-MW net geothermal turbine generator facility
- a cooling tower
- material and equipment storage
- a control building
- administrative and warehouse buildings
- a water storage pond and water storage tank
- an on-site substation
- a 230-kV gen-tie line to the IID interconnect station near Hudson Ranch

HKL1 will include construction of the following structures:

- geothermal pipelines to transfer brine from HKP1
- a cooling tower
- truck entrance security
- a cooling tower
- brine crystallizers, clarifiers, thickeners, and filter presses
- a lithium-recovery resin vessel and systems
- raw water filtration, fire-water storage, and reverse osmosis facilities
- electrical buildings to house electric power switchgear and electrical metering
- reagent storage and preparation buildings
- two motor-control centers
- lithium product handling and packaging buildings (that will house the filtration and drying equipment for the lithium products and bagging and palletizing of finished products)
- polymetallic product handling facilities
- 13.8kV power transmission cable from HKP1
- silica product handling facilities
- bulk boron containing product handling facilities two lime silos
- hydrochloric acid offloading and storage tanks
- a reverse osmosis water treatment facility

The two lime silos will be up to 60 feet tall. The evaporator support structure will be up to 80 feet tall and the cooling towers up to 50 feet tall. The crystallizers will be 80 to 110 feet tall. The gantry crane will be up to 60 feet tall. The electrical power line and transmission structures will be up to 120 feet tall. All other buildings and structures will be single-story with a maximum height of 35 feet. The buildings will be an earth-tone color. The Project would require a variance for the increase in height above 35 feet.

2.6 HKP1 Facilities

2.6.1 Production and Injection Wells

The Project will use Well Pad 1 and may use a well pad adjacent and north of the Q Drain for geothermal fluid production and injection. The Project may also use Well Pad 3 and/or Well Pad 4 for geothermal fluid production or injection. Well Pad 1 was previously approved for geothermal exploration drilling and was constructed in 2021. The geothermal production wells will be drilled at Well Pad 1, and one or two

injection wells will also be drilled at Well Pad 1. The existing footprint of Well Pad 1 will be expanded during construction of the commercial facility by approximately 160 feet to the north to accommodate the wells required for commercial operation of the Project. Well Pad 4 and Well Pad 4 were previously approved by the County for geothermal exploration drilling but was not constructed. The Project will include a total of seven wells for production and injection, including one well for injection of aerated fluids. The two previously drilled geothermal exploration wells will be used as commercial production wells for the Project. All production and injection wells will be operated in accordance with California Geologic Energy Management Division (CalGEM) regulations.

2.6.2 Well-Site Production and Injection Equipment

Production and injection wellhead dimensions are not expected to exceed a height of 15 feet above the ground surface or 4 feet in diameter. The wellhead will consist of control valves, warmup bypass valves, and isolation valves. The wellheads will be insulated, and the insulation cladding will be supplied with an appropriate color to blend with the area and minimize visibility.

The injection wells will be located to avoid geothermal fluid interference with the production wells. Each injection well will be remotely monitored for pressure, temperature, and flow rate. Injection pumps located at the power plant site will pump the geothermal injection fluid through the injection pipeline system, providing sufficient pressure to inject the geothermal brine back into the geothermal reservoir. Limited electrical equipment is required at the injection well sites. A flow meter will be integrated into the injection pipeline equipment at the injection well pad and remotely operated from the control room. Overhead lighting will be constructed on the injection well pads. The injection well pad will be fenced.

The geothermal production and injection wells will be drilled from the production and injection well pads using steel, titanium or titanium alloy, nickel alloy, duplex stainless steel, or equivalent as appropriate to the final well completion depth.

2.6.3 Geothermal Pipeline Systems

Above-ground pipelines will be constructed to interconnect the production and injection wells with the power plant site facilities. The pipelines will be constructed at ground level on pipeline supports on drilled foundations approximately every 20 to 40 feet along the pipeline routes. The pipelines will use a cattleguard type crossing at the Q and R Drains to avoid impacts on the irrigation drains, and the crossing will be constructed in collaboration with IID. Pipeline construction will be conducted concurrently with construction of the power plant.

The production wellheads will be located on Well Pad 1, south of the power plant site. An above-ground pipeline will be constructed from the production wells to the brine and steam-handling facilities on the power plant site. The production pipelines will be constructed from alloy or alloy-lined pipe designed, constructed, tested, and inspected pursuant to current industry standards for high temperature, high-pressure piping. Above-ground geothermal fluid pipelines, approximately 30-inches in diameter, will be covered with approximately 2 inches of insulation and a protective metal sheath appropriately colored to blend with the area.

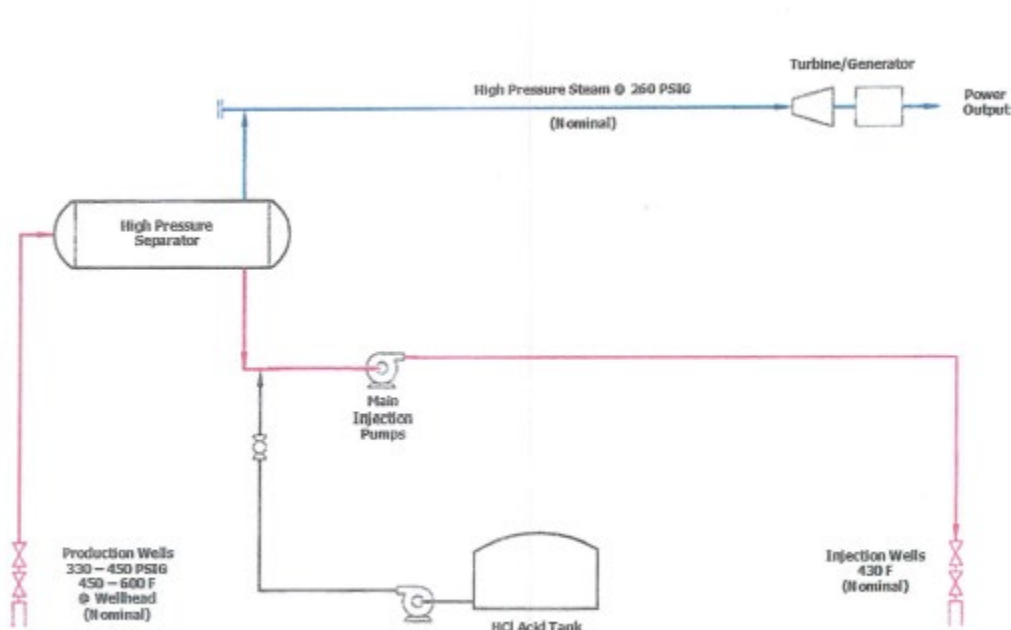
The brine injection pipeline will be either cement-lined carbon steel, alloy, or a combination of both. The brine injection pipeline will be approximately 24 inches in diameter and will be insulated then covered with a protective metal sheath appropriately colored to blend with the area.

2.6.4 Brine Processing Facility

The brine processing facility will prepare the geothermal fluid produced from the production wells for steam extraction. The geothermal fluid will be delivered through aboveground pipelines to the brine-processing facility. The spent brine will be injected back into the geothermal reservoir through injection wells (discussed below).

A pH-modification system will be installed should silica management be necessary to prevent scaling in either surface equipment or injection wellbores. The pH modification system will involve injection of dilute hydrochloric acid (HCl) into the brine stream exiting the high-pressure separator at a rate to establish a known bulk fluid pH value. The pH modification system consists of a concentrated acid storage tank, acid transfer pumps, a diluted acid storage tank, diluted acid injection pumps, and an injection nozzle to distribute the diluted acid into the brine injection pipeline. Concentrated HCl (approx. 32% by weight) will be delivered to the Project site by truck for storage. The concentrated acid will be mixed with service water to create a diluted acid solution (approx. 4% by weight). This diluted acid solution, should it be necessary for silica management, would then be injected into the brine pipeline between the high-pressure separator and the brine-injection pumps.

The brine processing facility would flow through the system as shown in the image below.



The expected brine composition is in Table 2.0-2 below.

Table 2.0-2: Expected Brine Composition

Mineral	Value (mg/L)
Ammonium, NH ₄	250
Arsenic, As	10

Mineral	Value (mg/L)
Barium, Ba	250
Boron, B	350
Bromine, Br	100
Calcium, Ca	29,000
Cesium, C	15
Chloride, Cl	156,000
Cobalt, Co	<0.05
Copper, Cu	5
Iodide, I	10
Fluoride, F	25
Iron, Fe	1,600
Lead, Pb	100
Lithium, Li	250
Magnesium, Mg	50
Manganese, Mn	1,400
Potassium, K	17,000
Sodium, Na	54,000
Silica, SiO ₂	350
Strontium, Sr	500
Sulphate, So ₄	5
Zinc, Zn	500

2.6.5 Brine Pond

The brine pond will be cement-lined, with an underliner-leak detection system, and will allow for storage of brine during upset conditions and collection of brine during flow testing and plant start-up. The brine pond will be sized to accommodate two times the volume of the largest vessel and up to four hours of normal-brine-flow equivalent during system upset conditions plus two feet of freeboard. The brine pond will be constructed as a waste management unit (WMU) to meet Colorado River Regional Water Quality Control Board (CRRWQCB) surface-discharge requirements. Groundwater-monitoring wells will be constructed adjacent to the brine pond in conformance with CRRWQCB requirements.

2.6.6 Turbine Generator Facility

The Project will use flash-based power plant technology utilized in the Salton Sea geothermal field since 1982 to convert geothermal-based renewable steam energy into electricity. Steam from the high temperature geothermal fluid in the brine-handling facilities will be delivered to the turbine generator facility. The turbine generator facility will include a 49.9-MW (net) condensing turbine/generator set, a gas removal and emission abatement system, and a heat rejection system (i.e., condenser and cooling tower). The steam will be cleaned using a scrubber and demister before being admitted into the

condensing steam turbine. The turbine will be directly coupled to a totally enclosed water and air-cooled (TEWAC) synchronous-type generator. The turbine-generator unit will be fully equipped with all the necessary auxiliary systems for turbine control and speed protection, lubricating oil, gland sealing, generator excitation, and cooling. Facilities associated with the turbine generator facility include a control building, a service water storage tank, lube oil skid, and other ancillary facilities.

Two 3.9-MW diesel generator will be installed to provide black start¹ capability.. An 800-kW emergency generator will also be installed to provide emergency backup for critical-instrument and equipment-control power. The diesel engines will meet California Air Resources Board (CARB) air pollutant emission limits. The generators are expected to operate fewer than 600 hours per year.

2.6.7 Heat Rejection and Noncondensable Gas Removal Systems

The heat rejection system will be comprised of a shell-and-tube type condenser, a counterflow cooling tower, and a noncondensable gas (NCG) removal system. The cooling tower, NCG removal system, and condenser design will be similar to those employed at other geothermal power plants at the Salton Sea. The cooling tower will be up to 40 feet tall. Steam from the turbine will be condensed in the condenser. The geothermal steam condensate from the condenser will be collected in an aeration tank and used as a source of makeup water for the cooling tower and or other water needs.. Gases that accumulate in the condenser will be evacuated by the NCG removal system. NCG will be pressurized and vented to a Regenerative thermal oxidizer hydrogen sulfide (H₂S) abatement system during normal plant operation.

During plant start-up or load rejection (i.e., plant trip offline), steam to the turbine will be diverted to a rock muffler for safe venting, which is currently the procedure at the existing geothermal power plants in the Salton Sea Known Geothermal Resource Area. During this time, H₂S and other NCGs will be released to the atmosphere.

A combination of best-available control technology, management practices, and process-monitoring equipment will be used to minimize air emissions from the power plant facilities. Permits to construct and operate the facility will be obtained from the Imperial County Air Pollution Control District (ICAPCD).

2.6.8 Hydrogen Sulfide Abatement System

H₂S gas is a naturally occurring compound found in Salton Sea geothermal brines. To minimize H₂S H₂S from being released to the atmosphere and to meet permitted requirements during routine operations, the project will employ proven abatement systems. The H₂S abatement system effectively oxidizes the gas to a sulfate (SO₄²⁻) that is highly soluble and then returns the sulfate product to injectate streams via the cooling tower blowdown process. HKP1 plans to utilize this technology, or alternatively the best available technology for H₂S abatement."

NCGs, including H₂S, are removed from the main condenser through a series of steam-powered air ejectors, vacuum pumps, and compressors. Once the gas stream is pressurized, it is sent to to the RTO, where the H₂S is oxidized at high temperature to produce sulfur dioxide, which is then scrubbed with sodium hydroxide to produce soluble sodium sulfate. The sulfate product is injected into the reservoir with cooling tower blowdown.

¹ Blackstart service is the capability of generating units to start without an outside electrical supply or the demonstrated ability of a generating unit to automatically remain operating at reduced levels when disconnected from the grid (FERC-NERC, 2018).

Additionally, condensate flowing from the main condenser is routed to a tank where oxygen (sparged air) is introduced along with oxidizing chemicals. This process oxidizes any remaining dissolved H₂S gas to soluble sulfate. The treated condensate is then introduced to the cooling tower basin as a source of makeup water. As stated above, the sulfate product is subsequently injected into the reservoir as cooling tower blowdown.

2.6.9 Substation and Electrical Power Transmission

The electricity from the geothermal power plant will be converted to 230-kilovolts (kV) in the onsite substation. The output of the turbine generator facility is connected through a generator breaker to a (13.8-kV to 230-kV) main step-up transformer in the facility substation. The transformer will be set on a concrete pad within an oil containment system. The transformer will include air-insulated switchgear. The high voltage side of the main step-up transformer will be connected to a new gen-tie line located within IID's transmission ROW to the IID interconnect station at HR1. The gen-tie line will be constructed as part of the power plant construction but turned over to IID for ownership and operation. The transmission line will be installed on steel structures that will support up to two 230-kV three-phase electrical circuits, including optical ground and static wire. The steel structures will consist of direct-bury steel poles approximately 120 feet tall and will span an average length of 800 feet.

2.7 HKL1 FACILITIES

2.7.1 Pipe Rack and Process Pipelines

A pipe rack will be constructed from the HKL1 Project's process area to the HKP1 site. A geothermal brine delivery pipeline from HKP1 will feed brine to the HKL1 Project's process area. Steam/steam-condensate pipelines will also be constructed on the pipe rack. After minerals processing, the depleted brine will be delivered to the HKP1 injection system for reinjection into the geothermal reservoir.

The geothermal brine delivery and return pipelines will be constructed with minimal usage of flanged connections to reduce the potential for pipeline leaks. Automatic valves will be integrated into the pipeline system that will close or divert the geothermal brine in the event of a pipeline issue to minimize the size of any potential spill. An Emergency Response Plan will be prepared and implemented should a fluid spill event occur.

2.7.2 Product Extraction Facilities

The lithium extraction areas will be constructed on concrete pads with a containment curb. The lithium extraction processing areas will consist of a series of interconnected tanks, pipelines, and control valves.

2.7.3 Security Fence and Landscaping

A security fence will be constructed around the Project site. The fence will be constructed to meet County standards for obscured fencing around processing areas.

2.7.4 Power Facilities

Power will be supplied to HKL1 from the HKP1 switchyard. A power cable will be routed from a HKP1 power distribution center on a cable tray to a power distribution center at HKL1 .. Up to six electrical-control buildings will be located on the site, and each will house pad-mounted transformers and

switchgears. An emergency standby diesel generator will provide emergency power supply in case of electrical outage.

2.8 HKP1 AND HKL1 SHARED FACILITIES AND DESIGN

2.8.1 Foundations

Buildings and equipment will be constructed on foundations consistent with the overall site plan. Deep foundations for all major equipment are expected to require subsurface improvements in the form of steel and or concrete pilings. Shallow foundations for buildings are not expecting to require piling supports.

2.8.2 Water Storage

A high-density polyethylene (HDPE)-lined freshwater pond with a capacity of 18 AF will be constructed at the southern end of the Project site and just north of the Q Drain. The pond will store and provide fresh water for Project operations. The pond will be sized to provide sufficient storage capacity to meet Project demand during foreseeable periodic interruptions in IID canal water availability. A water storage tank will be located on site for fire water storage, and a 5-acre water storage pond for the facility to use would also be on-site.

2.8.3 Stormwater Retention

Stormwater retention infrastructure will be constructed along the western boundary of the site. A berm/levee will run along the western boundary of the site to contain any stormwater runoff and prevent stormwater run-on. Water accumulated in the stormwater retention basin will be allowed to evaporate or possibly used as a substitute for normal fresh water. The retention basin will be designed to meet State Water Resources Control Board requirements and will include an appropriate mosquito abatement per Imperial County guidelines.

The developed Project facility pad generally will be flat but will be designed to effectively drain to the stormwater retention basin. The stormwater drainage system will be size to accommodate 3 inches of precipitation in a 24-hour period (100-year storm event), and to comply with applicable local codes and standards. Buildings and equipment will be constructed to provide protection from a 100-year storm event. Spill containment areas and sumps subject to spills of miscible chemicals will drain to an enclosed oil/water separator and collected in a waste oil tank for off-site recycling. The site will be graded and constructed so that any geothermal fluid spills will be collected in sumps that drain to the brine pond rather than the stormwater retention basin.

2.8.4 Generation Tie Line and Power Facilities

The 230-kV gen-tie structures constructed for the HKP1 project will also provide power for the HKL1 Project. The gen-tie line will run from Noffsinger Road approximately 2 miles south to McDonald Road and then will run approximately 0.3 miles east to Hudson Ranch. The gen-tie line will be located east of Davis Road and north of McDonald Road within the IID's transmission ROW..

2.8.5 Parking and Site Access

Parking will be available in the administration and control building area. The Project will be accessed from Davis Road via new driveways. Davis Road will be upgraded with aggregate base during construction of the HKP1 Project. Project traffic will access the site from Highway 111 via McDonald Road and Davis Road. A bridge, separate from the cattle guard, will be constructed across the R Drain to connect the northern and southern portions of the Project site. County road ingress/egress points will be constructed in conformance with Imperial County Public Works Department and Fire Department requirements. During construction of the Project, road access will be restricted, and appropriate traffic controls will be in place. Davis Road will be paved from McDonald Road to Noffsinger Road at the completion of HKL1 Project construction. All structures within the IID ROW, including the bridge over the R Drain, will require IID approval.

2.9 PROJECT COMPONENTS

The Project consists of construction and operation of the HKP1 and HKL1 facilities to develop and operate geothermal and mineral processing facilities.

2.9.1 Project Construction

Site Preparation

Prior to construction of the power plant facility, the limits of the power plant site impact area will be staked and flagged. All vegetation within the power plant site impact area will be cleared. Vegetation will be removed using a brush hog or functional equivalent. The removed vegetation will either be chipped on site for dust control, reused in landscaping, or composted. Sediment and erosion-control best management practices will be installed along the work areas as needed to protect water quality and control sedimentation and erosion during construction.

Shallow groundwater encountered in excavations (e.g., foundations, water storage pond) would be removed from the excavation via a submersible pump and would be either be applied as irrigation in upland areas via perforated pipe, discharged through a sediment filter bag, or pumped to a Baker Tank and removed from the site. The groundwater dewatering method would comply with all water quality standards. A Colorado River Regional Water Quality Control Board permit will be obtained prior to any groundwater discharge to land.

Approximately 400,000 cubic yards of engineered fill material will be imported and compacted within the Project site to construct the Project facilities. The geothermal power production facilities will be on a pad of compacted fill material averaging approximately 2 to 3 feet in elevation over existing grade. The Project will be constructed to an elevation above the Imperial County designated special flood hazard for lands near the Salton Sea and will have a berm extended to the outer perimeter of the site as part of the stormwater infrastructure described above.

Well Pad 1 will be extended by approximately 160 feet to the north. Well Pad 3, should it be constructed, will be approximately the same size as Well Pad 1 and located to the south of the S-Drain and west of Davis Road. The production and injection well pads and access roads will be constructed on imported fill and compacted to finished grade. Grading will occur at the administration and warehouse area east of Davis Road, to provide a flat space for construction of the proposed buildings and foundations. Limited

grading is proposed for the gen-tie line. A flat, approximately 100 foot by 100 foot pad will be constructed at each transmission structure location, to support the cranes and heavy equipment that will be required to install the transmission structures.

Material staging and laydown will occur within the Project area after site preparation. The area between Well Pad 1 and HKP1 facilities west of Davis Road will be available for material staging and laydown during construction.

Construction Workforce and Schedule

The construction phase of the Project (power portion and lithium portion) is anticipated to last 24 months in total. CTR anticipates starting construction 4th quarter 2023, after all necessary permits and authorizations are obtained through 4th quarter 2025. Construction will generally be conducted Monday through Saturday from 7 a.m. to 6 p.m. over the 24-month construction period. Construction work will also occur during nighttime hours during periods of extreme heat in the summer.

Project construction is anticipated to span an approximately 24-month period. The HKP1 well drilling will be conducted during the construction period and will occur 24 hours a day, seven days a week until the targeted well depth is obtained for each well and all wells are complete. Well drilling is anticipated to last approximately 8 weeks at each well and will involve a workforce of approximately 12 to 20 people, depending upon the activity. An average of approximately 225 workers will be on site daily during construction, with a maximum of approximately ~~450~~ 500 workers per day during peak construction. The power portion will be complete prior to the remainder of the Project, and it is anticipated to be complete in the 4th quarter of 2024. Construction will continue on the lithium portion with an anticipated completion in the 4th quarter of 2025. Trailers may be brought to the site to provide temporary worker housing and offices for the owner's representatives, construction management & staff, security, canteen facilities, and drilling staff who need to be on site 24 hours/day. The temporary housing will be located on site for the duration of the construction and drilling periods. Portable sanitary facilities will be housed on trailers, and sanitary waste from construction will be serviced regularly and removed from the site in compliance with all federal, State, and local regulations.

Construction Truck Trips

The HKP1 Project will require approximately 54,000 truck trips over the course of the project construction. The HKL1 Project is estimated to have an average of 25 trucks per day to and from the construction site, except during site grading, when about 250 trucks will travel to and from the Project construction site daily. Up to 500 workers will travel to the site per day at the peak of construction.

Construction Equipment

Below is a list of typical construction equipment types anticipated to be required for the Project:

- Off-highway trucks
- Rollers
- Crawler tractors
- Excavators
- Graders
- Water trucks
- Concrete pump
- Plate compactors
- Rough terrain forklifts
- Skid steer loaders
- Tractor/Loader/Backhoe
- Aerial lifts

- Compactors
- Rubber-tired loaders
- Scrapers
- Cranes
- Generator sets
- Welders
- Air compressors
- Pavers
- Paving equipment
- Personal lifts

Construction Water Supply Source and Requirements

Water will be used during construction for dust control and compaction. Water for dust control and compaction will be obtained from IID and transported to the site via truck or temporary pipeline. It is estimated that up to 240 acre-feet would be needed. Water will be applied for dust control to meet Imperial County dust control requirements.

Construction Power Supply Source

A new electrical drop from IID's distribution line will be installed at the Project site to provide temporary construction power. Alternatively, a generator may be used to provide construction power where a power line is not practical. Any generator use will be permitted with the Imperial County Air Pollution Control District (ICAPCD).

2.9.2 Project Operations

Routine operations and maintenance of the facility will include preventative maintenance and repairs of any damaged or otherwise inoperable equipment on an as-needed basis. The operation and maintenance staff will monitor the facility operations over the project life to ensure the Project is operating to meet design standards.

- The HKP1 facility will utilize geothermal brine to extract renewable electric energy which will be sold to IID, and other potential off-takers, through the gen-tie line and through an on-site low voltage line to the lithium facility. The HKL1 facility will utilize geothermal brine produced from the geothermal fluid management activities from the adjacent HKP1 power facility for the commercial production of lithium hydroxide, silica, and polymetallic products, and possibly boron compounds. The production processing steps may be altered over time as production methods and efficiencies evolve and new or revised product lines are developed at the facility. The process includes the following steps: brine cooling
 - silica, polymetallic, and possibly boron compound production
 - lithium and metals extraction
 - extracted lithium
 - processing of extracted lithium
 - drying and packaging of lithium
 - offsite product shipping

Each of the general processing steps is discussed further below. After processing of the geothermal brine, the depleted brine will be returned to HKP1 for injection at the wells, developed for HKP1..

Metal Recovery

Geothermal brine from the HKP1 will feed a vacuum-flash brine cooling trains sized for the full operating flow of approximately 5.9 million lb/hr. The cooled brine will be fed to the mineral extraction process. Silica, and polymetallic products, and possibly boron compounds will be extracted from the brine using proprietary technology. Silica, and polymetallic products, and possibly boron compounds will be filtered and shipped offsite in roll-off bins or other suitable Department of Transportation authorized equipment. A lithium chloride (LiCl) product stream will be produced using a proprietary extraction process. The LiCl will be processed in the subsequent on-site lithium process steps to produce the required lithium hydroxide monohydrate. Lithium Production

The LiCl product stream will be concentrated and purified. The purified, concentrated LiCl will be transported via pipeline from the lithium purification/concentration operation to the lithium product production buildings. Proprietary technology will be used to convert the LiCl into a lithium hydroxide monohydrate (LiOH•H₂O) product.

The LiOH•H₂O product stream will be crystallized and transported to a lithium product-handling, production, and warehouse building, where the crystals will be separated from the lithium-rich process fluid in a filtration system. LiOH•H₂O crystals will be dried and packaged in bulk bags. Packaging is expected to be into 20-kilogram (kg) bags or 1,000-kg super sacks.

Product Shipping to Off-site Markets

The HKL1 plant will produce multiple products for off-site shipment to market by truck. The average annual amount of product shipped out of the plant operating at 5,900,000 lb/hr brine flow capacity is estimated at approximately 6,300 lb/hr dry lithium product (LiOH•H₂O), 1,600 lb/hr silica, 110,000 lb/hr polymetallic products, and possibly 2,800 lb/hr boron compounds.. All products will be transported by freight truck on existing roadways to shipping distribution point(s).

Operational Workforce, Schedule, and Traffic

The HKP1 facility will require up to 22 full-time, on-site employees during operation. Operational staff will include operators, management and supervisors, maintenance technicians, and lab technicians. On a typical day, the operators will assume a two-shift, 24-hour workday, and all other personnel will assume a standard 8-hour workday. Approximately 22 worker trips, 3 vendor trips, and 1 haul-truck trip will take place during daily operations.

The HKL1 facility is expected to require up to 90 full-time, on-site employees during operation. Facility operations will continue 24 hours per day, 7-days per week. It is projected that up to 44 employees will be on site at any given time, with 28 day-staff employees and two rotating shifts of 16 additional employees overlapping the day staff and covering nights, weekends, and holidays. Approximately 113 trucks per day will travel in and out of the Project site during normal operations. Daily truck traffic includes up to 73 trucks for product shipping. All trucks used for internal product movement will be electric, pending availability of this type of equipment. Truck traffic will also include approximately 40 truck deliveries of reagent chemicals, cooling tower treatment chemicals, consumptive media, product-packaging materials, and fuel. Outgoing general waste generated on the site will be removed by truck as needed and is expected to require less than one truck per day.

Operational Water Supply and Requirements

The HKP1 will require up to approximately 400 acre-feet per year (AFY) of fresh water for normal operation, including supplemental cooling tower makeup and other plant uses when operating at full plant load. Average annual demand requirements will vary, depending on the capacity factor of the overall facility. It is anticipated that steam condensate will be utilized to offset fresh water requirements.

The primary source of fresh water for the facility is anticipated to be irrigation water made available under a supply contract and purchased through IID. Water will be obtained from the "Q," "R," or "S" lateral adjacent to the Project site. Water will be transferred to a water storage pond, with a capacity of approximately 18-acre feet, located adjacent to the Q Drain. The water would then be transferred to 100,000-gallon aboveground water storage tank via an aboveground fresh-water pipeline. Additional pipelines will be constructed to transport the water from the water storage tank to the power plant facility. The water will be used for steam wash water, purged water for pump seals, and the reverse osmosis (RO) potable water system, process wash water, and, at times, cooling water makeup. The project is designed to minimize reliance on external sources of water supply for process needs as well by using condensed steam from the geothermal steam condensate to the greatest extent practical.

A filtration-based or reverse osmosis potable water system will be used to process IID fresh water for the non-drinking potable water needs at the site. A Nontransient-Noncommunity Water System Permit will be obtained from the Imperial County Public Health Department (ICPHD) for the onsite potable water system. Bottled drinking water will be purchased for consumption.

The HKL1 facility will require approximately 6,100 AFY of water to be purchased from the IID for project cooling water makeup and additional process water. Approximately 3 AFY of the purchased water will be used for potable water purposes, including potable washbasin water, eyewash equipment water, water for showers and toilets in the administration and control buildings, and sink water in the sample laboratory.

Operational Energy Requirements

HKP1 would generate 49.9 MW of renewable energy of which 40 MW would be sold to IID and the remaining 9.9MW would be supplied to HKL1. HKL1 would require approximately 35 MW of power and have a peak power demand of 40 MW, which would be obtained from IID less the 9.9MW from HKP1. Overall, the power demand would be less than what is produced by HKP1. Additionally, HKP1 will require the use of generators for up to 600 hours per year for startups during black start situations and unscheduled plant outages.

Fire Protection and Safety

The fire protection system will consist of an underground fire main and surface distribution equipment, such as yard hydrants and hose houses, monitors around the perimeter of the cooling tower, automatic sprinklers for the turbine generator and auxiliary equipment, and a complete detection and alarm system. The firewater supply and pumping system will provide an adequate quantity of fire-fighting water. The systems will be designed in accordance with federal, State, and local fire codes, occupational health and safety regulations and other jurisdictional codes, requirements and standard practices.

Spent Fluid and Wastewater

Under normal operation, the spent brine will be pumped via the main injection system. Spent geothermal brine will be injected into the subsurface geothermal reservoir via the primary injection wells. Geothermal brine will be discharged into the bring pond during upset conditions or maintenance activities (start up and shut down). The fluids from the brine pond also will be injected into the subsurface geothermal reservoir via the dedicated aerated brine injection well. All subsurface fluid injection will conform with CalGEM requirements.

Wastewater including non-process wash water and sanitary waste, will be generated during operations. Sanitary drains will collect all sanitary waste and non-process wash water and discharge to an appropriately sized septic system. The septic system will be engineered and operated to meet Imperial County Environmental Health requirements.

Hazardous Materials and Waste

Hazardous Material Management

The Project will develop and implement a Hazardous Materials Business Plan (HMBP), in compliance with California Health and Safety Code, Division 20, Chapter 6.95, Sections 25500-25519 and California Code of Regulations, Title 19, Division 2, Chapter 4. The HMBP will be provided to the California Office of Emergency Services, the Imperial County Fire Department, and the Certified Unified Program Agency for Imperial County (the local California Department of Toxic Substances Control office), for review and approval before initial plant operation. The HMBP will include, at a minimum, procedures for:

- Hazardous materials handling, use and storage;
- Emergency response;
- Spill control and prevention;
- Employee training, and
- Reporting and record keeping.

Portable bins or other storage containers will be on-site for storage of maintenance lube oils, chemicals, paints, and other construction maintenance materials, as needed. Secondary containment will be provided in all petroleum hydrocarbon and hazardous material storage areas, and all brine processing areas. Safety showers and eyewash stations will be provided in or adjacent to chemical storage and use areas. Safety equipment will be provided for staff use, where required, during chemical containment and cleanup activities. All staff working with chemicals will be trained in proper handling and emergency response to chemical spills or accidental releases. Water hose connections will be provided near the chemical storage and feed areas to flush spills and leaks, and absorbent materials will be stored on site for spill cleanup.

The HKP1 facility may include transformer oil for transformer operation, lube oil for the turbine generator operation, diesel for generator fueling, and HCl (32% by weight). The transformer oil will be contained within the transformers; the lube oil will be stored on a skid. Diesel will be stored in a diesel storage tank with a capacity of approximately 3,000 gallons. Two fiber-reinforced epoxy HCl tanks, with capacities of approximately 20,000 and 75,000 gallons, will store the HCl for the acid modification process. The HCl tanks will be fitted with scrubbers. All chemicals will be stored outdoors on impervious surfaces in above-ground storage tanks with secondary containment. The secondary containment areas for the bulk storage

tanks will not have drains. Any chemical spill occurring in these areas will be removed with portable equipment and re-used or disposed properly. Other chemicals will be stored and used in their delivery containers.

Hazardous materials that are expected to be used during construction of HKP1 and HKL1 will include:

- Adhesives
- Diesel fuel
- Hydraulic fluids
- Lubricants
- Oil
- Paint material
- Solvents
- Unleaded gasoline

Hazardous materials that are expected to be used during operation of HKP1 and HKL1 will include:

- Calcium oxide (lime)
- Sodium carbonate (soda ash)
- Diesel fuel
- Hydraulic fluid
- Hydrochloric acid (32% by weight)
- Sodium hydroxide
- Transformer Oil
- Unleaded gasoline

No feasible alternatives exist to avoid use of these materials for construction or operation of vehicles and equipment for construction and /or maintenance activities, or for painting and caulking buildings and equipment. Hydrochloric acid, calcium oxide, sodium hydroxide, and sodium sulfide will be required for the power generation and mineral extraction process. A polymetallic product will be produced for commercial sale. The polymetallic product will be stored in DOT authorized containers for shipping.

Hazardous Materials Transportation

Hazardous material carriers and hazardous waste transporters are required by law to adhere to applicable local, State, and federal regulations regarding proper truck signage; indicating the materials being transported; carrying a shipping/waste manifest of the types and concentrations of materials being transported; and other appropriate measures. Hazardous material carriers also are responsible for their loads with respect to reporting spills and initiating appropriate emergency responses to the releases of any transported hazardous materials, from the point of origin up to the destination of the hazardous material delivery.

HKP1 and HKL1 will communicate with the locally responsible emergency response agencies before shipment of any bulk hazardous materials to or from the Project site. Continuing coordination and communications with these agencies relevant to hazardous material shipments will be undertaken as required by the agencies. HKP1 and HKL1 will also develop an Emergency Action Plan for responding to spills or releases of hazardous substances by hazardous material carriers in the Project area. This plan will conform to all applicable federal, State, and local requirements for notifications, reporting, and

emergency response of hazardous substance release incidents. The plan also will describe appropriate cleanup procedure of spilled substances and site reclamation, if required. In the unlikely event of a hazardous materials spill during transportation of materials to or from the plant site, HKP1 and HKL1 will cooperate with the responsible agencies and provide all available information and knowledge about the materials to facilitate the spill response cleanup and spill site remediation.

Solid Waste

Construction and operation of the facility will generate both nonhazardous and hazardous wastes as follows.

Nonhazardous Wastes

Solid waste from construction activities may include lumber, excess concrete, metal, glass scrap, empty nonhazardous containers, and waste generated by workers. Management of these wastes will be the responsibility of the construction contractor(s). Typical management practices required for nonhazardous waste management will include recycling when possible, proper storage of waste and debris to prevent wind dispersion, and weekly pickup and disposal of wastes to local Class III landfills.

The primary source of solid waste during operation will be office waste and other waste generated by workers. Nonhazardous waste will be collected in appropriate on-site storage receptacles designated for waste and recycling. Recyclable materials will be brought to a recycling center, and nonrecyclable waste will be removed and taken to a Class III landfill.

Hazardous Wastes

Hazardous wastes may be generated over the course of construction and/or operation from spills of hazardous materials, empty hazardous material containers, or spill cleanup wastes. Hazardous materials that are expected to be used during construction and/or operation include paints, oil and lubricants, solvents, and welding materials. Used oil will be recycled, and oil or heavy metal contaminated materials (e.g., filters) requiring disposal will be transported to an off-site waste disposal facility that is authorized to accept such wastes. Scale from pipe and equipment cleaning operations will be disposed in a similar manner.

All hazardous wastes generated during construction and operation will be handled and disposed in accordance with applicable laws, ordinances, regulations, and standards. Any hazardous wastes generated during construction will be collected in hazardous waste accumulation containers near the point of generation and moved daily to the contractor's 90-day hazardous waste storage area on site. Similarly, any hazardous wastes generated during operation and/or maintenance activities will be collected in hazardous waste accumulation containers near the point of generation and moved to the operations 90-day hazardous waste storage area on site. The accumulated wastes subsequently will be delivered to an authorized waste management facility, which may be as far as Yuma, Arizona. Hazardous wastes will be managed and disposed properly in a licensed Class I waste disposal facility that is authorized to accept the waste.

2.9.3 Project Decommissioning

The projected life of the Project is 50 years. At the end of operations, a Site Abandonment Plan will be prepared and implemented in conformance with Imperial County and CalGEM requirements, for

consideration by the Planning Commission prior to Project approval. The Plan will describe the proposed equipment dismantling and site restoration program in conformance with the requirements of the respective landowners/lessors and regulatory requirements in effect at the time of abandonment and would be implemented at the end of Project operations.

The geothermal wells will be abandoned in conformance with the well abandonment requirements of CalGEM. Abandonment of a geothermal well involves plugging the well bore with clean drilling mud and cement sufficient to ensure that fluids will not move across into different aquifers. The wellhead (and any other equipment) will be removed, the casing cut off and capped below grade, and the well site reclaimed. Prior to building permit approval, HKP1 and HKL1 will provide the County with a bond, letter of credit, or other acceptable surety that guarantees restoration of the land at the Project site to its condition prior to development.

2.10 PROJECT DESIGN FEATURES INCORPORATED INTO THE PROPOSED PROJECT

This analysis was based on implementation of the following project design features that the project applicant has committed to implementing.

The Project applicant will implement the following features during construction of the Project:

- **Air Quality Permitting:** An application will be submitted to the ICAPCD for an Authority to Construct permit for construction activities and any operational equipment or emission sources requiring a permit. The application specifies a detailed list of control measures to reduce fugitive emissions from O&M activities, including watering of unpaved roads, vehicle speed limits, windbreaks, transport container covers, and cleaning and sweeping procedures. The project will comply with the ICAPCD permit conditions of approval to limit emissions from project activities.
- **Well Flow Testing Program:** Specific design features will be used, such as well test units to minimize the release of particulate matter and metals during well drilling and initial testing. The well flow testing program will include flow rate and duration limits.
- **Emissions Mitigation:** Consistent with the requirements of ICAPCD Policy 5, the project proponent shall pay an emission mitigation fee sufficient to offset the amount by which the project's NOx emissions exceed the 100 pounds per day threshold. ICAPCD allows a project to pay in-lieu impact fees using the most current Carl Moyer Cost Effective methodology to reduce excess NOx emissions. Under the ICAPCD program, the exact amount of the fee cannot be calculated until the time of construction when more precise data regarding the construction equipment types and hours of operation are known, allowing ICAPCD to calculate the fee. Prior to any earthmoving activity, the project proponent shall submit to the ICAPCD a complete list of all construction equipment to be utilized during the construction phase identifying make, model, year, horsepower, and estimated hours of usage.
- **A Transportation Plan** will be prepared for implementation during all phases of the project. The Transportation Plan will address methods for reducing construction worker traffic volumes and Project-related equipment and materials transport by implementing the following strategies: (1) provide a construction worker rideshare program; (2) schedule shift changes and deliveries to avoid conflict with peak-hour traffic patterns; (3) establish traffic controls for transport of facility hazardous and nonhazardous materials, components, main assembly cranes, and other large pieces of equipment; and (4) evaluate alternative transportation approaches depending on specific object sizes, weights, origin, destination, peak-hour traffic, and unique handling requirements.

The Project applicant will implement the following features during operation of the Project:

- **Hydrogen Sulfide Abatement:** The project will employ a proven industry standard hydrogen sulfide abatement system to minimize hydrogen sulfide emissions from both the vent gas and the portion of condensate being used as cooling tower make-up. The abatement system will remove at least 95 percent of the H₂S in the noncondensable gases. In addition, particle emissions from the cooling towers will be minimized by using high-efficiency drift eliminators.
- **Electric Truck Hauling:** The HKL1 Project commits to using 100 percent electrical vehicles for the hauling of mineral products.
- **Generators That Meet Pollutant Emission Limits:** The proposed standby/"black start" diesel engine generator, the emergency diesel generators, and the emergency fire pump engines would each meet the applicable U.S. Environmental Protection Agency and CARB air pollutant emission limits. Each engine would be tested for fewer than 50 hours per year (at 100 percent load).
- **Vehicle Charging Stations:** The project will include charging stations for electric vehicles and electric trucks.
- **Scrubbers:** HCl storage tanks will include scrubbers to eliminate discharge of acid gas in the tank venting system.

2.11 REQUIRED PERMITS AND APPROVALS

As required by the CEQA Guidelines, this section provides, to the extent the information is known to the County, a list of permits and approvals to implement the Project and a list of agencies that will review this Draft EIR and use it in their decision-making process. The following lists County entitlements and permits that may be required for the Project prior to construction and operation:

Imperial County Planning Department is the lead agency for the Proposed Project. The following permits would be required from the lead agency:

- Imperial County Planning Department – Conditional Use Permit
- Imperial County Planning Department – Zoning Variance
- Imperial County Planning Department – Development Agreement (if required)
- Imperial County Building Department – Building and Grading Permits
- Imperial County Public Works Department – Encroachment Permit(s)

The Final EIR must be certified by the Planning Commission as to its adequacy in compliance with CEQA prior to any actions being taken on the Project. The analysis of this Draft EIR is intended to provide environmental review for the Project, in accordance with CEQA requirements.

2.11.1 Other Required Permits and Approvals

Other required permits and approvals may be necessary to approve and implement the Project as the County finds appropriate. Approvals include but are not limited to architectural plan and design; landscaping; lighting; transportation permits and approvals for driveways and routes; grading; hauling; and public utilities. The following permits/agreements would be required from IID:

- Imperial Irrigation District – Encroachment Permit(s)
- Imperial Irrigation District – Water Supply Agreement
- Imperial Irrigation District – Other approvals not yet known for water or power

2.11.2 Responsible Agencies

A responsible agency includes all public agencies other than the lead agency that have discretionary approval power over a project. Due to the location of the Project, the California State Lands Commission would be a responsible agency. Additionally, IID is a Responsible Agency.

2.11.3 Reviewing Agencies

Reviewing Agencies include those agencies that do not have discretionary powers but that may review the Draft EIR for adequacy and accuracy. Potential Reviewing Agencies include the following:

Federal Agencies:

- United States Fish and Wildlife (USFWS) – Incidental Take Permit (ITP; if needed)
- United State Army Corps of Engineers (USACE) – Individual Permit under Section 404 of the Clean Water Act

State Agencies:

- California Department of Transportation (Caltrans) – Encroachment Permit
- California Department of Fish and Wildlife (CDFW) – Lake or Streambed Alteration Agreement and Incidental Take Permit (if needed)
- California Department of Toxic Substances/Certified Unified Program Agency (CUPA) – Hazardous Materials / Environmental Protection Agency Approvals and Permits
- California Geologic Energy Management Division (CalGEM) – Permit(s) to drill

Regional Agencies:

- Regional Water Quality Control Board – Waste Discharge Requirement and 401 Water Quality Certification
- Imperial Irrigation District – Encroachment Permit
- Imperial County Air Pollution Control District – Permit to Construct and Permit to Operate; Use of Generators (if needed)
- Imperial County Public Health Department – Nontransient-Noncommunity Water System Permit
- Imperial County Building Department – Building and Grading Permits
- Imperial County Public Works Department – Encroachment Permit(s)
- Imperial County Fire Department and Office of Emergency Services

CHAPTER 3.0 – ENVIRONMENTAL SETTING

3.1 EXISTING LAND USE

The Project is located within undeveloped land owned by Imperial Irrigation District (IID) and a right-of-way (ROW) corridor for the gen-tie transmission line to the IID interconnect station near Hudson Ranch (HR1). The Project would be located within Sections 11 and 12, Township 11 North, Range 13 East in Imperial County near the eastern shore of the Salton Sea (Section 2.0 Project Description, Figure 2.0-1). The Project is approximately 3.6 miles west of the Town of Niland. A list of the parcels included in the Project are shown in Table 2.0-1: Project Assessor Parcel Numbers (APNs). The majority of the proposed Project facilities are located immediately west of Davis Road, with administrative buildings and warehouses located east of Davis Road. The 230-kilovolt (kV) gen-tie line for the Project will run from Noffsinger Road approximately 2 miles south to McDonald Road and then will run approximately 0.3 miles east to Hudson Ranch. The gen-tie line would be located on the east side of Davis Road and on the north side of McDonald Road, within the IID's transmission ROW and within a new ROW. The layout of the Project is shown in the Project Site Plan (Section 2.0 Project Description, Figure 2.0-2).

As shown in Section 2.0 Project Description, Table 2.0-1, the majority of the development area is zoned S-1-G (open space/geothermal overlay zone) with a portion zoned S-2-G (open space/preservation/geothermal overlay) and is entirely within the renewable energy/geothermal map overlay zone in the 2015 Renewable Energy and Transmission Element update to the County General Plan. The gen-tie transmission line ROW is zoned S-1-G and M-2-G-PE (medium industrial/geothermal overlay). The General Plan Land Use designation for the entire Project is Agriculture.

The Project will be accessed from Davis Road via new ingress/egress driveways. Project traffic will access the site from Highway 111 via McDonald Road, Davis Road, and Alcott Road. County road ingress/egress points will be constructed in conformance with Imperial County Public Works Department and Fire Department requirements. Road access will be restricted during construction, and appropriate traffic controls will be in place during construction of the Project. Following Project construction, Davis Road will be paved from McDonald Road to Noffsinger Road.

3.1.1 Existing Site Uses

The Project is located on vacant land that is undeveloped. On June 14, 2017 the County authorized Geothermal CUP #16-0001, which allowed construction of up to four well pads as well as drilling and maintenance of up to six separate geothermal exploratory wells on the Project site. Well Pad 1, north of Alcott Road and west of Davis Road, and two geothermal wells were constructed on the Project site in 2021. Rough grading for Well Pad 3, south of Noffsinger Road and east of Davis Road began in November 2021. The remaining Project site is undeveloped.

3.1.2 Surrounding Land Uses

Zoning designations of the surrounding properties include S-1-G, to the north, east, and south, M-2-G-PE to also the east, and S-2-G to the west. The properties bordering the Project site are designated for Agricultural land use to the north, east, and south, with Government/Special Public land use also to the east in the County's General Plan. No land use is to the west of the Project site as that area is the Salton Sea (County 2007, 2015a). The land surrounding the Project site is mainly undeveloped agricultural or vacant land. Areas to the north and south of the Project site consist of undeveloped open space. Area to

the west is open space followed by the Salton Sea. The State of California manages a wildlife management area, including waterfowl ponds to the east of the Project site. The nearest development is a single-family home located approximately 0.50 miles to the east, and the nearest commercial development is Hudson Ranch, located approximately 1.1 miles south. The topography of the area is generally flat.

Fire protection and emergency medical services in the Project area are provided by the Imperial County Fire District. The closest fire station to the Project site is the Niland Station, approximately 4 miles northeast, or an approximately nine-minute drive. Police protection services in the area are provided by the Imperial County Sheriff's Department. The closest police station to the Project site is the Imperial County Sheriff's office in Niland, approximately 4 miles northeast, or an approximately 10-minute drive.

Utility services that serve the existing area are as follows:

- Water: Imperial Irrigation District
- Sewer: None, septic
- Electricity: Imperial Irrigation District
- Gas: None
- Telephone/Internet: AT&T and Beamspeed
- Waste: Allied Waste

3.1.3 Adopted Plans

General Plan

The County's General Plan was adopted in 1993. The General Plan outlines the goals, policies, and development regulations within the County. The 10 elements discussed in the General Plan are:

- Agricultural Element
- Circulation and Scenic Highways Element
- Conservation and Open Space Element
- Housing Element
- Land Use Element
- Noise Element
- Parks Element
- Renewable Energy and Transmission Element
- Seismic and Public Safety Element
- Water Element

All sections of the General Plan have been comprehensively updated since 1993. The Seismic and Public Safety Element and Water Element were updated in 1997; the Circulation and Scenic Highways Element and Parks Element in 2008; the Housing Element in 2022; the Agricultural Element, Land Use Element, Noise Element, and Renewable Energy and Transmission Element in 2015; and the Conservation and Open Space Element in 2016. In addition, the County's Zoning Map was updated in 2007, and the Zoning Code was updated in 2022. The Project land use category is Agriculture, according to the General Plan Land Use Element; however, a nonagricultural land use may be permitted within General Plan-designated agricultural land if the use does not conflict with agricultural operations and will not result in the premature elimination of agricultural operations (County 2015a).

3.2 RELATED PROJECTS

CEQA requires that an EIR contain an assessment of the cumulative impacts that could result from a project and other related projects. As defined in the CEQA Guidelines, “cumulative impacts refer to two or more individual effects which, when considered together, are considerable or which compound or increase other environmental impacts.” Although project-related impacts may be individually minor, the cumulative effects of these impacts, in combination with the impacts of other projects, could be significant under CEQA and must be addressed. Through the evaluation of cumulative impacts, CEQA attempts to ensure that large-scale environmental impacts will not be ignored.

The analysis of cumulative effects “need not provide as great detail as is provided for the effects attributable to the project alone,” but the discussion “shall reflect the severity of the impacts and their likelihood of occurrence.” Where a Lead Agency concludes that the cumulative effects of a project, taken together with the impacts of past, present, and probable future projects, are significant, the Lead Agency then must determine whether the project’s incremental contribution to such significant cumulative impact is “cumulatively considerable,” and thus significant in and of itself.

The section additionally states, “when the combined cumulative impact associated with the project’s incremental effect and the effects of other projects is not significant, the EIR shall briefly indicate why the cumulative impact is not significant and is not discussed in further detail in the EIR. A Lead Agency shall identify facts and analysis supporting the Lead Agency’s conclusion that the cumulative impact is less than significant” (State CEQA Guidelines sec 15130[a]).

This Draft EIR considers the effects of the Project in relation to the full development forecasted by General Plan and other related projects either proposed, approved, or under construction in the area. A total of five related projects within the County, illustrated in Figure 3.0-1, have been identified in relation to the Project based on their proximity to the Project site. Based on the timing of the NOP and in accordance with CEQA, these are projects which are considered reasonably foreseeable to be built in the near future. Table 3.0-1: Related Projects provides information on the land use, location, and size of these related projects. The list of related projects was used to assess cumulative conditions where appropriate.

Table 3.0-1: Related Projects

Project Name	Description	Approximate Distance from Project Site	Status
Hudson Ranch 1 (CUP 22-0020)	Geothermal Well on approximately 500 acre parcel (020-010-035)	0.58	Approved Not Built
VEGA 2 (CUP 20-0021)	Construction and operation of 240 MW solar and BESS on 1,472 acres (025-260-011, 025-010-006, and 025-270-023)	9.53	Pending Approval
VEGA 3 (CUP 20-0022)	Construction and operation of 60 MW solar and BESS on 240 acres (025-101-006)	10.72	Pending Approval
VEGA 5 (CUP-0023)	Construction and operation of 50 MW solar and BESS on 249.70 acres (025-260-019, 025-260-022)	9.04	Pending Approval
Transmission Lines for VEGA 2, 3, 5	Transmission Lines Coming through Niland Area	Unknown – approximately 9 miles	Pending Approval

Figure 3.0-1: Locations of Related Projects in Imperial County

CHAPTER 4.0 – ENVIRONMENTAL IMPACT ANALYSIS

ENVIRONMENTAL ISSUES ADDRESSED

An Initial Study was prepared for the Project in March 2022. Based on the findings of the Initial Study, it has been determined that a Draft EIR is required for the Project. The County used the Initial Study as well as agency and public input received during the public comment period (March 31 through May 13, 2022), to determine the final scope for this Draft EIR. Environmental issue areas are listed by the level of significance of their impacts below in Table 4.0-1: Environmental Issue Areas, as determined by the analysis provided in the Initial Study.

Table 4.0-1: Environmental Issue Areas

No Impact	Less Than Significant Impact	Potentially Significant Impact
Agriculture and Forest Resources	Land Use and Planning	Aesthetics
Mineral Resources	Population and Housing	Air Quality
Recreation	Public Services	Biological Resources
	Wildfire	Cultural Resources
		Energy
		Geology and Soils
		Greenhouse Gas Emissions
		Hazards and Hazardous Materials
		Hydrology and Water Quality
		Noise
		Transportation
		Tribal Cultural Resources
		Utilities and Service Systems

The purpose of this section of the Draft EIR is to further analyze those impacts previously determined to be potentially significant to inform decision-makers and the public of the type and magnitude of the changes to the existing environment that would result from the Project. The following sections provide detailed discussion of the environmental setting for each topic addressed in this Draft EIR, the analysis of the potential impacts of the Project, potential cumulative impacts, and measures to mitigate potential significant impacts to the fullest extent feasible.

Impacts found to be less than significant in the Initial Study are further discussed in Section 6.1: Effects Not Found to Be Significant, of this Draft EIR.

TERMINOLOGY USED IN THIS ANALYSIS

For each CEQA checklist question listed in the Draft EIR, a determination of the level of significance of the impact is provided (CEQA Guidelines Appendix G). Impacts are determined in the following categories:

- **No Impact.** A designation of *no impact* is given when no adverse changes in the environment are expected.
- **Less Than Significant.** A *less than significant impact* would cause no substantial adverse change in the environment.

- **Less Than Significant With Mitigation.** A *potentially significant but mitigable impact* would have a substantial adverse impact on the environment that could be reduced to a less than significant level with incorporation of mitigation measure(s).
- **Potentially Significant.** A *significant and unavoidable impact* would cause a substantial adverse effect on the environment and no feasible mitigation measures would be available to reduce the impact to a less-than-significant level.

Please see Chapter 9.0: Acronyms and Abbreviations for a glossary of terms, definitions, and acronyms used in this Draft EIR.

4.1 AESTHETICS

This section provides a discussion of the existing visual and aesthetic resources on the Project site and in the surrounding area and evaluates the potential for changes in the visual character that could result from implementation of the Proposed Project. This section also evaluates the potential loss of existing visual resources, effects on public views, visual compatibility with existing uses, and light and glare impacts. Information presented in this section is based on photographs of the Project site, surveys and site visits, and the prepared visual simulations showing how development of the Project site would look from key vantage points around the area (Figure 4.1-1 through Figure 4.1-5)

4.1.1 Existing Environmental Setting

Regional Setting

Imperial County extends over 4,597 square miles between Riverside County to the north, Mexico to the south, San Diego County to the west, and Arizona to the east. According to the Conservation and Open Space Element (County 2016), the visual character within the County varies, including such natural scenic visual resources as deserts, sand dunes, mountains, and the Salton Sea. Many of the natural scenic resources are located on land under Bureau of Land Management (BLM) jurisdiction. Many areas with moderate to high value for maintenance of visual quality are mainly located on BLM lands, although private holdings under the County's jurisdiction may be available for conservation and open space designations (County 2016).

Various contributions to the scenic quality include the desert areas of Yuha, West Mesa, lower Borrego Valley, East Mesa, and Pilot Knob. Additionally, springtime blooms of the desert wildflowers contribute to the desert scenic quality. The eastern foothills of Peninsular Range including In-Ko-Pah or Jacumba Mountains, Coyote Mountains, and Fish Creek Mountains, and southeast foothills of Santa Rosa-San Jacinto, Superstition Mountains and Superstition Hills, and Chocolate Mountains provide additional visual resources within the County (County 2016).

The Salton Sea is located in the northwestern portion of the County and extends into Riverside County, measuring 35 miles in length with a surface area of approximately 376 square miles. The Salton Sea has been sustained by agricultural drainage from the Imperial, Coachella, and Mexicali Valleys; rainfall; storm runoff from the surrounding mountains; and groundwater inflow.

Anza-Borrego Desert State Park is located on the eastern side of San Diego County, with portions extending east into Imperial County and north into Riverside County. The park features washes, wildflowers, palm groves, cacti, sweeping vistas, and many miles of hiking trails.

The Osborne Overlook offers scenic views of the Imperial Sand Dunes Recreation Area, North Algodones Dunes Wilderness, and surrounding area. The overlook is located among the largest and tallest dunes. The Juan Bautista de Anza Overlook provides a view of the Yuha Basin and surrounding landscape.

Project Site

The Project site is approximately 3.8 miles southwest of the community of Niland on three parcels privately owned by HR1 in Imperial County, California. The Project is located within the U.S. Geological Survey (USGS) Niland, California 7.5-minute topographic quadrangle. The Project site is vacant and undeveloped.

The Project site is located approximately 1.5 miles east of the Salton Sea coast, approximately 48 miles east of Anza-Borrego Desert State Park (Visitor Center), and approximately 30 miles northwest from the Imperial Sand Dunes and Osborne Overlook.

Areas to the north and south of the Project site consist of undeveloped open space. The area to the west is open space followed by the Salton Sea. The State of California oversees a wildlife management area, including waterfowl ponds to the east of the Project site. One residence is located approximately 0.5 mile east of the Project site along Pound Road. No other developed areas are present within the Project site outside of private property signs.

4.1.2 Regulatory Setting

Local

Imperial County General Plan

The Conservation and Open Space Element of the Imperial County General Plan provides detailed plans and measures for the preservation and management of biological and cultural resources, soils, minerals, energy, regional aesthetics, air quality, and open space (County 2016). It recognizes that natural resources must be maintained for their ecological value for the direct benefit to the public and to protect open space for the preservation of natural resources, the managed production of resources, outdoor recreation, and public health and safety. In addition, the purpose of this element is to promote the protection, maintenance, and use of the County's natural resources, with particular emphasis on scarce resources, and to prevent wasteful exploitation, destruction, and neglect of the State's natural resources. Table 4.2-1 analyzes the consistency of the Project with specific policies contained in the Imperial County General Plan associated with visual resources.

Table 4.2-1: General Plan Consistency

General Plan Policies	Consistency with General Plan	Analysis
Conservation and Open Space Element		
<i>Visual Resources Conservation</i>		
Policy No. 4 - Develop planning programs to conserve and protect visual resources and scenic views from incompatible development and land uses. Program – Amend the Land Use Ordinance, and/or Community Area Plans, as applicable, to enact or revise ordinance standards to protect scenic resources. Adoption and implementation of scenic protection standards shall not interfere with	Consistent	Visual simulations have been prepared for the Project to compare and analyze the visual changes of the Proposed Project to the existing visual character at key viewpoints to the Project site, including the nearest highway. No significant visual changes are expected along Highway 111 due to its distance from the Project site. Visual changes would occur to areas along David Road; however, the construction and design of the Project would be consistent with other plants within the region. Furthermore, no designated scenic views or protected visual resources are nearby the Project site that would be impacted by the Proposed Project.

<p>agricultural uses on private lands. Standards for land use permits, including industrial and processing uses, and subdivisions should include visual assessments by qualified experts; visually effective setbacks near highways and roadways; siting in unobtrusive locations; and standards for height, architectural design, landscaping, lighting, and signs. The standards should emphasize avoiding visual impacts through alternative locations and designs where feasible. Establish consistent Countywide Viewshed Protection Standards.</p>		
<i>Conservation of Environmental Resources for Future Generations – Conservation of Visual Resources</i>		
<p>Goal 5 - The aesthetic character of the region shall be protected and enhanced to provide a pleasing environment for residential, commercial, recreational, and tourist activity.</p> <p>Objective 5.1 - Encourage the conservation and enhancement of the natural beauty of the desert and mountain landscape.</p> <p>Objective 5.2 - Utilize the Code Enforcement process to eliminate visually dilapidated buildings that impact the visual character of rural communities.</p>	<p>Consistent</p>	<p>Visual simulations were prepared to present the change of visual character of the Project site. The Proposed Project would be built on land permitted to construct renewable energy facilities with a CUP application. In addition, the Project would be constructed and designed to be visually consistent with other similar plants in the region. The Project is not located near any residential, commercial, or recreational areas where tourist and residential activities would be impacted.</p>

Figure 4.1-1: Visual Simulations Viewpoint Map

Figure 4.1-2: Viewpoint 1: Existing and Proposed

Figure 4.1-3: Viewpoint 2: Existing and Proposed

Figure 4.1-4: Viewpoint 3: Existing and Proposed

Figure 4.1-5: Viewpoint 3: Existing and Proposed (Enhanced)

4.1.3 Thresholds of Significance

To assist in determining whether a project would have a significant effect on the environment, the County utilizes the State CEQA Guidelines Appendix G Guidelines. Appendix G states that a project may be deemed to have impacts to aesthetic resources if it would:

- Threshold a) Have a substantial adverse effect on a scenic vista or scenic highway?**
- Threshold b) Substantially damage scenic resources, including, but not limited to trees, rock outcroppings, and historic buildings within a state scenic highway?**
- Threshold c) In non-urbanized areas, substantially degrade the existing visual character or quality of public views of the site and its surrounding? (Public views are those that are experienced from publicly accessible vantage point.) If the project is in an urbanized area, would the project conflict with applicable zoning and other regulations governing scenic quality?**
- Threshold d) Create a new source of substantial light or glare which would adversely affect day or nighttime views in the area?**

Please refer to **Section 6.1: Effects Found Not to Be Significant** for an evaluation of those topics that were determined to be less than significant or have no impact and do not require further analysis in the EIR.

4.1.4 Methodology

Chambers Group, Inc. (Chambers Group) was retained by the County to prepare visual simulations for the Project, which include simulations of key viewpoints around the Project site to provide a visual representation of the Project's existing and proposed views. Detailed descriptions of the findings are provided below.

4.1.5 Project Impact Analysis

- Threshold a) Have a substantial adverse effect on a scenic vista or scenic highway?**

The General Plan Open Space Element (County 2016) notes that there are highways within the County that have potential to be considered as State-designated or eligible scenic highways. These include Interstate (I) 8 (I-8), State Route (SR) 78, SR 111 and the Borrego-Salton Seaway, also known as S-22. According to the California Department of Transportation (Caltrans) State Scenic Highway System Map (Caltrans 2023), portions of SR 78, I-8, and SR 111 are part of the eligible and State-designated highway listings. However, these designated/potentially eligible routes are not located near the Proposed Project. The closest portion of SR 111 eligible for listing is approximately 12 miles northwest of the Project site.

As discussed in the Initial Study, the closest scenic viewpoint is an observation deck located within the Sonny Bono Salton Sea National Wildlife Refuge, approximately 4 miles southwest of the Project site (Appendix A). Additionally, the Project would require a zoning variance to increase some of the heights of the proposed structures from the allowed 35 feet. These structures would include two lime silos up to 60 feet tall; the evaporator support structure up to 80 feet tall and the associated cooling towers up to 50 feet tall; the crystallizers, which will be 80 to 110 feet tall; and the electrical power line and transmission structures up to 120 feet tall.

Given both the presence of a scenic viewpoint and the proposed variances, a visual analysis was prepared to compare the existing and proposed views of the Project. Three key viewpoints were selected to prepare visual analysis. These viewpoints were located at Davis Road and Pound Road; Davis Road between Noffsinger Road and Alcott Road; and along Highway 111 (refer to Figure 4.1-1 through Figure 4.1-5).

Due to the distance of the Project site from the nearest scenic highway, the Proposed Project is not anticipated to have a substantial adverse effect on a scenic highway. Additionally, as shown in viewpoint 3 in Figure 4.1-4, the Proposed Project would not result in substantial adverse effect on a scenic highway because it would neither be located near a scenic highway nor would its presence interrupt the views seen along Highway 111.

Viewpoints 1 and 2 show that the Proposed Project would affect the existing viewshed by partially blocking the mountain ranges to the north of the Project, such as the Orocopia and Chocolate Mountains to the north/northwest. While the mountains within Imperial County provide visual character to the area, the Project site is not a designated scenic viewpoint and therefore, the presence of Project features would not be considered to have a substantial adverse effect on a scenic vista. Furthermore, the Sonny Bono Salton Sea Wildlife Refuge is located 4 miles southwest of the Project site. Due to its distance from the Project site, the construction and operation of the Proposed Project would not result in substantial adverse effect to its use.

Based on the proposed structures of the Project and proximity to scenic viewpoints and scenic highways, the Proposed Project would result in less than significant impacts.

Threshold c) In non-urbanized areas, substantially degrade the existing visual character or quality of public views of the site and its surrounding? (Public views are those that are experienced from publicly accessible vantage point.) If the project is in an urbanized area, would the project conflict with applicable zoning and other regulations governing scenic quality?

The Project is located in a vacant, non-urbanized area characterized by agricultural and open space uses, near the Salton Sea. Public viewers of the Project site would be limited to workers at the Project site and limited passersby on nearby roads. There is one residence approximately 0.50 miles east of the site, however, there are no recreation areas in proximity of the Project site. Views of Project operations will be consistent with current views of the area, which include the nearby IID power plant and other power plants within the Salton Sea Known Geothermal Resource Area. The Project would require zoning variances for the structures above 35 feet including two lime silos up to 60 feet tall, the evaporator support structure up to 80 feet tall and the cooling towers up to 50 feet tall, the crystallizers which will be 80 to 110 feet tall and the electrical power line and transmission structures up to 120 feet tall.

As discussed in the previous section, a visual analysis was conducted to compare the existing and proposed views of the Project (Figure 4.1-2, Figure 4.1-3). Based on the renderings provided for viewpoints 1 and 2, the Proposed Project would change the existing visual character from vacant to developed with the presence of the proposed facilities and with the paving of the roadways which would bring commuters to the Project site. According to the General Plan's Conservation and Open Space Element, County areas for land managed by the BLM depict the values of the County's visual resources using their Visual Resource Inventory Process (VRI). Areas within the County with moderate to high value for maintenance of visual quality represent areas with opportunities of conservation and open space. According to the VRI maps, the Project site is in an area with no to low maintenance of visual quality.

Therefore, the construction and operation of the Proposed Project would not substantially degrade the existing visual character of the area. While the Project is not designated to contain high visual quality, it would be designed and constructed to be consistent with the existing power plants in the region so as to maintain visual consistency. Furthermore, the proposed uses of the site would be consistent with the permitted uses of the area as the land use ordinance by the County authorizes the development and operation of renewable energy projects with a CUP. Impacts therefore are less than significant.

4.1.6 Cumulative Impacts

Cumulative impacts are defined in CEQA as “two or more individual effects which, when considered together, are considerable or which compound or increase other environmental impacts” (CEQA Guidelines Section 15355). Stated in another way, “a cumulative impact consists of an impact which is created as a result of the combination of the project evaluated in the EIR together with other projects causing relating impacts” (CEQA Guidelines Section 15130 [a][1]).

Implementation of the Project in combination with other proposed, approved, and reasonably foreseeable projects in the region could have cumulative impacts on the existing views of the Project site should the area be fully developed. Future construction of the Proposed Project would be consistent with what is permitted on-site. The Project area is not designated as a scenic vista and not within the immediate vicinity of a State-designated or eligible scenic highways. Because the proposed uses would be consistent with the land uses, the Proposed Project would not result in substantial adverse impacts to aesthetics. Related projects would similarly undergo CEQA review, and determinations regarding the significance of impacts of the related projects on aesthetic resources would be made on a case-by-case basis. If necessary, the applicants of the related projects would be required to implement appropriate mitigation measures. Therefore, implementation of related projects and other anticipated growth in Imperial County would not combine with the Proposed Project to result in cumulatively considerable impacts on aesthetic resources.

4.1.7 Mitigation Measures

No mitigation measures would be required.

4.1.8 Level of Significance After Mitigation

Impacts related to aesthetics would be less than significant. No mitigation measures would be required.

4.2 AIR QUALITY

This section provides information on ambient air quality conditions in the vicinity of the Project site and identifies potential impacts to air quality as a result of the construction and operation of the Project. Information contained in this section is from the air quality modeling output prepared for the Project in the *Air Quality Technical Report for the Hell's Kitchen Geothermal Power Plant and Lithium Production Plant, County of Imperial*, dated May 6, 2022, prepared by RCH Group (Appendix B of this Environmental Impact Report EIR]).

4.2.1 Existing Environmental Setting

Regional Climate

The Project site is located within the central portion of Imperial County, which is part of the Salton Sea Air Basin (Air Basin). The Air Basin comprises the central portion of Riverside County and all of Imperial County. The Riverside County portion of the Air Basin is regulated by the South Coast Air Quality Management District (SCAQMD), and the Imperial County portion of the Air Basin is regulated by the Imperial County Air Pollution Control District (ICAPCD).

Air quality is a function of both the rate and location of pollutant emissions under the influence of meteorological conditions and topographical features. Atmospheric conditions such as wind speed, wind direction, and air temperature gradients interact with physical features of the landscape to determine their movement and dispersal and, consequently, their effect on air quality. The combination of topography and inversion layers generally prevents dispersion of air pollutants in the Air Basin. The following description of climate of Imperial County was obtained from *Imperial County 2018 Redesignation Request and Maintenance Plan for Particulate Matter less than 10 Microns in Diameter*, prepared by ICAPCD, October 23, 2018.

The climate of Imperial County is governed by the large-scale sinking and warming of air in the semi-permanent high-pressure zone of the eastern Pacific Ocean. The high-pressure ridge blocks out most mid-latitude storms, except in the winter, when it is weakest and located farthest south. The coastal mountains prevent the intrusion of any cool, damp air found in California coastal areas. Because of the barrier and weakened storms, Imperial County experiences clear skies, extremely hot summers, mild winters, and little rainfall. The sun shines, on the average, more in Imperial County than anywhere else in the United States.

Winters are mild and dry with daily average temperatures ranging between 65 and 75 degrees Fahrenheit (°F). During winter months it is not uncommon to record maximum temperatures of up to 80 °F. Summers are extremely hot with daily average temperatures ranging between 104 and 115 °F. It is not uncommon to record maximum temperatures of 120 °F during summer months.

The flat terrain of the valley and the strong temperature differentials created by intense solar heating, produce moderate winds and deep thermal convection. The combination of subsiding air, protective mountains, and distance from the ocean all combine to severely limit precipitation. Rainfall is highly variable, with precipitation from a single heavy storm able to exceed the entire annual total during a later drought condition. The average annual rainfall is just over 3 inches, with most of it occurring in late summer or mid-winter.

Humidity is low throughout the year, ranging from an average of 28 percent in summer to 52 percent in winter. The large daily oscillation of temperature produces a corresponding large variation in the relative humidity. Nocturnal humidity rises to 50 to 60 percent but drops to about 10 percent during the day.

The wind in Imperial County follows two general patterns. Wind statistics indicate prevailing winds are from the west–northwest through southwest; a secondary flow maximum from the southeast is also evident. The prevailing winds from the west and northwest occur seasonally from fall through spring and are known to be from the Los Angeles area. Occasionally, Imperial County experiences periods of extremely high wind speeds. Wind speeds can exceed 31 miles per hour (mph), which occurs most frequently during the months of April and May. However, speeds of less than 6.8 mph account for more than half of the observed wind measurements.

Air Pollutants of Concern

Criteria Air Pollutants

Federal and State laws regulate the air pollutants emitted into the ambient air by stationary and mobile sources. These regulated air pollutants are known as criteria air pollutants and are categorized as primary and secondary pollutants. Primary air pollutants are those that are emitted directly from sources. Carbon monoxide (CO), volatile organic compounds (VOC), nitrogen oxides (NO_x), sulfur dioxide (SO₂), and most fine particulate matter (PM₁₀, PM_{2.5}), including lead (Pb) and fugitive dust, are primary air pollutants. Of these CO, SO₂, PM₁₀, and PM_{2.5} are criteria pollutants. VOC and NO_x are criteria pollutant precursors and go on to form secondary criteria pollutants through chemical and photochemical reactions in the atmosphere. Ozone (O₃) and nitrogen dioxide (NO₂) are the principal secondary pollutants.

Toxic Air Contaminants

The public's exposure to toxic air contaminants (TACs) is a significant environmental health issue in California. In 1983, the California Legislature enacted a program to identify the health effects of TACs and to reduce exposure to these contaminants to protect the public health. The Health and Safety Code defines a TAC as "an air pollutant which may cause or contribute to an increase in mortality or in serious illness, or which may pose a present or potential hazard to human health." A substance that is listed as a hazardous air pollutant pursuant to subsection (b) of Section 112 of the Federal Act (42 U.S. Code [U.S.C.] Sec. 7412[b]) is a toxic air contaminant. Under State law, the California Environmental Protection Agency (CalEPA), acting through the California Air Resources Board (CARB), is authorized to identify a substance as a TAC if it determines the substance is an air pollutant which may cause or contribute to an increase in mortality or an increase in serious illness, or which may pose a present or potential hazard to human health.

Cancer Risk

One of the primary health risks of concern due to exposure to TACs is the risk of contracting cancer. The carcinogenic potential of TACs is a particular public health concern because it is currently believed by many scientists that there is no safe level of exposure to carcinogens; that is, any exposure to a carcinogen poses some risk of causing cancer. Health statistics show that one in four people will contract cancer over their lifetime from all causes, including diet, genetic factors, and lifestyle choices.

Noncancerous Health Risks

Unlike for carcinogens, it is believed that for most noncarcinogens a threshold level of exposure to the compound exists below which it will not pose a health risk. The CalEPA and California Office of Environmental Health Hazard Assessment have developed reference exposure levels (RELs) for noncarcinogenic TACs that are health-conservative estimates of the levels of exposure at or below which health effects are not expected. The noncancerous health risk due to exposure to a TAC is assessed by comparing the estimated level of exposure to the REL. The comparison is expressed as the ratio of the estimated exposure level to the REL, called the hazard index (HI).

Other Effects on Air Pollution

Just as humans are affected by air pollution, so too are plants and animals. Animals must breathe the same air and are subject to the same types of negative health effects. Certain plants and trees may absorb air pollutants that can stunt their development or cause premature death.

Air pollution also results in numerous impacts to the human economy, including lost workdays due to illness, a desire on the part of business to locate in areas with a healthy environment, and increased expenses from medical costs. Pollutants may also lower visibility and cause damage to property. Certain air pollutants are responsible for discoloring painted surfaces, eating away at stones used in buildings, dissolving the mortar that holds bricks together, and cracking tires and other items made from rubber.

Monitored Air Quality

The air quality at any site is dependent on the regional air quality and local pollutant sources. The air quality at any location in the Air Basin is determined by the release of pollutants throughout the Air Basin as well as from air pollutants that travel from the coastal areas and Mexico to the Air Basin. The ICAPCD operates a network of monitoring stations throughout the County that continuously monitor ambient levels of criteria pollutants in compliance with federal monitoring regulations.

Because not all air monitoring stations measure all of the tracked pollutants, the data from the following two monitoring stations, listed in the order of proximity to the Project site, have been used: Niland–English Road Monitoring Station (Niland Station) and Brawley–220 Main Street Monitoring Station (Brawley Station).

The Niland Station is located approximately 2.1 miles northeast of the Project site at 7711 English Road, Niland; and the Brawley Station is located approximately 17.4 miles south of the Project site at 220 Main Street, Brawley. It should be noted that due to the air monitoring stations' distances from the Proposed Project site, recorded air pollution levels at the air monitoring stations reflect with varying degrees of accuracy local air quality conditions at the Proposed Project site.

Table 4.2-1 presents the composite of pollutants monitored from 2018 through 2020.

Table 4.2-1: Ambient Air Quality Monitoring Summary

Air Pollutant	2018	2019	2020
Ozone (O₃)^a			
Max 1 Hour (ppm)	0.060	0.060	0.054
Max 8 Hour (ppm)	0.055	0.054	0.045
Nitrogen Dioxide (NO₂)^b			
Max 1 Hour (ppm)	0.034	0.041	0.045
Carbon Monoxide (CO)			
Max 1 Hour (ppm)	1.1	1.3	0.8
Max 8 Hour (ppm)	0.08	0.7	0.5
Particulate Matter (PM₁₀)^a			
Max Daily California Measurement (50 µg/m ³)	331	155	239
State Average (20 µg/m ³)	45.8	32.6	35.8
Particulate Matter (PM_{2.5})^b			
Max Daily National Measurement (35 µg/m ³)	22.4	21.4	28.5
State Average (12 µg/m ³)	8.70	7.94	9.80

Abbreviations:

> = exceed; ppm = parts per million; µg/m³ = micrograms per cubic meter

CAAQS = California Ambient Air Quality Standard NAAQS = National Ambient Air Quality

Bold = exceedance

^a Measurement taken from Niland Mesa Station.

^b Measurement taken from Brawley Station.

Source: <http://www.arb.ca.gov/adam/>

Sensitive Receptors

Some land uses are considered more sensitive to air pollution than others due to the types of population groups or activities involved. As detailed in ICAPCD Regulation VIII, sensitive receptors include but are not limited to residential areas, schools, daycare facilities, churches, hospitals, nursing facilities, and commercial and/or retail uses. No sensitive receptors are within two miles of the Proposed Project.

4.2.2 Regulatory Setting

The Proposed Project site lies within the County of Imperial, which is managed by the ICAPCD. National Ambient Air Quality Standards (NAAQS) and California Ambient Air Quality Standards (CAAQS) have been established for the following criteria pollutants: CO, ozone (O₃), SO₂, NO₂, PM₁₀, PM_{2.5}, and Pb. The CAAQS also set standards for sulfates, hydrogen sulfide, and visibility.

Federal

The Clean Air Act, passed in 1970 and last amended in 1990, is the primary federal law that governs air quality. The Federal CAA delegates primary responsibility for clean air to the U.S. Environmental Protection Agency (USEPA). The USEPA develops rules and regulations to preserve and improve air quality and delegates specific responsibilities to state and local agencies. Under the act, the USEPA has established the NAAQS for six criteria air pollutants that are pervasive in urban environments and for

which state and national health-based ambient air quality standards have been established. Ozone, CO, NO₂, SO₂, Pb, and PM (Including both PM₁₀, and PM_{2.5}) are the six criteria air pollutants. Ozone is a secondary pollutant, nitrogen oxides (NO_x) and volatile organic compounds (VOC) are of particular interest as they are precursors to O₃ formation. In addition, national standards exist for Pb. The NAAQS standards are set at levels that protect public health with a margin of safety and are subject to periodic review and revision. Areas are classified under the federal Clean Air Act as either “attainment” or “nonattainment” areas for each criteria pollutant, based on whether the NAAQS have been achieved or not. Attainment relative to the State standards is determined by the CARB. The Air Basin has been designated by the U.S. Environmental Protection Agency (USEPA) as a nonattainment area for O₃, PM₁₀, and PM_{2.5}. Currently, the Air Basin is in attainment with the NAAQS for CO, SO₂, and NO₂. Table 4.2-2 presents the designations and classifications applicable to the Proposed Project area.

Table 4.2-2: Designations/Classifications for the Project Area

Pollutant	National Classification	California Standards ²
Ozone (O ₃) - 2008 Standard	Nonattainment (Moderate)	Nonattainment
Inhalable Particulate Matter (PM ₁₀)	Nonattainment (Serious)	Nonattainment
Fine Particulate Matter (PM _{2.5})	Nonattainment (Moderate)	Attainment
Carbon monoxide (CO)	Attainment	Attainment
Nitrogen dioxide (NO ₂)	Attainment	Attainment
Sulfur dioxide (SO ₂)	Attainment	Attainment

Sources: <https://ww3.arb.ca.gov/degis/adm/adm.htm>; and
<https://ww3.arb.ca.gov/planning/sip/planarea/imperial/staffreport121318.pdf>

State

California Clean Air Act

The California Clean Air Act (CCAA) was adopted by CARB in 1988. The CCAA is responsible for meeting the state requirements of the Federal CAA and for establishing the CAAQS. CARB oversees the functions of local air pollution control districts and air quality management districts, which, in turn, administer air quality activities at the regional and county levels. The CCAA, as amended in 1992, requires all air districts of the state to achieve and maintain the CAAQS by the earliest practical date.

The CCAA requires CARB to designate areas within California as either attainment or nonattainment for each criteria pollutant based on whether the CAAQS have been achieved. Under the CCAA, area are designated as nonattainment for a pollutant if air quality data shows that a state standard for the pollutant was violated at least once during the previous 3 calendar years. the CAAQS are generally more stringent than the corresponding federal standards and incorporate additional standards for sulfates, hydrogen sulfide, vinyl chloride, and visibility-reducing particles. Exceedances that are affected by highly irregular or infrequent events are not considered violations of a state standard and are not used as a basis for designating areas as nonattainment.

California State Implementation Plan

The ICAPCD has addressed each of three nonattainment pollutants in separate State Implementation Plans (SIPs). For O₃the most current SIP is the *Imperial County 2017 State Implementation Plan for the*

2008 8-Hour Ozone Standard (2017 Ozone SIP), prepared by ICAPCD, September 2017, which was prepared to detail measures to reduce O₃ precursors (i.e., reactive organic gases [ROGs] and NO_x) within the County to meet the 2008 NAAQS for 8-hour O₃ standard of 0.075 parts per million (ppm) by July 20, 2018. Although the Ozone 2017 SIP demonstrates that the County met the 8-hour O₃ standard of 0.075 ppm by the July 20, 2018, requirement, it should be noted that in 2015 the USEPA further strengthened its 8-hour O₃ standard to 0.070 ppm, which will require an updated SIP for the County to meet the new O₃ standard.

Because PM₁₀ in the County has met the 24-hour NAAQS other than for exceptional events, including storms, as well as from substantial PM₁₀ concentrations blowing into the County from Mexico, the most current PM₁₀ plan is the *Imperial County 2018 Redesignation Request and Maintenance Plan for Particulate Matter Less than 10 Microns in Diameter* (2018 PM₁₀ Plan), prepared by ICAPCD and dated October 23, 2018. The 2018 PM₁₀ Plan shows that the monitoring of PM₁₀ in the County found that other than exceptional events, no violation of the 24-hour PM₁₀ NAAQS of 150 micrograms per cubic meter (µg/m³) occurred over the 2014 to 2016 time period. As such, the ICAPCD has requested the USEPA to redesignate the Air Basin to maintenance. The redesignation was anticipated to occur sometime in the year 2020.

For PM_{2.5} the most current SIP is the *Imperial County 2018 Annual Particulate Matter less than 2.5 Microns in Diameter State Implementation Plan* (2018 PM_{2.5} SIP), prepared by ICAPCD and dated April 2018, that details measures to meet the 2012 NAAQS for annual PM_{2.5} standard of 12 µg/m³ by the end of 2021 for the portion of Imperial County (approximately from Brawley to Mexico border) that is designated nonattainment. The PM_{2.5} Plan found that the only monitoring station in the County that has recorded an exceedance of PM_{2.5} is the Calexico Monitoring Station and that the exceedance is likely caused by the transport of PM_{2.5} across the border from Mexico. It is anticipated that the ICAPCD will submit a redesignation request for PM_{2.5} in the near future.

Toxic Air Contaminants Regulation

TAC sources include industrial processes, dry cleaners, gasoline stations, paint and solvent operations, and fossil fuel combustion sources. The TACs that are relevant to the implementation of the Project include DPM and airborne asbestos.

In August 1998, CARB identified DPM emissions from diesel-fueled engines as a TAC. In September 2000, CARB approved a comprehensive diesel risk reduction plan to reduce emissions from both new and existing diesel-fueled engines and vehicles. The goal of the plan was to reduce diesel PM₁₀ (inhalable particulate matter) emissions and the associated health risk by 75 percent in 2010 and by 85 percent by 2020. The plan identified 14 measures that target new and existing on-road vehicles (e.g., heavy duty trucks and buses, etc.), off-road equipment (e.g., graders, tractors, forklifts, sweepers, and boats), portable equipment (e.g., pumps, etc.), and stationary engines (e.g., stand-by power generators, etc.).

Tanner Air Toxics Act and Air Toxics Hot Spots Information and Assessment Act

CARB's Statewide comprehensive air toxics program was established in 1983 with Assembly Bill (AB 1807), the Toxic Air Contaminant Identification and Control Act (Tanner Air Toxics Act of 1983). AB 1807 created California's program to reduce exposure to air toxics and sets forth a formal procedure for CARB to designate substances as TACs. Once a TAC is identified, CARB adopts an airborne toxics control measure for sources that emit designated TACs. If there is a safe threshold for a substance at which there is no

toxic effect, the control measure must reduce exposure to below that threshold. If there is no safe threshold, the measure must incorporate toxics best available control technology to minimize emissions.

CARB also administers the state's mobile source emissions control program and oversees air quality programs established by state statute, such as AB 2588, the Air Toxics Hot Spots Information and Assessment Act of 1987. Under AB 2588, TAC emissions from individual facilities are quantified and prioritized by the air quality management district or air pollution control district. High-priority facilities are required to perform a health risk assessment (HRA) and, if specific thresholds are exceeded, required to communicate the results to the public in the form of notices and public meetings. In September 1992, the act was amended by Senate Bill 1731, which required facilities that pose a significant health risk to the community to reduce their risk through a risk management plan.

Regional

Imperial County Air Pollution Control District

The ICAPCD is the agency responsible for monitoring air quality, as well as planning, implementing, and enforcing programs designed to attain and maintain State and federal ambient air quality standards in the district. ICAPCD is responsible for regulating stationary sources of air emissions in Imperial County and is responsible for establishing stationary source permitting requirements and ensuring that new, modified, or relocated stationary sources do not create net emission increases. Stationary sources that have the potential to emit air pollutants into the ambient air are subject to the rules and regulations adopted by ICAPCD. Monitoring of ambient air quality in Imperial County began in 1976. Since that time, monitoring has been performed by ICAPCD, CARB, and private industry. Six monitoring sites are in Imperial County, from Niland to Calexico. The ICAPCD has developed the following plans to achieve attainment for air quality ambient standards.

- **2009 Imperial County Plan for PM₁₀.** Imperial Valley is classified as nonattainment for federal and state PM₁₀ standards. As a result, ICAPCD was required to develop a PM₁₀ Attainment Plan. The final plan was adopted by ICAPCD on August 11, 2009 (ICAPCD 2009).
- **2013 Imperial County Plan for 2006 24-hour PM_{2.5} for Moderate Nonattainment Area.** USEPA designated Imperial County as nonattainment for the 2006 24-hr PM_{2.5} standard, effective December 14, 2009. The 2013 PM_{2.5} SIP demonstrates attainment of the 2006 PM_{2.5} NAAQS "but-for" transport of international emissions from Mexicali, Mexico. The City of Calexico, California, shares a border with the City of Mexicali. Effective July 1, 2014, the City of Calexico was designated nonattainment, while the rest of the SSAB was designated attainment (ICAPCD 2014).
- **2017 Imperial County Plan for 2008 8-hour Ozone Standard.** Because of Imperial County's "moderate" nonattainment status for 2008 federal 8-hour O₃ standards, ICAPCD was required to develop an 8-hour Attainment Plan for O₃ (ICAPCD 2017). The plan includes control measures that are an integral part of how the ICAPCD currently controls the ROG and NO_x emissions within the O₃ nonattainment areas. The overall strategy includes programs and control measures which represent the implementation of reasonable available control technology (40 CFR 51.912) and the assurance that stationary sources maintain a net decrease in emissions.
- **2018 Imperial County Plan for PM₁₀.** Imperial Valley is classified as nonattainment for federal and State PM₁₀ standards. The 2018 SIP maintained previously adopted fugitive dust control measures (Regulation VIII) that were approved in the Imperial County portion of the California SIP in 2013 (see above) (ICAPCD 2018a).

- **2018 Imperial County Plan for PM_{2.5}.** U.S. EPA designated Imperial County as nonattainment for the 2018 24-hr PM_{2.5} standard. The 2018 PM_{2.5} SIP concluded that the majority of the PM_{2.5} emissions resulted from transport in nearby Mexico. Specifically, the SIP demonstrates attainment of the 2006 PM_{2.5} NAAQS “but for” the transport of international emissions from Mexicali, Mexico. In accordance with the CCAA, the PM_{2.5} SIP satisfies the attainment demonstration requirement satisfying the provisions of the CCAA (ICAPCD 2018b).

In addition to the above plans, the ICAPCD is working cooperatively with counterparts from Mexico to implement emissions reductions strategies and projects for air quality improvements at the border. The two countries strive to achieve these goals through local input from states, county governments, and citizens. Within the Mexicali and Imperial Valley areas, an air quality task force has been organized to address those issues unique to the border region known as the Mexicali/Imperial air shed. Membership includes representatives from federal, State, and local governments from both sides of the border, as well as representatives from academia, environmental organizations, and the general public. This group was created to promote regional efforts to improve the air quality monitoring network, emissions inventories, and air pollution transport modeling development, as well as the creation of programs and strategies to improve air quality.

Imperial County Air Pollution Control District

ICAPCD has the authority to adopt and enforce regulations dealing with controls for specific types of sources, emissions or hazardous air pollutants, and new source review. The ICAPCD rules and regulations are part of the SIP and are separately enforceable by the EPA.

Rule 106 – Abatement. The Board may, after notice and a hearing, issue, or provide for the issuance by the Hearing Board, of an order for abatement whenever the District finds that any person is in violation of the rules and regulations limiting the discharge of air contaminants into the atmosphere.

Rule 107 – Land Use. The purpose of this rule is to provide ICAPCD the duty to review and advise the appropriate planning authorities within the District on all new construction or changes in land use which the Air Pollution Control Officer believes could become a source of air pollution problems.

Rule 201 – Permits Required. The construction, installation, modification, replacement, and operation of any equipment that may emit or control air contaminants require ICAPCD permits.

Rule 207 – New and Modified Stationary Source Review. Establishes preconstruction review requirements for new and modified stationary sources to ensure the operations of equipment does not interfere with attainment or maintenance of ambient air quality standards.

Rule 208 – Permit to Operate. Gives ICAPCD authority to inspect and evaluate the facility to ensure the facility has been constructed or installed and will operate to comply with the provisions of the Authority to Construct permit and comply with all applicable laws, rules, standards, and guidelines.

Rule 310 – Operational Development Fee. Provides ICAPCD with a sound method for mitigating the emissions produced from the operation of new commercial and residential development projects throughout the County of Imperial and incorporated cities. All project proponents have the option to either provide off-site mitigation, pay the operational development fee, or do a combination of both. This rule will assist ICAPCD in attaining the state and federal ambient air quality standards for PM₁₀ and O₃.

Rule 401 – Opacity of Emissions. Sets limits for release or discharge of emissions into the atmosphere, other than uncombined water vapor, that are dark or darker in shade as designated as No.1 on the Ringelmann Chart; or obscure an observer's view to a degree equal to or greater than smoke does as compared to No.1 on the Ringelmann Chart, for a period or aggregated period of more than three minutes in any hour.

Rule 403 – General Limitations on the Discharge of Air Contaminants. Rule 403 sets forth limitations on emissions of pollutants, including particulate matter, from individual sources.

Rule 407 – Nuisance. Rule 407 prohibits a person from discharging from any source whatsoever such quantities of air contaminants or other material which cause injury, detriment, nuisance or annoyance to any considerable number of persons or to the public, or which endanger the comfort, repose, health or safety of any such persons or the public, or which cause, or have a natural tendency to cause, injury or damage to business or property.

Rule 801 – Construction and Earthmoving Activities. Rule 801 aims to reduce the amount of PM₁₀ entrained in the ambient air as a result of emissions generated from construction and other earthmoving activities by requiring actions to prevent, reduce, or mitigate PM₁₀ emissions. This rule applies to any construction and other earthmoving activities, including, but not limited to, land clearing, excavation related to construction, land leveling, grading, cut and fill grading, erection or demolition of any structure, cutting and filling, trenching, loading or unloading of bulk materials, demolishing, drilling, adding to or removing bulk of materials from open storage piles, weed abatement through disking, back filling, travel on-site and travel on access roads to and from the site.

Regulation VIII – Fugitive Dust Rules. Regulation VIII sets forth rules regarding the control of fugitive dust, including fugitive dust from construction activities. The regulation requires implementation of fugitive dust control measures to reduce emissions from earthmoving, unpaved roads, handling of bulk materials, and control of track-out/carry-out dust from active construction sites. Best Available Control Measures to reduce fugitive dust during construction and earthmoving activities include but are not limited to:

- Phasing of work in order to minimize disturbed surface area
- Application of water or chemical stabilizers to disturbed soils
- Construction and maintenance of wind barriers
- Use of a track-out control device or wash down system at access points to paved roads

Compliance with Regulation VIII is mandatory for all construction sites, regardless of size; however, such compliance does not constitute mitigation under the reductions attributed to environmental impacts. In addition, compliance for a project requires (1) the development of a dust control plan for the construction and operational phase; and (2) notification to ICAPCD 10 days prior to the commencement of any construction activity. Furthermore, any use of engines or generators of 50 horsepower or greater may require a permit through ICAPCD.

4.2.3 Thresholds of Significance

To assist in determining whether a project would have a significant effect on the environment, the County utilizes the State CEQA Guidelines Appendix G Guidelines. Appendix G states that a project may be deemed to have an air quality impact if it would:

- Threshold a) Conflict with or obstruct implementation of the applicable air quality plan?**
- Threshold b) Result in a cumulatively considerable net increase of any criteria pollutant for which the project region is nonattainment under an applicable federal or State ambient air quality standard?**
- Threshold c) Expose sensitive receptors to substantial pollutant concentrations?**
- Threshold d) Result in other emissions (such as those leading to odors) adversely affecting a substantial number of people?**

Please refer to **Section 6.1: Effects Found Not to Be Significant** for an evaluation of those topics that were determined to be less than significant or have no impact and do not require further analysis in the EIR.

4.2.4 Methodology

The air quality impacts related to construction and daily operations were calculated through use of the California Emissions Estimator Model (CalEEMod) Version 2020.4.0, and the operational TAC impacts were calculated through entering the TAC emissions calculated by the CalEEMod model into the USEPA AERMOD air dispersion model to calculate the TAC concentrations at the nearest sensitive receptors. The air quality modeling and air model printouts are provided in the Air Quality Analysis (Appendix B).

4.2.5 Project Impact Analysis

- Threshold a) Conflict with or obstruct implementation of the applicable air quality plan?**

The Proposed Project would conflict with the applicable air quality plans, which include the 2017 Ozone SIP, 2018 PM₁₀ Plan, and 2018 PM_{2.5} SIP that are described above in the air quality regulatory setting. The *CEQA Air Quality Handbook* (ICAPCD Handbook), prepared by ICAPCD, December 12, 2017, details that for any project that emits less than the screening thresholds provided in Table 4.2-3 for construction and operations, the Project is compliant with the most current ozone and PM₁₀ attainment plans and no further demonstration of compliance with these plans is required.

Table 4.2-3: ICAPCD Thresholds of Significance

	Pollutant Emissions (Pounds/Day)					
	ROG	NOx	CO	SO ₂	PM ₁₀	PM _{2.5}
Construction	75	100	550	—	150	55
Operation	55	55	550	150	150	55

Source: ICAPCD, <http://www.co.imperial.ca.us/AirPollution/PlanningDocs/CEQAHandbk.pdf>.

The Proposed Project's construction and operational air emissions have been calculated in the Air Quality Analysis (Appendix B). Table 4.2-4 shows the maximum daily emissions for each year of construction activities for the Proposed Project with implementation of the Project Design Features shown above in Section 2.10 of the Project Description. Table 4.2-4 shows that construction activities for the Proposed Project will exceed the ICAPCD thresholds of significance.

Table 4.2-4: Construction-Related Criteria Pollutant Emissions (Unmitigated)

Construction Year	Pollutant Emissions in Pounds per Day					
	ROG	NO _x	CO	SO ₂	PM ₁₀	PM _{2.5}
2022	13.0	145	90	0.37	34.7	19.4
2023	34.0	258	249	0.78	51.6	26.7
2024	76.3	106	144	0.36	14.4	8.50
Significance Thresholds	75	100	550	—	150	55
Exceed thresholds?	No	Yes	No	—	No	No

Source: CalEEMod Version 2020.4.0.

The operational daily criteria pollutant emissions for the Proposed Project have been calculated with implementation of the Project Design Features shown in Section 2.10 of the Project Description, and the results are shown in Table 4.2-5 for the operational-related emissions and Table 4.2-6 for operations-related start up emissions.

Table 4.2-5: Operational-Related Criteria Pollutant Emissions

Emissions Sources	Pollutant Emissions in Pounds per Day					
	ROG	CO	NO _x	SO ₂	PM ₁₀	PM _{2.5}
Hell's Kitchen PowerCo1						
Employee vehicles	0.06	4.12	0.28	0.01	0.06	0.02
Haul trucks	<0.01	0.01	0.17	<0.01	0.03	0.01
Vendor vehicles	0.09	1.39	1.31	0.01	0.13	0.06
On-site equipment	0.63	22.8	1.56	<0.01	0.27	0.21
Area sources	2.57	0.01	<0.01	<0.01	<0.01	<0.01
Cooling towers	—	—	—	—	20.2	9.60
Standby/Black start diesel generator Testing (when operating)	3.37	46.1	8.87	6.51	0.53	0.53
Standby diesel generator testing	4.27	58.4	11.2	8.25	0.67	0.67
Standby fire pumps testing	0.42	5.73	1.10	0.81	0.07	0.07
Subtotal Hell's Kitchen PowerCo 1	11.4	139	24.5	15.6	21.9	11.2
Hell's Kitchen LithiumCo1						
Employee vehicles	0.23	16.9	1.13	0.05	0.24	0.08
Haul trucks	0.12	0.53	6.01	0.16	0.96	0.38
On-site equipment	0.14	1.43	1.33	<0.01	0.07	0.06
Area sources	14.0	0.06	<0.01	<0.01	<0.01	0.00
Cooling towers	—	—	—	—	25.2	12.0
Standby diesel generator testing	0.90	12.3	2.37	1.74	0.14	0.14
Rock muffler	6.70	—	—	—	—	—
Material transfer and packaging	—	—	—	—	0.78	0.27
Subtotal Hell's Kitchen LithiumCo 1	22.1	31.2	10.8	1.95	27.4	12.9

Grand total	33.5	170	35.4	17.5	49.3	24.1
ICAPCD significance thresholds	55	550	55	150	150	55
Exceed thresholds?	No	No	No	No	No	No

Source: CalEEMod Version 2020.4.2.

Table 4.2-6: Operational-Related Start Up Criteria Pollutant Emissions

Emissions Sources	Pollutant Emissions in pounds/day					
	ROG	CO	NO _x	SO ₂	PM ₁₀	PM _{2.5}
Standby/Black Start Diesel Engine Generator (when operating)	40.4	553	106	78.1	6.39	6.39
CEQA Significance Threshold	55	550	55	150	150	55
Exceeds CEQA Significance Threshold?	No	Yes	Yes	No	No	No
Rule 207, Section C.2.g Threshold?	137	137	137	137	137	137
Exceeds Rule 207, Section C.2.g threshold?	No	Yes	No	No	No	No

Source: CalEEMod Version 2020.4.0.

As shown above, both construction and operational emissions created from the Proposed Project would not be within their respective ICAPCD thresholds. According to the ICAPCD Handbook, projects that are within the ICAPCD thresholds are consistent with the regional air quality plans. Furthermore, the standard mitigation measures provided in the ICAPCD Handbook have been incorporated into the Project Description for the Proposed Project as Project Design Features (see Section 2.10), and the Proposed Project will be required to implement all of the ICAPCD Regulation VIII, fugitive dust control measures during construction and operation of the Proposed Project. Furthermore, any stationary sources of emissions operated on site will be required to adhere to ICAPCD Rule 207, New and Modified Stationary Source Review and Rule 201 that require permits to construct and operate stationary sources. The Proposed Project would have the potential to conflict with or obstruct implementation of the applicable air quality plans. However, the Project would implement mitigation measures AQ-1 and AQ-2 to reduce CO and NO_x emissions. Table 4.2-7 shows that once mitigated, all criteria pollutants would be reduced to a level that is less than significant. Therefore, with implementation of the above mitigation measure, impacts to air quality plans would be reduced to a level less than significant.

Table 4.2-7: Construction-Related Criteria Pollutant Emissions (Mitigated)

Construction Year	Pollutant Emissions in pounds/day					
	ROG	NO _x	CO	SO ₂	PM ₁₀	PM _{2.5}
2022	3.88	79.0	108	0.37	17.4	6.88
2023	18.6	95.0	307	0.78	28.8	11.5
2024	70.8	49.3	175	0.36	11.5	3.85
Significance Thresholds	75	100	550	—	150	55
Exceed Thresholds?	No	No	No	—	No	No

Source: CalEEMod Version 2020.4.0.

Threshold b) Result in a cumulatively considerable net increase of any criteria pollutant for which the project region is nonattainment under an applicable federal or State ambient air quality standard?

The Proposed Project would not result in a cumulatively considerable net increase of any criteria pollutant for which the Project region is in nonattainment under an applicable federal or State ambient air quality standard.

The ICAPCD Handbook provides project emissions limits that are provided in Table 4.2-3 for both construction and operation of projects within the County. The ICAPCD Handbook details that if the air emissions created from a project are below the air emissions thresholds shown in Table 4.2-3, then the Proposed Project's air emissions would result in a less than significant impact, provided that all standard mitigation measures listed in the ICAPCD Handbook are implemented as well as all applicable ICAPCD rules controlling emissions are adhered to.

As shown in Table 4.2-4, construction activities for the Proposed Project will not exceed the ICAPCD thresholds of significance for construction. Also, as shown in Table 4.2-5, daily operations of the Proposed Project will not exceed the ICAPCD thresholds of significance for operations. Table 4.2-6 provides the start-up emissions for the Proposed Project, which would exceed CO and NOx emissions standards set by the ICAPCD.

The standard measures from the ICAPCD Handbook for both construction and operations have been incorporated into the Project Description as Project Design Features (see Section 2.10 of the Project Description). Furthermore, the Proposed Project would be required to implement all of the ICAPCD Regulation VIII, fugitive dust control measures during construction and operation of the Proposed Project. Furthermore, any stationary sources of emissions operated on site will be required to adhere to ICAPCD Rule 207, New and Modified Stationary Source Review and Rule 201 that require permits to construct and operate stationary sources. Therefore, the Proposed Project would result in a less than significant cumulatively considerable net increase of any criteria pollutant.

Table 4.2-8: Estimated CO Concentrations ($\mu\text{g}/\text{m}^3$) from Startup Operations

Criteria	1-Hour CO	8-Hour CO
Off-site receptor (Project)	718	480
Background concentration	1,495	889
Total concentration	2,213	1,369
CAAQS/NAAQS	23,000/40,000	10,000/10,000
Significant (Yes or No)?	No	No

During start-up conditions, air emissions of CO and NO_x associated with the HKP1 were estimated to exceed the CEQA significance thresholds and air emissions of CO associated with HKP1 were estimated to exceed the Rule 207, Section C.2.g thresholds. ICAPCD Rule 207 Section C.2 requires emissions offsets for sources with pollutant emissions that exceed 137 pounds per day. Pursuant Rule 207, Section C.2.g, the

Proposed Project has prepared a CO Air Quality Impact Analysis (Part F of Rule 207), which demonstrates that the HKP1 would not cause or contribute to a violation of the CO NAAQS/CAAQS. The 1-hour and 8-hour CO modeled concentration plus background concentrations are 2,213 and 1,369 micrograms per cubic meter ($\mu\text{g}/\text{m}^3$), respectively, which are well below the NAAQS/CAAQS. Therefore, the startup operations associated with the proposed standby/black-start diesel engine generator would have a less than significant impact on CO concentrations.

4.2.6 Cumulative Impacts

Cumulative impacts are defined in CEQA as “two or more individual effects which, when considered together, are considerable or which compound or increase other environmental impacts” (CEQA Guidelines Section 15355). Stated in another way, “a cumulative impact consists of an impact which is created as a result of the combination of the project evaluated in the EIR together with other projects causing relating impacts” (CEQA Guidelines Section 15130 [a][1]).

Cumulative impacts would exist when either direct air quality impacts or multiple construction projects occur within the same area simultaneously. If a project were to produce air quality emissions simultaneously to a nearby construction project, the addition of both project emissions to the environment could exceed significance thresholds. For this Project, the construction emissions were found to be less than significant. If a nearby project were to be under construction at the same time, that project would need to produce an additive amount of emissions close to the Project site such that emissions would exceed thresholds. No cumulatively considerable construction projects are within one mile of the site. Given this, a less than significant cumulative air quality impact would be expected during construction. The Proposed Project site is zoned medium industrial and open space, and the Project has been designed to be consistent with this zoning designation. The Project would generate less than significant direct and cumulative air quality impacts with mitigation incorporated. Given this, since the Proposed Project would not have any significant direct impacts and would not have any significant cumulative impacts, the Project would not conflict with either the County’s Air Quality Management Plan or SIP.

4.2.7 Mitigation Measures

The following mitigation measures are proposed as part of threshold (a), to reduce air quality related impacts to a level less than significant. A fugitive dust plan would help control sources of PM during construction and operations. A combustion exhaust emissions control program would reduce the construction-related NO_x emissions. Full details regarding these mitigation measures are listed below:

- MM-AQ-1** Prior to commencing construction, the Project proponent shall submit a Dust Control Plan to the Imperial County Air Pollution Control District (ICAPCD) for approval identifying all sources of PM_{10} and $\text{PM}_{2.5}$ emissions and associated mitigation measures during the construction and operational phases of the Project. The Project proponent shall submit a Construction Notification Form to the ICAPCD ten days prior to the commencement of any earthmoving activity. This plan would provide a detailed list of control measures to reduce fugitive emissions from construction and operational activities, including but not limited to watering of unpaved roads, vehicle speed limits, windbreaks, transport container covers, and cleaning and sweeping procedures. The Dust Control Plan submitted to the ICAPCD shall meet all applicable requirements for control of

fugitive dust emissions, including the following measures designed to achieve the no greater than 20-percent opacity performance standard for dust control:

- All disturbed areas, including bulk material storage, that is not being actively used shall be effectively stabilized; and visible emissions shall be limited to no greater than 20 percent opacity for dust emissions by using water, chemical stabilizers, dust suppressants, tarps, or other suitable material, such as vegetative groundcover. Bulk material is defined as earth, rock, silt, sediment, and other organic and/or inorganic material consisting of or containing PM with 5 percent or greater silt content.
- All on- and off-site unpaved roadway segments being used for 50 or more average vehicle trips per day shall be effectively stabilized, and visible emissions shall be limited to no greater than 20 percent opacity for dust emissions by the use of restricting vehicle access, paving, chemical stabilizers, dust suppressants, and/or watering.
- All unpaved traffic areas one acre or more in size with 75 or more average vehicle trips per day shall be effectively stabilized, and visible emissions shall be limited to no greater than 20 percent opacity for dust emissions by paving, chemical stabilizers, dust suppressants, and/or watering.
- All track-out or carry-out, which includes bulk materials that adhere to the exterior surfaces of motor vehicles and/or equipment (including tires) that may then fall onto the pavement on paved public roads, shall be cleaned at the end of each workday or immediately when mud or dirt extends a cumulative distance of 50 linear feet or more onto a paved road in an urban area.
- Movement of bulk material handling or transfer shall be stabilized prior to handling or at points of transfer with application of sufficient water or chemical stabilizers, or by sheltering or enclosing the operation and transfer line except, where such material or activity is exempted from stabilization by the rules of ICAPCD.
- Any temporary unpaved road shall be effectively stabilized and visible emissions shall be limited to no greater than 20 percent opacity for dust emission by paving, chemical stabilizers, dust suppressants and/or watering.
- Fugitive dust generation during construction would be minimized by watering as needed to meet Imperial County standards for fugitive dust control. To further reduce fugitive dust emissions, vehicle traffic on unpaved roads would be kept below 15 miles per hour.
- During grading, the Project would be watering actively disturbed on-site areas at least three times a day as necessary to reduce fugitive dust emissions.
- Access to the site would be via Highway 111, McDonald Road, and Davis Road. All workers, vendors and haul trucks would be required to utilize these roadways.
- An agreement between County of Imperial Public Works and the applicant would be established requiring the applicant to improve a two-mile section of the unpaved Davis Road adjacent to the site by installing a 12- to 18-inch-thick engineered Class II base section. In addition, at the request of the

County, the applicant would utilize the improved section during construction and would wet the site continuously during construction activities. The road would be immediately paved after construction prior to operations of the plant to avoid damaging a new asphalt section.

- During construction, the Project would be required to maintain daily dust suppression at the two-mile section of Davis Road adjacent to the site using a water truck operating continuously while vehicles are using the road.
- The Project would provide wheel shakers at the exit(s) of the construction site to minimize dust being tracked off the Project site and onto the roadways.
- Operational on-road trips shall not operate on unpaved dirt roads.

MM-AQ-2

Prior to commencing construction, the Project proponent shall submit and commit to a Combustion Exhaust Emissions Control Program. This plan would provide a detailed list of control measures to minimize exhaust emissions during Project construction, including but not limited to fuel use, engine maintenance, and procedures:

- The Exhaust Emission Control Plan shall provide a detailed list of control measures to minimize exhaust emissions during Project construction, including but not limited to fuel use, engine maintenance, and procedures.
- The construction contractor shall be required to utilize construction equipment using diesel engines less than 50 horsepower with certified NO_x emissions rated as Tier 3 or better. All off-road diesel-powered equipment greater than 50 horsepower that is used on-site during construction of the Project shall meet USEPA Tier 4 offroad emission standards and Level 3 diesel particulate filters.
- When commercially available, fossil fueled equipment shall be replaced with electrically driven equivalents (provided they are not run via a portable generator set).
- Idling times shall be minimized either by shutting equipment off when not in use or reducing the maximum idling time to five minutes (as required by the California Airborne Toxics Control Measure, Title 13, Section 2485 of California Code of Regulations). Clear signage shall be provided for construction workers at all access points.
- All construction equipment shall be maintained and properly tuned in accordance with manufacturer's specifications. All equipment shall be checked by a certified mechanic and determined to be running in proper condition prior to operation.
- Where access to alternative sources of power are available, portable diesel engines shall be prohibited. Haul truck shall be 2010 model year trucks or newer (a gross vehicle weight rating of at least 14,001 pounds), or best commercially available equipment, that meet the California Air Resources Board 2010 engine emissions standards at 0.01 g/horsepower-hour of particulate matter and 0.20 g/horsepower-hour of NO_x emissions or newer, cleaner trucks.

- The volatile organic compounds (VOC) architectural coating limits specify that the use paints and solvents with a VOC content of 100 grams per liter or less for interior and 150 grams per liter or less for exterior surfaces shall be required.

4.2.8 Level of Significance After Mitigation

With the implementation of Mitigation Measures AQ-1 and AQ-2, the Project would ensure potential impacts related to air quality would remain less than significant.

4.3 BIOLOGICAL RESOURCES

This section provides a background discussion of the regulatory framework, the affected environment, and impacts to biological resources. The regulatory framework discussion focuses on the federal, State, and local regulations that apply to plants, animals, and sensitive habitats. The affected environment discussion focuses on the topography and soils; general vegetation; general wildlife; sensitive biological resources; riparian habitat and sensitive natural communities; jurisdictional waters; and habitat connectivity and wildlife corridors. Information contained in this section is summarized from the Biological Resources Technical Report (Appendix C of this EIR) and aquatic resources delineation reports (Appendices D1 and D2 of this EIR) for the Hell's Kitchen PowerCo 1 and Hell's Kitchen LithiumCo 1 Projects, Imperial County, California.

4.3.1 Existing Environmental Setting

Regional Setting

An extensive range of vegetation communities have been identified in the County, including native and nonnative communities on which sensitive and common plant and wildlife species are dependent. Native communities include wetland and riparian habitats within fresh and saltwater systems and high and low elevation woodland and scrub habitats, some with saline and alkali soil conditions. Nonnative communities include agriculture, annual grasslands, and tamarisk or salt cedar stands.

A number of sensitive vegetation communities, identified by the California Department of Fish and Wildlife (CDFW) and others as rare and worthy of consideration in California, occur in Imperial County. Of the total 2,942,080 acres in the County, approximately 215,220 acres include sensitive habitats. Sensitive vegetation and habitats are a conservation priority for local, State, and federal regulatory agencies because they have limited distribution and support a variety of sensitive plants and wildlife.

Several areas in Imperial County have been designated as environmentally sensitive areas by various public agencies or entities. These include US Fish & Wildlife Service (USFWS)-designated critical habitat, USFWS National Wildlife Refuges, Bureau of Land Management (BLM), National Landscape Conservation System (NLCS) lands, BLM Desert Wildlife Management Areas (DWMAs) and Areas of Critical Environmental Concern (ACECs), wilderness and wildlife areas, State parks, and other protective designations by federal and State agencies in the County. Many of these areas have development restrictions or prohibitions to facilitate conservation of biological resources or other sensitive resources.

A number of species listed or candidates for listing as endangered or threatened under the Endangered Species Act or California Endangered Species Act or listed as rare under the California Native Plant Protection Act, have been recorded or potentially occur in Imperial County. Several California Species of Special Concern are of particular conservation focus within Imperial County including the burrowing owl and flat-tailed horned lizard. Approximately two-thirds of the burrowing owl population in California occurs in agricultural areas in the Imperial Valley. There are three regional populations of flat-tailed horned lizard in California; two of these (representing the majority of the range in the State) occur in Imperial County. These are on the west side of the Salton Sea/Imperial Valley and on the east side of the Imperial Valley; both populations extend south into Mexico.

Project Site

The Project development area consists of approximately 74 acres of potential development area within CTR's geothermal lease area (approximately 64 acres within the Stage 1 area and approximately 10 acres within the Well Pad 4 and S-Berm Road area) and a 200-foot-wide right-of-way (ROW) corridor for the 2-mile-long gen-tie and power line to the Imperial Irrigation District (IID) interconnect station at Hudson Ranch. The Project development area is located adjacent to and east of the Salton Sea within Imperial County, California, approximately 3.6 miles west from the town of Niland (Figure 2.0-1 Project Location and Vicinity). The Project is development area located within the U.S. Geological Survey (USGS) *Niland*, California 7.5-minute topographic quadrangle. The geothermal development area and lithium facilities are located within Sections 11 and 12 of Township 11 South, Range 13 East, San Bernardino Base Meridian, and the gen-tie/power line ROW corridor is located within Sections 12, 13, and 14. The majority of the proposed HKP1 and HKL1 facilities are located immediately west of Davis Road, with administrative buildings and warehouses located east of Davis Road. The 230-kilovolt (kv) gen-tie line for HKP1 will run from Noffsinger Road approximately 2 miles south to McDonald Road and then will run approximately 0.3 miles east to Hudson Ranch. The gen-tie line would be located east of Davis Road and north of McDonald Road, within the IID's transmission ROW and within new ROW. The power line to supply power to the HKL1 facilities would be collocated on the HKP1 transmission structures/poles. The layout of the Project is shown in the Project Site Plan (Figure 2.0-4).

Elevations in the Project development area range from 225 to 223 feet below mean sea level (bmsl). The topography drops off very gradually to the west and north with a high topographic area in the southern portion of the Project development area (223 feet bmsl). According to the results from the United States Department of Agriculture (USDA) Natural Resource Conservation Service (NRCS) Web Soil Survey, the Project development area is located within the Imperial Valley Area, CA683 soil survey. Soils in the Project development area consist of fluvaquents saline, Imperial silty clay wet, and Imperial-Glenbar silty clay loams wet. Soil data is not available for a majority of the Well Pad 4 and S-Berm Road area. Fluvaquents saline is a hydric soil (USDA 2022).

The Project is located within the designated boundaries of the Desert Renewable Energy Conservation Plan. However, the Project is not located within or adjacent to an Area of Critical Environmental Concern (BLM 2023).

4.3.2 Regulatory Setting

Federal

Federal Endangered Species Act

The federal ESA protects federally listed threatened and endangered species and their habitats from unlawful take and ensures that federal actions do not jeopardize the continued existence of a listed species or result in the destruction or adverse modification of designated critical habitat. Under the ESA, "take" is defined as to harass, harm, pursue, hunt, shoot, wound, kill, trap, capture, or collect, or to attempt to engage in any such conduct. USFWS regulations define harm to mean "an act which actually kills or injures wildlife" (50 CFR 17.3).

Migratory Bird Treaty Act

The Migratory Bird Treaty Act (MBTA) prohibits the kill or transport of native migratory birds, or any part, nest, or egg of any such bird unless allowed by another regulation adopted in accordance with the MBTA. The prohibition applies to birds included in the respective international conventions between the U.S. and Great Britain, the U.S. and Mexico, the U.S. and Japan, and the U.S. and Russia. Disturbances that cause nest abandonment and/or loss of reproductive effort or the loss of habitats upon which these birds depend may be a violation of the MBTA.

Bald and Golden Eagle Protection Act of 1940

The Bald Eagle Protection Act of 1940 protects bald eagle (*Haliaeetus leucocephalus*) and golden eagle (*Aquila chrysaetos*) by prohibiting the taking, possession, and commerce of such birds and establishes civil penalties for violation of this Act. 'Take' is defined as "pursue, shoot, shoot at, poison, wound, kill, capture, trap, collect, molest or disturb." 'Disturb' is defined as "to agitate or bother a bald or golden eagle to a degree that causes, or is likely to cause, based on the best scientific information available: (1) injury to an eagle, (2) a decrease in its productivity, by substantially interfering with normal breeding, feeding, or sheltering behavior, or (3) nest abandonment, by substantially interfering with normal breeding, feeding, or sheltering behavior" (72 Federal Register [FR] 31132; 50 CFR 22.3). All activities that may disturb or incidentally take an eagle or its nest as a result of an otherwise legal activity must be permitted by the USFWS under this Act.

Clean Water Act (Section 404 Permit)

The Clean Water Act establishes a program to regulate the discharge of dredge and fill material into waters of the U.S., including wetlands. Activities regulated under this program include fills for development, water resource projects (e.g., dams and levees), infrastructure development (e.g., highways and airports), and conversion of wetlands to uplands for farming and forestry. Either an individual 404b permit or authorization to use an existing USACE Nationwide Permit will need to be obtained if any portion of the construction requires fill into a river, stream, or stream bed that has been determined to be a jurisdictional waterway.

State

California Endangered Species Act

Provisions of CESA protect State-listed threatened and endangered species. CDFW regulates activities that may result in "take" of individuals ("take" means "hunt, pursue, catch, capture, or kill, or attempt to hunt, pursue, catch, capture, or kill"). Habitat degradation or modification is not expressly included in the definition of "take" under California FGC. Additionally, California FGC contains lists of vertebrate species designated as "fully protected" (California FGC §§ 3511 [birds], 4700 [mammals], 5050 [reptiles and amphibians], 5515 [fish]). Such species may not be taken or possessed.

In addition to state-listed species, CDFW has also produced a list of Species of Special Concern to serve as a "watch list." Species on this list are of limited distribution or the extent of their habitats has been reduced substantially such that threats to their populations may be imminent. Species of Special Concern may receive special attention during environmental review, but they do not have statutory protection.

Birds of prey are protected in California under California FGC. Section 3503.5 states it is “unlawful to take, possess, or destroy any birds of prey (in the order Falconiformes or Strigiformes) or to take, possess, or destroy the nest or eggs of any such bird except as otherwise provided by this Code or any regulation adopted pursuant thereto.” Construction disturbance during the breeding season could result in the incidental loss of fertile eggs or nestlings or otherwise lead to nest abandonment.

California Fish and Game Code Section 1600 (as amended)

California Fish and Wildlife Code Section 1600 regulates activities that substantially divert or obstruct the natural flow of any river, stream, or lake or use materials from a streambed. This can include riparian habitat associated with watercourses.

California Fish and Game Codes 3503, 3503.5, and 3513

Under Sections 3503, 3503.5, and 3513 of the California FGC, activities that would result in the taking, possessing, or destroying of any birds-of-prey, taking or possessing of any migratory nongame bird as designated by the MBTA, or the taking, possessing, or needlessly destroying of the nest or eggs of any raptors or non-game birds protected by the MBTA, or the taking of any non-game bird pursuant to FGC Section 3800 are prohibited. Additionally, the State further protects certain species of fish, mammals, amphibians and reptiles, birds, and mammals through CDFW’s Fully Protected Animals which prohibits any take or possession of classified species.

Native Plant Protection Act (California Fish and Game Code Sections 1900-1913)

California’s Native Plant Protection Act prohibits the taking, possessing, or sale within the State of any plant listed by CDFW as rare, threatened, or endangered. This allows CDFW to salvage listed plant species that would otherwise be destroyed.

Porter-Cologne Water Quality Control Act

Under the Porter-Cologne Water Quality Control Act, all projects proposing to discharge waste that could affect waters of the State must file a waste discharge report with the appropriate regional board. The Project falls under the jurisdiction of the Colorado River RWQCB.

California Environmental Quality Act

Title 14 CCR 15380 requires the identification of endangered, rare, or threatened species or subspecies of animals or plants that may be impacted by a project. If any such species are found, appropriate measures should be identified to avoid, minimize, or mitigate the potential effects of projects.

Local

Imperial County General Plan

The Conservation and Open Space Element of the Imperial County General Plan provides detailed plans and measures for the preservation and management of biological and cultural resources, soils, minerals, energy, regional aesthetics, air quality, and open space (County 2016). The purpose of this element is to recognize that natural resources must be maintained for their ecological value for the direct benefit to the public and to protect open space for the preservation of natural resources, the managed production

of resources, outdoor recreation, and for public health and safety. In addition, the purpose of this element is to promote the protection, maintenance, and use of the County’s natural resources with particular emphasis on scarce resources, and to prevent wasteful exploitation, destruction, and neglect of the state’s natural resources. Table 4.3-1 analyzes the consistency of the Project with specific policies contained in the Imperial County General Plan associated with preservation of biological resources. An analysis of the consistency of the Project with these goals, is provided in Section 4.3.6.

Table 4.3-1: Imperial County General Plan Consistency

General Plan Policies	Consistency with General Plan	Analysis
Conservation and Open Space Element		
<i>Open Space and Recreation Conservation</i>		
Policy No. 2 – The County shall participate in conducting detailed investigations into the significance, location, extent, and condition of natural resources in the County.	Consistent	A biological assessment has been conducted at the Project site to evaluate the Project’s potential impacts on biological resources. Burrowing owl (California Species of Special Concern) was identified within the survey area.
Program – Notify any agency responsible for protecting plant and wildlife before approving a project which would impact a rare, sensitive, or unique plant or wildlife habitat	Consistent	All necessary consultation and submittal of permit applications would be conducted with the applicable agencies, including CDFW, USFWS, and USACE, before any potential impact on the biological resources under their jurisdictions, including special status species or Waters of the U.S. Therefore, Project implementation would be consistent with this goal.
<i>Conservation of Environmental Resources for Future Generations</i>		
Goal 1 – Environmental resources shall be conserved for future generations by minimizing environmental impacts in all land use decisions and educating the public on their value.	Consistent	Project implementation would comply with all State and federal regulations protecting biological resources, which would include evaluation of resources on site and either avoiding or minimizing impacts on those resources to the extent feasible. Therefore, Project implementation would be consistent with this goal.
Objective 1.1 - Encourage uses and activities that are compatible with the fragile desert environment and foster conservation.	Consistent	Project implementation would not occur within any fragile desert habitats. Therefore, Project implementation would be consistent with this goal.
Objective 1.6 – Promote the conservation of ecological sites and preservation of cultural resource sites through scientific investigation and public education.	Consistent	A biological assessment has been conducted at the Project site to evaluate the Project’s potential impacts on biological resources.

Objective 2.4 - Use the CEQA and NEPA process to identify, conserve and restore sensitive vegetation and wildlife resources.	Consistent	CEQA review and approval would occur during the planning stages of the Project, and no construction activities would occur until the CEQA process has been completed. Therefore, Project implementation would be consistent with this goal.
Objective 2.6 - Attempt to identify, reduce, and eliminate all forms of pollution; including air, noise, soil, and water.	Consistent	All necessary consultation and submittal of permit applications would be conducted with the applicable agencies, including CDFW, USFWS, and USACE, before any potential impact on the biological resources under their jurisdictions, including special status species or Waters of the U.S. Therefore, Project implementation would be consistent with this goal.

Habitat Conservation Plans

The Project development area is not within the coverage areas of any HCP, NCCP, or other approved local, regional, or State habitat conservation plan.

Jurisdictional Waters

USACE Jurisdictional Waters

In accordance with Section 404 of the Clean Water Act (CWA), USACE regulates the discharge of dredged or fill material into waters of the United States (WOUS). On April 21, 2020, the U.S. Environmental Protection Agency (EPA) and USACE published the Navigable Waters Protection Rule in the Federal Register to finalize a revised definition of WOUS under the Clean Water Act (USEPA 2020). However, the USACE and EPA halted implementation of the NWPR in 2021 and are interpreting waters of the United States consistent with the pre-2015 regulatory definition until further notice.

Section 404 of the CWA regulates the discharge of dredged or fill material into WOUS. The CWA grants dual regulatory authority of Section 404 to the U.S. Environmental Protection Agency (EPA) and U.S. Army Corps of Engineers (Corps). The Corps is responsible for issuing and enforcing permits for activities in jurisdictional Waters in conjunction with prior permitting authorities in navigable Waters under the Rivers and Harbors Act of 1899. The EPA is responsible for providing oversight of the permit program. In this capacity, the EPA has developed guidelines for permit review (Section 404 [b][1] Guidelines) and has the authority to veto permits by designating certain sites as non-fill areas (Section 404[c] of the CWA). The EPA also has enforcement authority under Section 404.

The Corps generally extends its jurisdiction to all areas meeting the criteria for Waters of the United States. WOUS exclude isolated waters that are not hydrologically connected to navigable rivers and streams. Additionally, Corps jurisdiction over wetlands created by artificial means is decided on a case-by-case basis. The Corps generally does not assume jurisdiction over areas that are (1) artificially irrigated and would revert to upland habitat if the irrigation ceased; or (2) artificial lakes and ponds created by excavating and/or diking of dry land to collect and retain water, used exclusively for such purposes as

stock watering, irrigation, settling basins, or rice growing. Other areas that are not considered jurisdictional WOUS include waste treatment ponds, ponds formed by construction activities including borrow pits until abandoned, and ponds created for aesthetic reasons such as reflecting or ornamental ponds (33 CFR Part 328.3).

Wetlands and Wetland Parameters

According to the USACE Wetland Delineation Manual, wetlands are defined as “those areas that are inundated or saturated by surface or groundwater at a frequency and duration sufficient to support, and that under normal circumstances, do support a prevalence of vegetation typically adapted for life in saturated soil conditions” (USACE 2008).

The USACE published the 1987 Wetland Delineation Manual (USACE 1987) to guide its field personnel in determining jurisdictional wetland boundaries. This Corps published regional supplements to the wetland delineation manual, including the 2008 Arid West Regional supplement, which covers southern California and other portions of the southwest United States (USACE 2008). The 1987 Wetland Manual and the 2008 Arid West Supplement provide the legally accepted methodology for identification and delineation of USACE-jurisdictional wetlands in the Project development area.

Wetlands are delineated using three parameters: hydrophytic vegetation, wetland hydrology and hydric soils. According to USACE, indicators for all three parameters must normally be present to qualify as a wetland. Because there are situations in which one or more of the wetland parameters has been removed or altered due to recent natural events or human activities, the definition of a wetland includes the phrase “under normal circumstances”, taking into consideration atypical situations and problem areas that may lack one or more of the three criteria, yet still may be considered wetlands (USACE 1987).

Non-Wetland Waters

The USACE also requires the delineation of non-wetland jurisdictional WOUS. These waters must have strong hydrology indicators, such as the presence of seasonal flows and an ordinary high watermark (OHWM). Areas delineated as non-wetland jurisdictional waters include rivers, streams, lakes, and other areas that lack wetland vegetation and characteristics, but hold water.

Traditionally Navigable Waters

The Salton Sea was determined to be a traditionally navigable water in *Colvin v. United States* (U.S. District Court 2001). The court determined that the Salton Sea is a “navigable water” and WOUS that supports interstate commerce through tourism.

CDFW Jurisdictional Waters

Under Sections 1600–1607 of the Fish and Game Code, CDFW regulates activities that would divert or obstruct the natural flow or substantially change the bed, channel, or bank of any river, stream, or lake that supports fish or wildlife. CDFW has jurisdiction over riparian habitats (e.g., riparian woodland) associated with watercourses. CDFW jurisdictional waters are delineated by the distances between the outer edges of riparian vegetation or at the tops of the banks of streams or lakes, whichever is wider. CDFW may also assert jurisdiction over modified or man-made waterways; such jurisdiction is generally based on the value of such features to support riparian or aquatic plant or animal species.

CDFW jurisdictional limits may also include artificial stock ponds and irrigation ditches constructed within uplands, and outer drip line limits of adjacent riparian habitat supported by a river, stream, or lake regardless of the riparian area's federal status or its location beyond the defined bed, bank, or channel.

RWQCB Jurisdictional Waters

RWQCB is the regional agency responsible for protecting water quality in California. The jurisdiction of this agency includes waters of the State (WOS) as mandated by the federal CWA Section 401. On April 6, 2021, the State Water Resources Control Board adopted a resolution to confirm that the "State Wetland Definition and Procedures for Discharges of Dredged or Fill Material to Waters of the State" is in effect as state policy for water quality control. WOS are defined in State Wetland Definition and Procedures for Discharges of Dredged or Fill Material to Waters of the State (SWRCB 2021) to include any surface water or groundwater, including saline waters, within the boundaries of the state. Thresholds of Significance

In order to assist in determining whether a project would have a significant effect on the environment, the County utilizes the State CEQA Guidelines Appendix G Guidelines. Appendix G states that a project may be deemed to have impacts to biological resources if it would:

- Threshold a) Have a substantial adverse effect, either directly or through habitat modifications, on any species identified as a candidate, sensitive, or special status species in local or regional plans, policies, or regulations, or by the California Department of Fish and Wildlife or U.S. Fish and Wildlife Service?**

- Threshold b) Have a substantial adverse effect on any riparian habitat or other sensitive natural community identified in local or regional plans, policies, regulations or by the California Department of Fish and Wildlife or U.S. Fish and Wildlife Service?**

- Threshold c) Have a substantial adverse effect on state or federally protected wetlands (including, but not limited to, marsh, vernal pool, coastal, etc.) through direct removal, filling, hydrological interruption, or other means?**

- Threshold d) Interfere substantially with the movement of any native resident or migratory fish or wildlife species or with established native resident or migratory wildlife corridors, or impede the use of native wildlife nursery sites?**

- Threshold e) Conflict with any local policies or ordinances protecting biological resources, such as a tree preservation policy or ordinance?**

- Threshold f) Conflict with the provisions of an adopted Habitat Conservation Plan, Natural Community Conservation Plan, or other approved local, regional, or state habitat conservation plan?**

Please refer to **Section 6.1: Effects Found Not to Be Significant** for an evaluation of those topics that were determined to be less than significant or have no impact and do not require further analysis in the EIR.

4.3.3 Methods

Report Terminology and Definitions

As multiple studies and delineations have been conducted for the Project over the last several years and the shapes and acreages of the study areas differ between reference reports to some degree, this section serves to clarify the definitions of “study area” and “development area” and the naming of the various Project areas.

The methods, results, Project impact analysis, cumulative impacts, and mitigation measures for plants and wildlife provided herein, are based on and consistent with Panorama Environmental’s November 2021 Biological Resources Technical Report. The Biological Resources Technical Report defines the “Project study area” as approximately 141 acres and includes 65 acres of “potential development area” (Appendix C).

The methods, results, Project impact analysis, cumulative impacts, and mitigation measures for jurisdictional wetlands and waters provided herein, are based on and consistent with Great Ecology’s November 2022 Wetland Delineation Report for the Hell’s Kitchen Geothermal Project Well Pad 4 (Great Ecology 2022a), and Great Ecology’s December 2022 Wetland Delineation Report for the Hell’s Kitchen Geothermal Project Stage 1 (Great Ecology 2022b). The Well Pad 4 delineation report describes the “delineation area” for that portion of the Project, as approximately 12 acres. The Stage 1 delineation report describes the “delineation area” for that portion of the Project as approximately 101 acres. As such, a combined approximately 113 acres was delineated in 2022 which included the Well Pad 4 and Stage 1 areas and buffer (Appendices D and X).

The current Project development area includes approximately 10 acres of the 12 acres delineated by Great Ecology in the Well Pad 1 and S-Berm Road area in November 2022, and approximately 64 acres of the 101 acres delineated by Great Ecology in the Stage 1 area in December 2022. The combined approximately 74-acre Project development is depicted in Figure 4.3-1 and Figure 4.3-2. The current Project development area falls largely within the Project study area as shown in Appendix C, Figure 6.

Vegetation mapping was also updated during Great Ecology’s 2022 delineation efforts. Figure 4.3-1: Vegetation Communities in the Project Development Area, depicts vegetation communities as mapped by Great Ecology in 2022. This vegetation mapping differs slightly from the vegetation mapping conducted by Panorama Environmental and as depicted in their 2021 Biological Resources Technical Report; however, it is the most up-to-date data and the best representation of current Project conditions and is constant with the 2022 aquatic resources delineation results. It should be noted that potentials for special status plant and wildlife species presented herein were determined based on the study area and vegetation communities presented in Panorama Environmental’s 2021 Biological Resources Technical Report, and language regarding the areas and communities where special status species were observed or could potentially inhabit is constant with that report.

Summary of Project Studies

A reconnaissance biological survey was conducted by Panorama Environmental, Inc. in the Project study area west of Davis Road in spring 2021 and in the area east of Davis Road and north of Pound Road in October 2021. Focused species surveys were conducted in the Project study area to evaluate the presence of special status species. Aquatic resources surveys were conducted by Great Ecology within the 2022

delineation area; the Well Pad 4 and S-Berm Road areas were delineated in October 2022, and the Stage 1 area was delineated in November 2022.

The biological reconnaissance survey, focused species surveys, and aquatic resource surveys for the Project are summarized in the sections that follow.

Yuma Ridgway's Rail, California Black Rail, and Least Bittern

Staff from the USFWS's Sonny Bono Salton Sea National Wildlife Refuge conducted surveys for Yuma Ridgway's rail (*Rallus obsoletus yumanensis*) and California black rail (*Laterallus jamaicensis coturniculus*) in the Project vicinity in spring 2014, 2017, 2018, and 2019 (USFWS 2021a). The biologists detected the bird species visually and by call. USFWS conducted surveys of the area two to three days in each season between March and May, and survey days were spaced approximately one month apart. USFWS staff also surveyed for least bittern (*Ixobrychus exilis*) during the spring of 2019. Surveys were conducted at eight survey points along the marshland surrounding IID's S, R, and Q Drains west of Davis Road during each year. The locations of the eight survey points are shown in Appendix C, Figure 5 Marshbird Survey Points).

Desert Pupfish

1991–2006 CDFW, IID, and USGS

Between 1991 and 2006, CDFW, IID, and the U.S. Geological Survey (USGS) conducted trapping surveys for desert pupfish (*Cyprinodon macularis*) in the IID drains of the south Salton Sea (CH2M HILL 2006). The drains that were surveyed by these organizations include IID's Q, R, and S Drains.

2018–2020 CDFW

Staff from CDFW Region 6 conducted trapping surveys for desert pupfish in IID's Q and S Drains in 2016, and in the Q, R, and S Drains in 2018, 2019, and 2020 (CDFW 2021a). Surveys were primarily conducted between late March and September, which coincided with periods of higher activity for the species because of warmer waters. Surveys for desert pupfish were conducted by a CDFW qualified biologists in accordance with CDFW survey protocols.

Burrowing Owl

2006–2008 Bloom Biological, Inc.

In April 2006, 2007, and 2008, biologists from Bloom Biological conducted a detailed survey for burrowing owl (*Athene cunicularia*) within a 500,000-acre study area for IID's draft Habitat Conservation Plan in the Imperial Valley, to estimate the relative abundance and distribution of the species (Bloom Biological, Inc. 2009). The surveys used a random sampling methodology and focused on IID's ROWs and service areas that parallel irrigation canals, drains, and ditches.

2011–2012 AECOM

In May 2011 and 2012, biologists from AECOM conducted additional surveys for burrowing owl in IID's Habitat Conservation Plan study area (AECOM 2012). Those surveys used the same methodology as those used by Bloom Biological between 2006 and 2008.

2017–2018 Barrett's Biological Surveys

In July 2017, biologists from Barrett's Biological Surveys conducted field surveys and monitoring for burrowing owl, to support geothermal seismic measurement activities in the marsh area west of the Q, R, and S Drains. In April 2018, biologists from Barrett's Biological Surveys conducted a habitat assessment field survey for burrowing owl, in accordance with the procedures described in CDFW's 2012 Staff Report on Burrowing Owl Mitigation (Barrett's Biological Surveys 2018). The 2018 burrowing owl habitat assessment area included the entirety of CTR's geothermal lease area and a 500-foot buffer (within which the Project development area is located).

Reconnaissance Biological Surveys

2016 TRC Solutions

On April 12, 2016, biologists from TRC Solutions, Inc. conducted a reconnaissance field survey for biological resources in CTR's geothermal lease area, within which the Project development area is located (TRC Solutions, Inc. 2016). The survey consisted of driving existing access roads and walking to accessible vantage points to view as much of the lease area and surrounding vicinity as practical.

2021 Panorama Environmental, Inc.

A reconnaissance biological survey was conducted by Panorama Environmental, Inc. in the Project study area west of Davis Road in spring 2021 and the portion of the study area east of Davis Road and north of Pound Road in October 2021 (Panorama Environmental, Inc. 2021a). The current Project development area falls largely within Panorama Environmental's 2021 Project study area.

Vegetation Communities Drone Imaging

In August 2020, CTR conducted a high-resolution (3-centimeter resolution) drone survey of the vegetation communities in CTR's geothermal lease area, within which the Project development area is located. A biologist from Panorama Environmental conducted a reconnaissance survey of the portion of the Project study area west of Davis Road and south of Pound Road in April and June 2021 and the area east of Davis Road in October 2021. The 2021 reconnaissance survey was used to define the vegetation communities in the Project study area. Vegetation communities in the Project study area were categorized in accordance with *A Manual of California Vegetation, Second Edition and Preliminary Descriptions of the Terrestrial Natural Communities of California* (Sawyer et al. 2009; Holland 1986).

In September 2021 Great Ecology captured aerial ortho-imagery within Project development area and vicinity using a drone and recorded at a resolution of four inches per pixel. Real-time kinematic (RTK) transects consisting of 20 survey shots at a spacing of 20 to 40 feet were used to accomplish field calibration of vertical accuracy. The resulting ortho-imagery used to classify landform types and vegetation provided coverage for the entire delineation area.

Jurisdictional Wetland Delineations

Several aquatic resource delineations were conducted in the Project vicinity between 2016 and 2022 by Merkel & Associates, the California Department of Water Resources (DWR), Panorama Environmental, and Great Ecology. All aquatic resource delineations were conducted according to the procedures outlined in the USACE Wetland Delineation Manual (USACE 1987) and the Regional Supplement to the Corps of

Engineers Wetland Delineation Manual: Arid West Region (USACE 2008). The jurisdictional delineation conducted by DWR in 2018 also used Delineating Playas in the Arid Southwest—A Literature Review (USACE 2001) as an additional reference. The dates and locations of these jurisdictional delineations are summarized below.

2016 – 2017 Merkel & Associates, Inc.

Merkel & Associates, Inc. conducted aquatic resource delineations on October 24 and November 1, 2016, and January 10, 2017. The biological study area of the Hell's Kitchen Geothermal Exploratory Wells Project, which included Well Pads 1 and 3 (Merkel & Associates, Inc., 2017).

2018 California Department of Water resources

California Department of Water resources conducted aquatic resource delineations within an approximately 527-acre study area for the Alcott Wetland Project, roughly bounded by Noffsinger Road to the north, Davis Road to the east, Pound Road to the south, and the Salton Sea shoreline to the west on July 17, 2018 (DWR 2018).

2021 Panorama Environmental, Inc.

Wetland delineation surveys were conducted by Panorama Environmental for the potential HKP1 and HKL1 development areas on March 5, May 14, and October 7, 2021, and for the right-of-way corridor on July 26, 2021, and October 7, 2021. Vegetation, soils, and hydrology data were recorded on a Wetland Determination Data Form at each data point. Data were collected using a Trimble GPS unit with accuracy of less than 1 meter. Photographs were taken at each data point to document the site conditions. (Panorama Environmental, Inc. 2021b).

2022 Great Ecology

The Well Pad 4 and S-Berm Road portions of the were surveyed by Great Ecology on October 19, 2022 (Great Ecology 2022a). The Stage 1 portion of the Project was surveyed by Great Ecology on November 11, 2022 (Great Ecology 2022b). Data points were recorded within the delineation areas to verify wetland/upland transition zones. Great Ecology recorded data point locations and wetland boundaries using a sub-meter accuracy Global Positioning System (GPS) unit, which were post-processed before incorporating onto delineation area maps. Aerial ortho-imagery was captured within the delineation areas using a drone in September 2021 and recorded at a resolution of four inches per pixel. Real-time kinematic (RTK) transects consisting of 20 survey shots at a spacing of 20 to 40 feet were used to accomplish field calibration of vertical accuracy. The resulting ortho-imagery used to classify landform types and vegetation provided coverage for the entire delineation area.

Literature Review

Prior to conducting the biological reconnaissance survey, Panorama Environmental queried several online databases to gather available data on sensitive biological resources within the Project study area and vicinity. Panorama Environmental conducted queries of the California Natural Diversity Database (CNDDDB), California Native Plant Society (CNPS), and USFWS's Information for Planning and Consultation (IPaC) on February 17, 2021, for the nine U.S. Geological Survey 7.5-minute quadrangles centered around the Niland quadrangle. These databases contain records of reported occurrences of federally or State listed endangered or threatened species, California Species of Concern (SSC), and/or otherwise sensitive

species or habitats that may occur within or in the immediate vicinity of the Project study area. Species of known public interest in the Project study area were also reviewed. Panorama evaluated all special status plant and wildlife species that were present in the database queries for their potential to occur in the Project study area. Table 4.3-2 summarizes the biological resource queries that were conducted. The Biological Resources Technical Report for the Hell's Kitchen PowerCo 1 and Hell's Kitchen LithiumCo 1 Projects is included as Appendix C.

Table 4.3-2: Database Queries

Database Name	Managing Organization	Data Maintained in Database	Geographic Extent of Query	Date of Query
California Natural Diversity Database	California Department of Fish and Wildlife	Special status plant species Special status wildlife species Sensitive natural communities	Nine U.S. Geological Survey (USGS) 7.5-minute quadrangles centered on the Project study area	February 17, 2021
Inventory of Rare and Endangered Plants of California	California Native Plant Society	Special status plant species	Nine USGS 7.5-minute quadrangles centered on the Project study area	February 17, 2021
Information for Planning and Consultation	U.S. Fish and Wildlife Service	Special status plant species Special status wildlife species Designated critical habitat	Nine USGS 7.5-minute quadrangles centered on the Project study area	February 17, 2021

Sources: (USFWS 2021b; CDFW 2021a; CNPS 2021)

Based on each species' known range and habitat requirements, as well as field survey results, the following criteria were used to determine the potential for each special status species to occur in the Project study area: Table 4.3-3 Criteria for Evaluating Sensitive Species Potential for Occurrence (PFO).

Table 4.3-3: Criteria for Evaluating Sensitive Species Potential for Occurrence (PFO)

PFO	CRITERIA
Presumed Absent	The species was not detected during protocol-level surveys, no suitable habitat is present in the Project study area, or the Project study area is outside the species' known range.
Low	Because of marginally suitable habitat in the Project study area combined with lack of past records and detection during surveys, the species is not anticipated to be present in the Project study area.
Moderate	Suitable habitat combined with CNDDDB occurrences or other records in the Project region indicate that the species has a moderate potential to occur in the Project study area.
High	The species was not observed in the Project study area during past field surveys; however, high habitat quality combined with nearby CNDDDB occurrences or other records indicate that the species has a high potential to occur in the Project study area.

PFO	CRITERIA
Present	The species was observed in the Project study area during field surveys.

* PFO: Potential for Occurrence

In addition, Panorama Environmental reviewed historical and currently available data pertaining to water resources, soils, vegetation, and wetlands within the Project study area. Panorama reviewed NRCS's Web Soil Survey (USDA 2021), USFWS's National Wetlands Inventory (USFWS 2021c), the Federal Emergency Management Agency's (FEMA) floodplain GIS (FEMA 2020), the National Oceanic and Atmospheric Administration's (NOAA) Regional Climate Centers data from Niland, California (NOAA 2021), and the previous delineation reports for the area and surroundings including Hell's Kitchen Exploratory Well Pad 1 (Merkel & Associates 2018), the Alcott Wetlands Project (Hamamoto 2018), Well Pad 4 (Panorama Environmental, Inc. 2017) and S-Berm Road and Minerals Test Project (Panorama Environmental, Inc. 2018).

Prior to conducting the 2022 aquatic resource surveys for the Hell's Kitchen PowerCo 1 and Hell's Kitchen LithiumCo 1 Projects Great Ecology reviewed USFWS NWI maps (USFWS 2022), USGS topographical maps, aerial imagery, and past aquatic resource delineation reports to identify potential wetlands or waters (Great Ecology 2022a and 2022b). Great Ecology's Wetland Delineation Report for Hell's Kitchen Geothermal Project Well Pad 4 is included as Appendix D1, and the Wetland Delineation Report for Hell's Kitchen Geothermal Project Stage 1 is included as Appendix D2.

Special Status Plants

For the purposes of the literature review, special status plant species include those identified on lists 1A, 1B, and 2 in the California Native Plant Society (CNPS) Inventory of Rare and Endangered Vascular Plants of California, which are considered rare, threatened, or endangered under the conditions of Section 15380 of the CEQA Guidelines. Database searches resulted in a list of nine federally and/or State listed threatened, endangered, or otherwise sensitive plant species that may potentially occur within the Project study area.

After the literature review and the biological reconnaissance survey were conducted, it was determined that eight of the nine these species are **absent** from the Project study area due to lack of suitable habitat. These eight species are listed below with their federal and/or State listing statuses and California Rare Plant Rank (CRPR).¹

- chaparral sand-verbena (*Abronia villosa* var. *aurita*) – CRPR 1B.1
- Harwood's milk-vetch (*Astragalus insularis* var. *harwoodii*) - CRPR 2B.2
- Peirson's milk-vetch (*Astragalus magdalenae* var. *peirsonii*) – **FT, SE**, CRPR 1B.2
- gravel milk-vetch (*Astragalus sabulonum*) – CRPR 2B.2
- Munz's cholla (*Cylindropuntia munzii*) – CRPR 1B.3
- glandular ditaxis (*Ditaxis claryana*) – CRPR 2B.2
- Abram's spurge (*Euphorbia abramisiana*) --CRPR 2B.2

¹ California Rare Plant Rank (CRPR) / CNPS: Rare Plant Rank 1B designates plants that are rare, threatened or endangered in California and elsewhere. Rare Plant Rank 2B designated plants that are rare, threatened or endangered in California but more common elsewhere. Threat extensions: 1- Seriously endangered in California; 2- Fairly endangered in California; 3- Not very endangered in California.

- Orocopia sage (*Salvia greatae*) – CRPR 1B.3

One of the nine species, California sawgrass (*Cladium californicum*; CRPR 2B.2), was determined to have low potential to occur in the Project study area. Potentially suitable habitat was present; however, occurrences of this species have only been recorded along the northern shoreline of the Salton Sea and the nearest CNDDDB occurrences were approximately 23 miles northwest of the Project study area.

Special Status Wildlife

For the purpose of the literature review, special status wildlife species include those federally designated as endangered (FE), threatened (FT), or candidate (FC) by the USFWS and protected under the federal Endangered Species Act (ESA) and/or those designated as State endangered (SE), threatened (ST), candidate (SC), Species of Special Concern (SSC), fully protected (FP), or watch list (WL) by the CDFW and protected under the California Endangered Species Act (CESA) or California Fish and Game Code (CFGC). Database searches resulted in a list of 57 federally and/or State listed threatened, endangered, or otherwise sensitive wildlife species that may potentially occur within the Project study area including 3 amphibians, 41 birds, 2 fishes, 7 mammals, and 4 reptiles.

After the literature review and biological reconnaissance survey were conducted, it was determined that 31 special status wildlife species are absent from the Project study area, 8 special status wildlife species have low potential to occur within the Project study area, 11 special status wildlife species have moderate potential to occur within the Project study area, 2 special status wildlife species have high potential to occur within the Project study area, and 5 special status wildlife species were observed within the Project study area during the biological reconnaissance survey. Factors used to determine potential for occurrence included range and habitat requirements, the quality of habitat and the location of prior CNDDDB records of occurrence.

The following 31 special status wildlife species are considered **absent** from the Project study area due to lack of suitable habitat present in the Project study area:

- American badger (*Taxidea taxus*)- SSC
- American white pelican (*Pelecanus erythrorhynchos*) – SSC
- black skimmer (*Rynchops niger*) – SSC
- black storm-petrel (*Hydrobates Melania*) – SSC
- black tern (*Chlidonias niger*) – SSC
- California least tern (*Sternula antillarum browni*) – **FE, SE, FP**
- California brown pelican (*Pelecanus occidentalis californicus*) – **FP**
- coastal whiptail (*Aspidoscelis tigris stejnegeri*) – SSC
- Colorado Desert fringe-toed lizard (*Uma notata*) – SSC
- Cooper's hawk (*Accipiter cooperi*) – WL
- Couch's spadefoot (*Scaphiopus couchii*) – SSC
- desert bighorn sheep (*Ovis canadensis nelson*) – **FP**
- desert tortoise (*Gopherus agassizii*)- **FT, ST**
- double-crested cormorant (*Phalacrocorax auratus*) – WL
- flat-tailed horned lizard (*Phrynosoma mcallii*) – SSC
- Gila woodpecker (*Melanerpes uropygialis*) – **SE**
- gray-headed junco (*Junco hyemalis caniceps*) – WL
- least Bell's vireo (*Vireo bellii pusillus*) – **FE, SE**

- Le Conte's thrasher (*Toxostoma lecontei*) – SSC
- lowland leopard frog (*Lithobates yavapaiensis*) – SSC
- osprey (*Pandion haliaetus*) – WL
- pallid bat (*Antrozous pallidus*) - SSC
- pocketed free-tailed bat (*Nyctinomops femorosaccus*) – SSC
- sharp-shinned hawk (*Accipiter striatus*) – WL
- razorback sucker (*Xyrauchen texanus*) – **FE, SE, FP**
- Sonoran Desert toad (*Incilius alvarius*) – SSC
- southwestern willow flycatcher (*Empidonax traillii extimus*) - **FE, SE**
- western mastiff bat (*Eumops perotis californicus*) - SSC
- western yellow bat (*Lasiurus xanthinus*) – SSC
- willow flycatcher (*Empidonax traillii*) – **SE**
- yellow-breasted chat (*Icteria virens*) – SSC

The following eight special status wildlife species have **low** potential to occur in the Project study area due to marginally suitable habitat in the Project study area combined with lack of past records and detection during surveys:

- black-tailed gnatcatcher (*Polioptila melanura*) – WL
- California gull (*Larus californicus*) – WL
- crissal thrasher (*Toxostoma crissale*) – SSC
- golden eagle (*Aquila chrysaetos*) – **FP**, WL
- laughing gull (*Leucophaeus atricilla*) – WL
- loggerhead shrike (*Lanius ludovicianus*) – SSC
- mountain plover (*Charadrius montanus*) – SSC
- long-billed curlew (*Numenius americanus*) – WL

The following 11 special status wildlife species have **moderate** potential to occur in the Project study area due to suitable habitat combined with CNDDDB occurrences or other records in the Project region:

- American peregrine falcon (*Falco peregrinus anatum*) – WL
- gull-billed tern (*Gelochelidon nilotica*) – SSC
- large-billed savannah sparrow (*Passerculus sandwichensis rostratus*) – SSC
- merlin (*Falco columbarius*) – WL
- northern harrier (*Circus hudsonius*) – SSC
- short-eared owl (*Asio flammeus*) – SSC
- western snowy plover (interior population; *Charadrius nivosus nivosus*) – SSC
- white-tailed kite (*Elanus leucurus*) – **FP**
- yellow-headed blackbird (*Xanthocephalus xanthocephalus*) – SSC
- yellow warbler (*Setophaga petechia*) – SSC
- Yuma hispid cotton rat (*Sigmodon hispidus eremicus*) – SSC

The following two special status wildlife species were not observed in the Project study area during past field surveys; however, high habitat quality combined with nearby CNDDDB occurrences or other records indicate that the species has a **high** potential to occur in the Project study area:

- burrowing owl (*Athene cunicularia*) – SSC
- wood stork (*Mycteria americana*) – SSC

The following five special status wildlife species were observed **present** in the Project study area during field surveys:

- California black rail (*Laterallus jamaicensis coturniculus*) – **ST, FP**
- least bittern (*Ixobrychus exilis*) – **SSC**
- white-faced ibis (*Plegadis chihi*) – **WL**
- Yuma Ridgway's rail (*Rallus obsoletus yumanensis*) – **FE, ST, FP**
- desert pupfish (*Cyprinodon macularius*) – **FE, SE**

Jurisdictional Waters

Historical and currently available literature and data pertaining to water resources, soils, vegetation, and wetlands within the Project development area and vicinity were reviewed. Great Ecology reviewed the NRCS soil map (USDA 2022a), National Wetlands Inventory (USFWS 2022), FEMA floodplain GIS, climate data from Niland, California (USDA 2022b), and the previous delineation reports for the area and surroundings including Hell's Kitchen Exploratory Well Pad 1 (Merkel & Associates 2018), the Alcott Wetlands Project (Hamamoto 2018), Well Pad 4 (Panorama Environmental, Inc. 2017), S-Berm Road and Minerals Test Project (Panorama Environmental, Inc. 2018), and Hell's Kitchen PowerCo 1 and Hell's Kitchen LithiumCo 1 Projects Aquatic Resources Delineation Report (Panorama Environmental, Inc. 2021).

4.3.4 Results

A reconnaissance biological survey was conducted by Panorama Environmental within the Project study area west of Davis Road in spring 2021 and within the area east of Davis Road and north of Pound Road in October 2021. Focused species surveys were conducted in the Project study area as summarized in Section 4.3.4 to evaluate the presence of special status species (Section 4.3.4). Aquatic resources surveys were conducted by Great Ecology within the Project delineation area in 2022; the Well Pad 4 and S-Berm Road areas were delineated in October 2022, and the Stage 1 area was delineated in November 2022. Results of these survey efforts are discussed below.

Vegetation

Table 4.3-4 shows the acreages of the vegetation communities and land cover types in the Project development area, as mapped during field surveys conducted by Great Ecology in 2022.

Table 4.3-4: Vegetation Communities and Land Cover Types in the Project Development Area

Vegetation Community/Land Cover Type	Area in the Project Development Area (acres)	CDFW Sensitive Natural Community Status*
Alkaline Marsh	0.06	Not sensitive
Cattail Marshes	16.27	Not sensitive
Common and Giant Reed Marshes	0.01	Not sensitive
Developed/Disturbed	14.56	N/A
Fourwing Saltbush Scrub	0.04	Not sensitive
Iodine Bush Scrub	3.38	Sensitive
Irrigation Ditch	0.62	N/A
Playa	11.60	N/A
Salt Grass Flats	8.09	Not sensitive

Saltbush Scrub	1.04	Not sensitive
Tamarisk Thickets	7.26	Not sensitive
Water	11.16	N/A
Total	74.08	

*Source: (CDFW 2022)

Sensitive Vegetation Communities

Iodine Bush Scrub

Iodine Bush Scrub is a CDFW-designated sensitive natural community that was identified in the Project development area (which falls largely within the Project study area) during field surveys conducted by Panorama Environmental in 2021, and by Great Ecology in 2022 (CDFW 2022). The community is characterized by a dominance of iodine bush (*Allenrolfea occidentalis*), with associated annual and perennial vegetation such as shadscale (*Atriplex* sp.), saltgrass (*Distichlis spicata*), and bush seepweed (*Suaeda nigra*; Sawyer et al. 2009). This community is established in lowlands where water flows or collects for some portion of a typical year (Sawyer et al. 2009). Iodine Bush Scrub is present within 3.38 acres of the Project development area. The specific location where this vegetation community occurs in the Project development area is shown in Figure 4.3-1. No other sensitive natural communities as designated by CDFW or CNPS were identified during Panorama Environmental’s or Great Ecology’s field surveys.

Other Vegetation Communities

Other vegetation communities and land cover types that were identified in the Project study area included Alkaline Marsh, Cattail Marsh, Common and Giant Reed Marshes, Fourwing Saltbush Scrub, Salt Grass Flats, Saltbush Scrub, and Tamarisk Thickets classified according to *A Manual of California Vegetation, Second Edition* (Sawyer et al. 2009). Playa habitat was defined consistent with USACE technical guidance in *Delineating Playas in the Arid Southwest* (Brostoff et al. 2001). Other land uses in the Project study area include developed areas and open water in the form of irrigation channels, classified according to *Preliminary Descriptions of the Terrestrial Natural Communities of California*, because *A Manual of California Vegetation* does not include classifications for these land cover types (Holland 1986). These vegetation communities and land uses are shown in Figure 4.3-1 and are described in further detail below.

Alkaline Marsh

Alkaline Marsh wetland was observed in a depression near the west end of S-Berm access road where there is a shallow water table to support perennial wetlands. The alkaline wetland habitat within the S-Berm access road area was dominated by saltgrass and annual rabbitsfoot grass (*Polypogon monspeliensis*) with cattails and tamarisk observed along the margins of the alkaline wetland areas. Alkaline Marsh is present within 0.06 acre of the Project development area.

Cattail Marshes

Cattail Marshes occur within semi-permanently flooded freshwater or brackish marshes with silty or clayey soils. Narrowleaf cattail (*Typha angustifolia*), Southern cattail (*Typha domingensis*) or broadleaf cattail (*Typha latifolia*) is dominant or co-dominant in the herbaceous layer. Other species observed in the

cattail marsh habitat in the project vicinity include annual rabbitsfoot grass, salt marsh fleabane (*Pluchea odorata*), and annual salt marshaster (*Symphotrichum subulatum*). Cattail Marshes occurs within the Project development area between the S and R Drains and south of the R Drain and small patches along the S-Berm access road in areas that are frequently flooded. Cattail Marshes is present within 16.27 acres of the Project development area.

Common and Giant Reed Marshes

Common and Giant Reed Marshes are found within riparian areas, along low-gradient streams and ditches and in semi-permanently flooded and slightly brackish marshes and impoundments (Sawyer et al. 2009). Giant reed (*Arundo donax*) or common reed (*Phragmites australis*) is dominant in the herbaceous layer with ragweed (*Ambrosia psilostachya*), yerba mansa (*Anemopsis californica*), saltgrass, Cooper's rush (*Juncus cooperi*), perennial pepperweed (*Lepidium latifolium*), Hardstem bulrush (*Schoenoplectus acutus*), chairmaker's bulrush (*Schoenoplectus americanus*), California bulrush (*Schoenoplectus californicus*), *Typha* species, and cocklebur (*Xanthium strumarium*; Sawyer et al. 2009). Common and Giant Reed Marshes occurs in a tiny match along the bank of R Drain where the norther and southern portions of the Stage 1 Project area connect. Common and Giant Reed Marshes is present within 0.01 acre of the Project development area.

Fourwing Saltbush Scrub

Fourwing Saltbush Scrub is found within playas, old beach and shores, lake deposits, dissected alluvial fans, rolling hills or channel beds. Soils are carbonate rich, alkaline, sandy, or sandy clay loams (Sawyer et al. 2009). *Atriplex canescens* is dominant or co-dominant in the shrub canopy with (white bursage (*Ambrosia dumosa*), burrobrush (*Ambrosia salsola*), spiny saltbush (*Atriplex confertifolia*), allscale saltbush (*Atriplex polycarpa*), green rabbitbrush (*Chrysothamnus viscidiflorus*), bladderpod (*Peritoma arborea*), green ephedra (*Ephedra viridis*), hop sage (*Grayia spinosa*), creosote (*Larrea tridentata*), and bush seepweed (*Suaeda moquinii*; Sawyer et al. 2009). Fourwing Saltbush Scrub occurs in a small patch south of R Drain and west of Davis Road. Fourwing Saltbush Scrub is present within 0.04 acre of the Project development area.

Saltbush Scrub (Allscale Scrub)

Saltbush Scrub is found is washes, playa lake beds and shores, dissected alluvial fans, rolling hills, terraces, and edges of large, low gradient washes (Sawyer et al. 2009). Soils may be carbonate rich, alkaline, sandy, or sandy clay loams. Allscale saltbush is dominant in the shrub canopy with white bursage, burrobrush, fourwing saltbush (*Atriplex canescens*), red brome (*Bromus rubens*), smallseed sandmat (*Euphorbia polycarpa*), bladderpod, alkali goldenbush (*Isocoma acradenia*), and creosote. Saltbush Scrub occurs along the west and north edges of Well Pad 4. Saltbush Scrub is present within 1.04 acres of the Project development area.

Salt Grass Flats

Salt Grass Flats is found within coastal salt marshes, inland habitats such as playas, swales, and terraces along washes that may be intermittently flooded. Soils within this community are typically deep, alkaline or saline, and poorly drained. When the soil is dry, the surface usually has salt accumulations (Sawyer et al. 2009). Saltgrass, or Cooper's rush are dominant or co-dominant in the herbaceous layer (Sawyer et al.

2009). Salt Grass Flats occur in winding patches between Q and R Drains and R and S Drains, west of Davis Road. Salt Grass Flats is present within 8.09 acres of the Project development area.

Tamarisk Thickets

Tamarisk Thickets are found along arroyo margins, lake margins, ditches, washes, rivers, and other watercourses (Sawyer et al. 2009). Tamarisk species (*Tamarix* spp.) possess eco-physiological characteristics that make them remarkably formidable as invasive plants. They are long-lived shrubs or trees with extensive and deep root systems. They consume large quantities of water, possibly more than any other woody species in similar habitats, because they can obtain water at very low water potentials and have very high water-use efficiencies. They are highly tolerant of alkaline and saline habitats and can concentrate salts in their leaves (Sawyer et al. 2009). Saltcedar (*Tamarix ramosissima*) or another *Tamarix* species is dominant in the shrub canopy. Tamarisk Thickets occur in the Well Pad 4 and S-Berm access road areas, and in small patches north and south of R Drain and northeast of Q Drain. Tamarisk Thickets is present within 7.26 acres of the Project development area.

Figure 4.3-1: Vegetation Communities in the Project Development Area

Playa

The playa occurs in areas that were recently inundated by the Salton Sea, but have become exposed by the receding sea and no vegetation has established in the area. Desert playa lacking vegetation was observed in the southeastern portion of the delineation area adjacent to Davis Road. Playa within the delineation area contains features consistent with descriptions in reference literature of desert playa habitat, including a barren landscape with salt crust and soil cracking (Brostoff et al. 2001). Playa occurs in winding patches between Q and S Drains just west of Davis Road. Playa is present within 11.60 acres of the Project development area.

Open Water (Holland Code 64100)

Open Water includes areas of ponded or contained water (e.g., lakes, rivers, oceans, and canals) that are devoid of vegetation. Open Water occurs in a small area south of S Drain and west of Davis Road, and between Q and R Drains west of Davis Road. The majority of the Open Water mapped in just north or Q Drain. Open Water is present within 11.16 acres of the Project development area.

Developed/Disturbed (Holland Code 12000)

Developed/Disturbed areas include maintained dirt roads (included portions of the S-Berm access Road), agricultural areas east of Davis Road between Alcott Road and Pound Road, and graded well pad areas just northwest of the intersection of Alcott Road and Davis Road, and just southwest of the intersection of Noffsinger Road and Davis Road. Developed/Disturbed areas are present within 14.56 acres of the Project development area.

Special Status Plants

Based on known habitat requirements and the results of the database queries, no special status plant species have suitable habitat in the Project study area. A full list of plant species that were evaluated can be found in Appendix C. No special status plant species were recorded during reconnaissance biological surveys of the Project study area.

Wildlife

Special Status Wildlife

Each species' habitat requirements were compared against the vegetation communities and land cover types present in the Project study area. The vegetated communities in the Project study area include riparian scrub, which primarily consists of non-native common reed, tamarisk, and cattails (*Typha* species) that may provide habitat to support special status species. Desert sink scrub also occurs in the Project development area (within the Project study area) but does not support special status species that occur in the Project vicinity. Of the 57 special status wildlife species identified in the database queries, it was determined that 18 of the species have a moderate or higher potential to occur in the Project study area, and 5 of the 18 species with moderate or higher potential to occur were observed present within the Project study area. Special status species that have a moderate or higher potential to occur in the Project study area are described below.

Short-Eared Owl (SSC) – Moderate

Short-eared owls are medium-sized owls that are active around dawn and dusk, when searching for small mammals. Short-eared owls are pale brown with streaks and spots on the wings and chest. Nesting short-eared owls require open country that supports concentrations of rodents and herbaceous cover sufficient to conceal their ground nests from predators. Suitable habitats may include salt- and freshwater marshes, irrigated alfalfa or grain fields, and ungrazed grasslands and old pastures. Short-eared owls are primarily crepuscular hunters (CDFW 2021b). The cattail marsh and riparian scrub habitat in the Project study area provide suitable habitat for short-eared owls.

Burrowing Owl (SSC) – High

The burrowing owl is a small, sandy colored owl with bright-yellow eyes. It lives underground in burrows dug by itself or taken over from a prairie dog, ground squirrel, or tortoise. The species is a year-long resident of open, dry grassland and desert habitats, and in grass, forb, and open-shrub stages of pinyon-juniper and ponderosa pine habitats. The species previously was common in appropriate habitats throughout the state, excluding the humid northwest coastal forests and high mountains, but population numbers have markedly reduced in recent decades because of habitat conversion and human disturbance.

The surveys for burrowing owl conducted by Bloom Biological and AECOM between 2006 and 2011 indicated that the species inhabits IID's ROWs and service areas in the Imperial Valley. The majority of species observations occurred within unsubmerged canals and drains, while a smaller percentage included farmland irrigation ditches and access roads or road banks. The survey results also indicated that the overall territory for the species in the Imperial Valley steadily declined over the years that the surveys were conducted. During the biological reconnaissance survey conducted by TRC Solutions in 2016, pellets, whitewash, and feathers from a burrowing owl were identified at a burrow on the edge of an access road along IID's Q Drain in the southeast corner of CTR's lease area. This location is adjacent to the current Project development area. No burrowing owl individuals were observed during the survey.

During the 2017 and 2018 surveys conducted by Barrett's Biological Surveys, no burrowing owl individuals or active burrows were found in CTR's geothermal development lease area or within a 500-foot buffer zone.

Habitat for burrowing owl in the Project study area is limited to the small areas of disturbed berms lining roads and irrigation drains, including the edges of McDonald Road, Davis Road, Pound Road, Alcott Road, and Noffsinger Road, as well as the edges of IID's O, P, Q, R, and S Drains. The salt pan, riparian scrub, desert sink scrub, and open water land cover types, which make up the majority of the land uses in the Project study area, do not provide suitable habitat for burrowing owl.

Western Snowy Plover² (SSC) – Moderate

The western snowy plover is a small wader in the plover bird family. It is about 6 inches long, with a thin dark bill, pale brown to gray upper parts, white or buff colored belly, and darker patches on its shoulders and head, with a white forehead. The species breeds in the southern and western United States and the

² The Pacific Coast population of the western snowy plover, defined as those individuals that nest adjacent to tidal waters of the Pacific Ocean, including all nesting birds on the mainland coast, peninsulas, offshore islands, adjacent bays, estuaries, and coastal rivers, is federally listed under the Endangered Species Act of 1973 as threatened (USFWS 2021d). The Project study area is outside the range of the Pacific Coast population of the species. The interior population of the species is listed by CDFW as a species of special concern (CDFW 2008).

Caribbean. The Pacific Coast population of the western snowy plover, defined as those individuals that nest adjacent to tidal waters of the Pacific Ocean, is federally listed under the ESA as threatened (USFWS 2021d). The Project study area is outside the range of the federally listed Pacific Coast population of the species.

The interior population of the western snowy plover is listed by CDFW as a species of special concern (CDFW 2008). In the interior of California, the species breeds on barren to sparsely vegetated flats, including salt pans, and along shores of alkaline and saline lakes, reservoirs, ponds, braided river channels, agricultural wastewater ponds, and salt evaporation ponds. Adults and broods typically forage near shallow water, sometimes up to two miles from their nests, and on dry flats. A moderate potential exists for this species to nest in the mostly unvegetated salt pan/salt flat land cover types in the Project study area and along the open water area.

Northern Harrier (SSC) – Moderate

The northern harrier is a raptor that breeds throughout North America. The species is most common in large, undisturbed tracts of wetlands and grasslands with low, thick vegetation. It breeds in freshwater and brackish marshes, lightly grazed meadows, old fields, tundra, dry upland prairies, drained marshlands, high-desert shrub steppe, and riverside woodlands across Canada and the northern United States. Western populations tend to breed in dry upland habitats, while northeastern and Midwestern populations tend to breed in wetlands. In winter, the species uses a range of habitats with low vegetation, including deserts, coastal sand dunes, pasturelands, croplands, dry plains, grasslands, old fields, estuaries, open floodplains, and marshes. The riparian scrub and cattail marsh communities in the Project study area provide suitable foraging and nesting habitat for the species. Higher quality habitat for the species is present in the marsh vegetation communities west of the Project study area.

White-Tailed Kite (FP) – High

The white-tailed kite is a small to medium-sized raptor with narrow, pointed wings and a long tail. It is found in grasslands, open woodlands, savannas, marshes, and cultivated fields. The species has a small range in the United States but occurs throughout North and South America. It often is found along tree-lined river valleys with adjacent open areas but usually is not found in forests or clear-cuts within forests. A white-tailed kite was observed hunting over a pickleweed patch in the southeast corner of Section 11 during the reconnaissance survey conducted by TRC Solutions in 2016. The riparian scrub and cattail marsh communities in the Project study area provide suitable nesting and foraging habitat for the species.

Merlin (WL) – Moderate

The merlin is a small falcon found at high latitudes throughout the northern hemisphere. Adult males have slate-blue backs with finely streaked underparts; females and immature birds have brown backs; all have tails with narrow white bands. During most of the year, merlin inhabits open country, ranging from marshlands to deserts, but many breed in conifer and birch woods. In open country, eggs are laid in a scrape on the ground amid bushes, but in forested areas, the tree nests of crows, rooks, or magpies are used. Its diet consists mainly of smaller birds that it catches in midair. The riparian scrub communities in the Project study area provide potential foraging habitat for the species. While the riparian scrub communities consist primarily of non-native reed and tamarisk, native cattails do exist in this area and provide suitable habitat for nesting.

American Peregrine Falcon (FP) – Moderate

The American peregrine falcon, which once bred from Hudson Bay to the southern United States, formerly was an endangered species. The species now is the most widely distributed species of bird of prey, with breeding populations on every continent except Antarctica and many oceanic islands. Its prey includes ducks and a wide variety of songbirds and shorebirds. Peregrine inhabits rocky, open country near water, where birds are plentiful. The peregrine falcon usually nests in a mere scrape on a ledge high on a cliff, but a few populations use city skyscrapers or tree nests built by other bird species. The riparian scrub and Cattail Marshes communities in the Project study area provide suitable foraging habitat for the species.

Gull-Billed Tern (SSC) – Moderate

A medium-sized tern with broader wings and a thicker bill than most other terns, the gull-billed tern is found along the Atlantic and Gulf coasts of the United States and very southern California. The species breeds on gravelly or sandy beaches and winters in salt marshes, estuaries, lagoons, and plowed fields, and less frequently along rivers, around lakes, and in fresh-water marshes. Typical prey include fish, insects, lizards, aquatic animals, and occasionally chicks of other birds. The riparian scrub communities in the Project study area provide potential foraging habitat for the species. While the riparian scrub communities consist primarily of non-native reed and tamarisk, native cattails do exist in this area and provide suitable habitat for nesting. Higher quality habitat for the species is present in the marsh vegetation communities west of the Project study area.

Least Bittern (SSC) – High Potential in the Project study area, and Present in Survey Buffer Area

The least bittern is one of the smallest herons in the world, adapted for life in dense marshes. It inhabits fresh marshes and reedy ponds, including mostly freshwater marsh but also brackish marsh. Rather than wading in the shallows like most herons, the least bittern climbs about in cattails and reeds, clinging to the stems with its long toes. Its narrow body allows it to slip through dense, tangled vegetation with ease. Because of its habitat choice, it often goes unseen except when it flies, but its cooing and clucking call notes are heard frequently at dawn and dusk and sometimes at night. A maximum of six least bittern individuals were detected during 2019 surveys by USFWS. A maximum of three individuals were detected at the Alcott 1 survey point (approximately 827 feet from the Project study area), while one individual was detected each at the Noffsinger 1 (approximately 19 feet from the Project study area), Noffsinger 2 (approximately 16 feet from the Project study area), and Pound 1 survey points (approximately 576 feet from the Project study area). None of the past observations fall within the current Project development area as show in Figures 4.3-1 and 4.3-2. These survey results indicate that the species is present in the marshland west of Davis Road. While the riparian scrub communities consist primarily of non-native reed and tamarisk, native cattails do exist in this area and provide suitable habitat for foraging and nesting. Higher quality habitat for the species is present in the marsh vegetation communities west of the Project study area. The locations of the eight marsh bird survey points are shown in Appendix C, Figure 5 Marshbird Survey Points.

Black Rail (ST, FP) – High Potential in the Project study area, and Present in Survey Buffer Area

The black rail is a small, secretive shorebird that nests in marshes and wet meadows across North America, including riparian marshes, coastal prairies, saltmarshes, and impounded wetlands. All its habitats have stable shallow water, usually just 1.2 inches deep at most. On the Atlantic and Gulf coasts, black rail nests in the higher, drier parts of marshes, where tidal activity is least and where different types of grasses,

sedges, and rushes occur in mosaic-like patches. Key plant species in these habitats include saltmeadow hay, sand cordgrass, chairmaker's bulrush, saltgrass, needlerush species (genus *Juncus*), and various species of pickleweed (genus *Salicornia*).

Between two and seven black rail individuals were detected during each year that the species was surveyed. Eleven of these detections occurred at the Alcott 3 survey point on IID's R Drain west of Davis Road, with the six remaining detections at the nearby Alcott 2 and Pound 3 survey points. The Alcott 3 and Pound 3 survey locations fall within the current Project development area as show in Figures 4.3-1 and 4.3-2. These survey results indicate that the species regularly is present in the marshland west of Davis Road, particularly in the vicinity of IID's R Drain. While the riparian scrub communities consist primarily of non-native reed and tamarisk, native cattails do exist in this area and provide suitable habitat for foraging and nesting. Higher quality habitat for the species is present in the marsh vegetation communities west of the Project study area. The locations of the eight marsh bird survey points are shown in Appendix C, Figure 5 Marshbird Survey Points.

Wood Stork (SSC) – High

The wood stork is a large American wading bird in the stork family. It formerly was named the "wood ibis," although it is not an ibis. It is found in subtropical and tropical habitats in the Americas, including the Caribbean. Its habitat can vary, but it must have a tropical or subtropical climate with fluctuating water levels. Its nest is found in trees, especially mangroves, usually surrounded by water or over water. The wood stork nests colonially. The diet of the adult changes throughout the year; in the dry season, fish and insects are eaten, and frogs and crabs are added in the wet season.

The Project study area includes open water areas that provide suitable habitat for the wood stork. The Cattail Marshes areas within the Project study area and to the west also provide suitable nesting and foraging habitat.

Large-Billed Savannah Sparrow (SSC) – Moderate

The range-restricted "large-billed" savannah sparrow of Mexico barely enters the United States in southern California; it has a much heavier bill than other forms of the species. All subspecies show thin, crisp streaking on the underparts and usually have yellow in front of the eyes. The species breeds in open areas with low vegetation, including most of northern North America, from tundra to grassland, marsh, and farmland. Even in winter, it occurs on the ground or in low vegetation in open areas. The species feeds on seeds on or near the ground, alone or in small flocks. The riparian scrub and Cattail Marshes communities in the Project study area provide suitable nesting and foraging habitat for the species. Higher quality habitat for the species is present in the marsh vegetation west of the Project study area.

White-Faced Ibis (WL) – Present

The white-faced ibis is a wading bird that breeds colonially in marshes, usually nesting in bushes or low trees. Its breeding range extends from the western United States south through Mexico, as well as from southeastern Brazil and southeastern Bolivia south to central Argentina, and along the coast of central Chile. Its winter range extends from southern California and Louisiana south to include the rest of its breeding range. Multiple individuals were observed foraging in a shallow pond in the eastern portion of CTR's geothermal lease area during the reconnaissance survey conducted by TRC Solutions in 2016.

Yuma Ridgway's Rail (FE, ST, FP) – Present

The Yuma Ridgway's rail is one of the smaller subspecies of the Ridgway's rail, with adults standing at about 8 inches tall. Its coloring is light grey to dark brown on the upper body, with a tawny-orange breast and orange legs. The species consistently is found in freshwater marshes that are composed of cattail and bulrush. This emergent vegetation averages greater than 6 feet tall, and water depth tends to be around 3.5 inches deep. Rail numbers are related directly to habitat quality, and the species has a range that extends from Nevada, California, and Arizona to Baja California and Sonora, Mexico.

Yuma Ridgway rails were detected during each year that a survey was conducted by USFWS, at nearly every survey point. A maximum of 40 individuals were detected in 2014, 56 individuals in 2017, 74 individuals in 2018, and 41 individuals in 2019.

The exact number of individuals was difficult to determine because the secretive bird often is detected by its call, and a single bird may be detected multiple times from different survey points or on different dates. However, the survey results indicate that a healthy population of the species is inhabiting the marshland west of Davis Road.

While the riparian scrub communities consist primarily of non-native reed and tamarisk, native cattails do exist in this area and provide suitable habitat for foraging and nesting. Higher quality habitat for the species is present in the marsh vegetation communities west of the Project study area.

Yellow Warbler (SSC) – Moderate

The yellow is a New World warbler species and is the most widespread species in the diverse genus *Setophaga*, breeding in almost the whole of North America, the Caribbean, and down to northern South America. Its habitat includes bushes, swamp edges, streams, and gardens. The species breeds in a variety of habitats, including woods and thickets along edges of streams, lakes, swamps, and marshes, favoring willows, alders, and other moisture-loving plants. In winter, individuals migrate to the tropics, where they favor semi-open country, woodland edges, and towns. The riparian scrub and Cattail Marshes vegetation communities in the Project study area provide suitable foraging and nesting habitat for the species.

Yellow-Headed Blackbird (SSC) – Moderate

Yellow-headed blackbirds have a large head with a sharply pointed bill, a long tail, and a stout body. Males are black with yellow heads and chests, and white patches where their wings bend. Females and immature males are generally gray-brown with a duller yellow head. Yellow-headed blackbirds breed in marshes with tall emergent vegetation including cattails. Yellow-headed blackbirds prefer water depths of 0.5 to 4 feet. Breeding areas are often on the edges of water bodies such as lakes, reservoirs, or larger ponds (CDFW 2021b). The Cattail Marshes and riparian scrub vegetation communities within the development area provide marginally suitable breeding habitat, depending on the depth of adjacent open water areas, which tend to be shallower than desirable for the species.

Desert Pupfish (FE, SE) – Present

The desert pupfish is a small, robust fish, usually less than 3 inches in length. The lifespan is typically 1 year but can be as long as 3 years. During the breeding season, males turn bright blue with lemon-yellow tails. Females are tan to olive in color with irregular, darker vertical bars on their sides. In California, this species historically occurred in several springs, seeps, and slow-moving streams in the Salton Sink Basin,

as well as in backwaters and sloughs along the lower Colorado River. Desert pupfish now are relegated to remnants of their former habitats, which generally are too harsh for most introduced species to exist. Naturally occurring populations of desert pupfish have been extirpated in Arizona but still occur in the Salton Sink Basin of California, the Colorado River Delta, and Laguna Salada Basin in Mexico.

The results of trapping surveys for desert pupfish conducted by CDFW, IID, and USGS at IID's Q, R, and S Drains between 1991 and 2006 are summarized in Appendix C Table 5.

During more recent surveys conducted by CDFW between 2018 and 2020, one juvenile desert pupfish individual was trapped in the S Drain in 2019, and no individuals were trapped in the other drains (CDFW 2021c). The survey methodology used can determine presence of the species but cannot confirm their absence. Therefore, the survey findings confirm that the species is present within the S Drain, and do not confirm its presence or absence in the Q and R Drains. However, the findings indicate that if the species is present in the Q and R Drains, the population numbers are likely to be low. The most recent confirmed observation of desert pupfish in the Q Drain was in 1994, and in the R Drain was in 2002. During a 2023 survey and salvaging effort conducted by CDFW presence of pupfish has been confirmed in all three drains. Over 400 pupfish were captured and relocated from the extended area of the S Drain.

Yuma Hispid Cotton Rat (SSC) – Moderate

Cotton rats are rodents that are thick bodied, with a medium-length tail slightly shorter than the head and body. Their ears barely project above their fur, and their tail is sparsely haired. There are two subspecies of cotton rats along the Lower Colorado River (LCR); the Colorado River cotton rat (*Sigmodon arizonae plenus*) and the Yuma hispid cotton rat (*S. hispidus eremicus*). Yuma hispid cotton rats occur in grass/cattail (*Typha*) communities with a dense understory. Yuma hispid cotton rats may be expanding their population and range into agricultural lands (Lower Colorado River Multi-Species Conservation Program 2016). The cattail marsh areas within the Project study area and the riparian scrub vegetation communities provide potentially suitable habitat for Yuma hispid cotton rats. The riparian scrub vegetation community in most areas has brush vegetation that lacks the dense grasses or understory for Yuma hispid cotton rat; however, in some areas, cattails occur as a sub-dominant species and the common reed could provide adequate cover/density.

Wildlife Movement and Nursery Sites

Wildlife corridors are defined as areas that connect suitable habitat in a region otherwise fragmented by rugged terrain, changes in vegetation, or human disturbance. Natural features, such as canyon drainages, ridgelines, or areas with dense vegetation cover, can provide corridors for wildlife travel. Wildlife corridors are important to mobile species because they provide access for individuals to find shelter, mates, food, and water; allow the dispersal of individuals away from high-density population areas; and allow immigration and emigration of individuals to other populations. Wildlife corridors are considered sensitive by resource and conservation agencies. Impacts on wildlife corridors are analyzed under CEQA. The Project study area may serve as a corridor for movement of terrestrial species across similar wetland habitats to the north, along the Salton Sea shoreline. The Salton Sea also serves as a key rest stop for migrating avian species on the Pacific Flyway, a major north/south flyway for migratory birds extending from Alaska to Patagonia (USFWS 2021a). Migrating birds use the vegetated habitats in the Project vicinity, as well as the Salton Sea itself, as stopovers during their migrations south to wintering sites and north to breeding sites.

Wildlife nursery sites are habitats where juveniles of a species occur, that support a generally greater level of productivity per unit area than other juvenile habitats. These habitats are found in particular in marine environments, and mangroves and seagrasses are examples of common nursery sites for marine species. The Project study area is adjacent to a developed roadway, contains a greater proportion of disturbed areas, and generally contains lower-quality habitat than the large, contiguous wetland areas to the west and along the Salton Sea shoreline. The Project study area does not support a greater level of productivity for any species and is not considered to be a wildlife nursery site.

Jurisdictional Wetlands and Waters

A general assessment of jurisdictional wetlands and waters regulated by the United States Army Corps of Engineers (USACE), California Regional Water Quality Control Board (RWQCB), and CDFW was conducted for the Project development area and vicinity. Pursuant to Section 404 of the Clean Water Act, USACE regulates the discharge of dredged and/or fill material into waters of the United States. The State of California (State) regulates discharge of material into waters of the State pursuant to Section 401 of the Clean Water Act and the California Porter-Cologne Water Quality Control Act (California Water Code, Division 7, §13000 et seq.). Pursuant to Division 2, Chapter 6, Sections 1600-1602 of the California Fish and Game Code, CDFW regulates all diversions, obstructions, or changes to the natural flow or bed, channel, or bank of any river, stream, or lake which supports fish or wildlife. The assessment was conducted by reviewing USFWS NWI maps, USGS topographical maps, aerial imagery, and past aquatic resource delineation reports to identify potential wetlands or waters.

The Project development area and vicinity contain wetlands and riparian habitats that are potentially subject to and USACE, CDFW, and RWQCB jurisdiction. Aquatic resources that occur within the Project development area that are potentially subject to USACE jurisdiction include Palustrine Emergent Wetlands: Alkaline Marsh, Cattail Marshes, Common and Giant Reed Marshes, and Salt Grass Flats; Palustrine Scrub Shrub Wetlands: Iodine Bush Scrub, Fourwing Saltbush Scrub, Saltbush Scrub, and Tamarisk Thickets; and Palustrine Open Water(Figure 4.3-2).

Figure 4.3-2: Aquatic Resources in the Project Development Area

Wetlands

Vegetation

Extremely low plant species diversity characterizes the Well Pad 4 and S-Berm Road delineation area with palustrine scrub-shrub dominating the area with small patches of freshwater emergent wetlands. The vegetation within the delineation area had been disturbed as of February 2022 as the result of vegetation clearing in portions of the delineation area. Tamarisk (facultative) is the dominate plant species throughout the Well Pad 4 and S-Berm Road delineation area. The tamarisk within the undisturbed portions of the delineation area ranges from approximately 8 to 12 feet tall and due to the density, does not allow for understory vegetation to establish. At the margins of undisturbed tamarisk stands, curly dock (*Rumex crispus*; facultative) co-dominates the understory along with the smaller individuals of tamarisk.

In the area where vegetation had been disturbed within Well Pad 4 and S-Berm Road delineation area, tamarisk-dominated features containing saltbush (*Atriplex lentiformis*: facultative upland) and curly dock were mapped as palustrine scrub-shrub. Tamarisk is relatively young and below 3 inches in diameter at breast height (DBH) due to the recent vegetation clearing and saltbush is present as an early successional species due to its capacity to perform exceedingly well in high sun conditions and seasonal dry periods inherent to the Salton Sea.

One area in the southeastern portion of the Well Pad 4 and S-Berm Road delineation area contained stands of southern cattail (facultative wetland) in the senescent stage and were therefore mapped as palustrine emergent wetlands.

Extremely low plant species diversity characterizes the Stage 1 delineation area, with two distinct vegetation communities present: palustrine scrub-shrub and freshwater emergent wetlands, which are expected in a soft playa desert ecosystem. Iodine bush (facultative wet) dominated features, sometimes containing a saltgrass (facultative) understory, were mapped as palustrine scrub-shrub. Iodine bush typically occurred along the eastern wetland/upland boundary, adjacent to intermittent open waters. Some areas within the southeastern portion of the delineation area contained stands of dead and/or stressed iodine bush likely due to lack of hydrology or extremely saline soil conditions. Areas containing dead iodine bush were not delineated as wetlands due to the lack of living hydrophytic vegetation and primary wetland hydrology indicators.

Southern cattail (obligate) dominated features within the Stage 1 delineation area were mapped as palustrine emergent wetlands and included some dense stands of giant reed (obligate) and saltgrass interspersed throughout. Southern cattail and giant reed dominated communities were confined to areas adjacent to intermittent open water and areas with intermittent shallow standing water. Saltgrass dominated communities were confined to the edges of intermittent open water on the southeastern portion of the delineation area.

Tamarisk was present throughout the delineation area, sometimes in areas of slightly higher elevation (several inches to feet) than palustrine emergent wetland communities. However, hummock features were common in areas dominated by tamarisk and standing water was occasionally present between hummocks. Most tamarisk within the delineation area is relatively young and below three inches in diameter at breast height (DBH) and were therefore mapped as palustrine scrub-shrub wetlands.

Soils

Soils within the Well Pad 4 and S-Berm Road delineation area showed distinct or prominent redoximorphic features, which varied depending on the vegetation community in the areas sampled. Soils within the cattail community typically contained clay loam soils with redox depressions. Soils within tamarisk-dominated communities most often contained redox features present at concentrations of 30 to 50 percent, predominantly in the form of soft masses within the matrix, meeting the hydric soil indicator for redox depressions. Soils textures were predominately clay loam with some layers of sandy clay, silt clay loam, and loamy sand present.

The determining characteristic differentiating wetland and upland points in the delineation of the Stage 1 area was the presence of soil indicators, specifically redox concentrations and depletion matrixes. Upland points superficially appeared similar to wetland points before soil excavation. Soils within the Stage 1 delineation area showed faint, distinct, or prominent redoximorphic features, which varied depending on the vegetation community in the areas sampled. In playa wetland fringes, seasonal and annual weather variation can result in inconsistent soil indicators, especially for relatively young wetlands in which soil conditions are not as well developed (USACE 2008). Sampling was conducted in the dry season, but the soil indicators used can be expected to be observable year-round in seasonal wetlands. Hydric soils were identified by the presence of redox concentrations along pore linings and occurring as soft masses or as depletion matrixes. Great Ecology used the 2022 Pocket Guide to Hydric Soil Field Indicators to confirm indicators occurred at depths, thicknesses, and percentages consistent with hydric soil qualifiers. Soil textures in wetland areas were predominantly characterized by clay loam and silty clay loam. Soils in upland points were predominantly characterized by sandy loam and clay loam. Most sample areas were minimally saturated or completely unsaturated (with the exception of W1, see Appendix D2), despite recent downpours and the presence of saturated soils along roads and areas adjacent to the delineation area. Cattails and saltgrass in sample areas were mostly senesced and more resilient species such as iodine bush and saltgrass still had green leaves.

A pH probe was used to confirm alkaline water and soil conditions common in areas adjacent to the Salton Sea. Open water had an average pH of 9.2, groundwater within soil pits had an average pH of 7.8, and irrigation water had an average pH of 8.5. Solutions with deionized water and soil from test pits were tested to determine if soils throughout the delineation area could be categorized as alkaline. Solutions of deionized water and soil from test pits had an average pH of 8.1 and indicated alkaline conditions. The formation of redoximorphic features is dependent on the ability of iron and manganese to “readily enter into solution as reduction occurs and then precipitates in the form of redox concentrations as the soil becomes oxidized” (USACE 2008). These reactions typically do readily take place in moderately to very strongly alkaline soils; therefore, alkaline soils are typically considered naturally problematic. Although soils throughout the delineation area were categorized as alkaline, redoximorphic features were observed in several wetland areas during field surveys and indicated that desert playa soils, which are typically more alkaline, occur throughout the delineation area. However, soil saturation from nearby drain discharge may have contributed to anaerobic conditions that promoted the development of redoximorphic features in some areas.

Hydrology

Primary indicators of wetland hydrology observed within the Well Pad 4 and S-Berm Road delineation areas were surface soil cracks, salt crust, and oxidized rhizospheres along living roots. Secondary hydrology indicators observed were confirmation of the FAC-Neutral Test. Although there may be enough

lateral percolation occurring from the drains to sustain wetlands within the delineation area, soil pits from the delineation did not reveal the presence of a water table or observations of soil saturation within an acceptable depth to be considered indicative of wetland hydrology.

Water was present in the Stage 1 delineation area as intermittent to permanent features, with most features showing visible saturation only part of the year. Primary indicators of wetland hydrology observed include hydrogen sulfide odor, oxidized rhizospheres along living roots, salt crust, inundation visible on aerial imagery, and drift deposits. Secondary hydrology indicators observed included confirmation of the FAC-Neutral Test, along with drainage patterns (B10), saturation visible on aerial imagery. Although there may be enough lateral percolation occurring from the ditches to sustain wetlands within the delineation area, soil pits did not reveal the presence of a water table or spatially uniform observations of soil saturation within an acceptable depth to be considered indicative of wetland hydrology.

Waters

Three irrigation return flow drains (Q, R, and S) surround and, until recently, discharged directly into the delineation area. Historically, specific areas surrounding these drains exceeded field capacity and were permanently to intermittently flooded. The S-Drain transects the northern boundary of the delineation area along the developed S-Berm Road. The OHWM was delineated for the S-Drain based on transition in soil color, change in vegetation cover and change in vegetation species type.

Great Ecology mapped approximately 2,176.34 linear feet (0.62 acres) of irrigation drain, primarily withing the S-Berm Road area, classified as riverine, lower perennial, unconsolidated bottom, within the Project development area. Approximately 11.16 acres of open waters were mapped in the form of small depressional ponds within the Project development area area and are classified as permanent-to-intermittent palustrine open water.

Desert Playa

Desert playa lacking vegetation was observed in the eastern portion of the delineation area adjacent to Davis Road. Playa within the delineation area contains features consistent with descriptions in reference literature of desert playa habitat, including a barren landscape with salt crust and soil cracking (Brostoff et al. 2001). The presence of salt crusts can be attributed to the shallow topography and high rates of evaporation in this region and is not considered to be a valid wetland indicator. A dense clay aquitard was also identified in one soil pit location during the spring 2022 delineation. The presence of this aquitard likely contributes to the strong levels of depletion in the top layer of the soils due to the extensive anaerobic conditions inherent to a perched water table. Approximately 11.60 acres of playa were mapped in the Project development area.

Aquatic resources within the Project development area are summarized below in Table 4.3-5.

Table 4.3-5: Aquatic Resources and Within the Project Development Area

Water Resource Type	Cowardin Type	Community	Acres	
Wetlands	Palustrine Emergent	Alkaline Marsh	0.06	
		Cattail Marshes	16.27	
		Common and Giant Reed Marshes	0.01	
		Saltgrass Flats	8.09	
	<i>Subtotal</i>			24.42
	Palustrine Scrub Shrub	Fourwing Saltbush Scrub	0.04	
		Iodine Bush Scrub	3.38	
		Saltbush scrub	1.04	
		Tamarisk Thickets	7.26	
	<i>Subtotal</i>			11.72
Waters	Palustrine Open Water	Permanent & Intermittent Water	11.16	
	<i>Subtotal</i>			11.16
	Riverine Lower Perennial	Irrigation Ditch	0.62	
	<i>Subtotal</i>			0.62
Total Aquatic Resources			47.92	
Non-Aquatic	None	Playa	11.60	
		Developed/Disturbed	14.56	
	<i>Subtotal</i>			26.16
Total Non-Aquatic Resources			26.16	
Total Development Area			74.08	

Potentially jurisdictional aquatic resources within the Project development area include 47.30 acres under USACE jurisdiction, 47.92 acres under CDFW jurisdiction, and 47.92 acres under RWQCB jurisdiction. These acreages are summarized in Table 4.3-6.

Table 4.3-6: Potentially Jurisdictional Resources in the Project Development Area

Water Resource Type	Cowardin Type	Acres	Jurisdiction		
			USACE	CDFW	RWQCB
Wetlands	Palustrine Emergent	24.42	x	x	x
	Palustrine Scrub Shrub	11.72	x	x	x
	Palustrine Open Water	11.16	x	x	x
Waters	Riverine Lower Perennial	0.62		x	x
Total Jurisdictional Acres			47.30	47.92	47.92

4.3.5 Project Impact Analysis

Threshold a) Have a substantial adverse effect, either directly or through habitat modifications, on any species identified as a candidate, sensitive, or special status species in local or regional plans, policies, or regulations, or by the California Department of Fish and Wildlife or U.S. Fish and Wildlife Service?

Special Status Plants

Based on known habitat requirements and the results of the database queries described in Section 4.3.4, eight of the nine special status species analyzed have no suitable habitat in the Project study area. One of the nine species, California sawgrass (CRPR 2B.2), was determined to have low potential to occur in the Project study area. Potentially suitable habitat for California sawgrass was present; however, occurrences of this species have only been recorded along the northern shoreline of the Salton Sea and the nearest CNDDDB occurrences were approximately 23 miles northwest of the Project study area. All plant species that were evaluated are listed in Section 4.3.4 and are described in detail in Appendix A of the Biological Resources Technical Report (Panorama Environmental, Inc. 2021a). No special status plant species were recorded during reconnaissance biological surveys of the Project study area. Special status plant species were not observed during any Project survey and are not anticipated to occur in the Project study area. As such, no adverse effects to special status plant species will occur.

Special Status Wildlife

Burrowing Owl

As discussed in Section 4.3.4, habitat for burrowing owl in the Project study area is limited to the small areas of disturbed berms lining roads and irrigation drains (estimated to total less than 3 acres). Other habitats within the Project study area do not provide suitable habitat for burrowing owl. If burrowing owl individuals were to occur in the small areas lining the roads and irrigation drains that provide suitable habitat for the species, Project construction at these locations could potentially affect the species. Recommended mitigation for burrowing owl including preconstruction surveys to define the locations of any active burrows in the Project vicinity and avoidance procedures for active nests would reduce impacts on burrowing owl to a less than significant level.

With the implementation of Mitigation Measures BIO-1, BIO-2, BIO-3, BIO-4, BIO-14, and BIO-16 outlined in Section 4.3.8, no substantial adverse effects to burrowing owl will occur.

Western Snowy Plover

The salt pan/salt flat in the Project study area provides suitable habitat for the interior population of western snowy plover, a State-listed species of special concern. If the species is found to occur within the salt pan cover types in the Project study area, construction activities at these locations could potentially affect the species. Without mitigation, potential impacts on the species from Project activities may include injury or mortality, or destruction of nests from use of vehicles and heavy equipment for grading and other construction activities. If construction activities occur within the salt pan in the Project study area between February 1 and August 31, these activities would have the potential to adversely affect snowy plover nests, if an active nest is present on the site.

In order to avoid impacts on snowy plover nests, ground disturbing construction activities would occur outside nesting bird season or preconstruction avoidance surveys would be conducted before the start of any ground-disturbing construction activities within salt pan during the nesting season, and protective buffers would be implemented for any nests discovered, until the nests are determined to no longer be active. Implementation of this avoidance strategy would reduce the impact on western snowy plover from Project construction to less than significant.

With the implementation of Mitigation Measures BIO-1, BIO-2, BIO-3, BIO-4, and BIO-16 outlined in Section 4.3.8, no substantial adverse effects to western snowy plover will occur.

Marsh Birds

As discussed in Section 4.3.4, the Project study area provides suitable habitat for Yuma Ridgway's rail, black rail, least bittern, wood stork, white-faced ibis, and other marsh birds which rely on native marsh vegetation communities for nesting and molting. While the riparian scrub communities consist primarily of non-native reed and tamarisk, native cattails do exist in this area and may provide suitable habitat for foraging and nesting for marsh bird species.

If Project construction involves any vegetation removal within cattail marsh or riparian scrub between February 1 and August 31, these activities would have the potential to adversely affect nesting marsh birds if an active nest is present within the vegetation, which would be a potentially significant impact. If special status marsh birds are detected within or within 500 feet of work areas during surveys, avoidance and minimization measures for potential impacts to nesting special status marsh birds would include: 1) timing vegetation removal activities within 500 feet of suitable habitat to occur outside of the nesting season and impacts within habitat to occur outside of the molting season, and 2) employing a qualified biologist to be on site throughout the duration of construction activities. The biologist would have the authority to halt construction activities if special status species are observed in the work area. The Project would avoid capturing or killing of special status marsh bird species through monitoring and avoidance procedures.

If any nests of special status marsh birds were to occur in the riparian scrub communities within the Project development area or within the native marshland within 500 feet of the Project, the noise from the construction could potentially result in nest abandonment, and the impact would be potentially significant. The operational noise would be continuous and would not be expected to cause nest abandonment because birds in the vicinity of the Project would be accustomed to the on-going noise. CTR would install noise barriers to provide a buffer for any construction activities that occur within 500 feet of the native marshlands west of the current Project development area during the marsh bird nesting season (February 1 through August 31). Noise barriers could include a wall of hay bales, or another equivalent continuous, sound-absorbing physical barrier placed between the noise-emitting activity and the native marshland vegetation.

With the implementation of Mitigation Measures BIO-1, BIO-2, BIO-3, BIO-4, BIO-9, BIO-10, BIO-11, BIO-12, BIO-13, and BIO-16 outlined in Section 4.3.8, potential direct and indirect impacts to nesting marsh birds due to the Project and indirect impacts on nesting marsh birds from construction noise would be reduced to less than significant.

Other Migratory Birds

The Project study area includes cattail marsh and riparian scrub (common reed– tamarisk series), a vegetation community composed primarily of non-native tamarisk and common reed. The cattail marsh and riparian scrub vegetation community has the potential to provide nesting habitat for other resident and migratory birds species. Active bird nests (i.e., nests that contain eggs or young) are protected under the MBTA and Fish and Game Code (USFWS 2004; CDFW 2007). The bird nesting season generally occurs between February 1 and August 31 each year, the period when trees and vegetation may have the potential to contain an active bird nest.

If Project construction involves any vegetation removal within riparian scrub between February 1 and August 31, these activities would have the potential to adversely affect nesting birds, if an active bird nest is present within the vegetation, which would be a potentially significant impact. Avoidance and minimization measures for potential impacts to nesting birds would include ensuring vegetation removal occurs outside nesting bird season, conducting preconstruction surveys for nesting birds prior to any vegetation removal during the nesting bird season, and implementing protective buffers for any nests discovered until the nests are determined to no longer be active.

Operation of the proposed Project includes use of a gen-tie and power line that could cause avian electrocution or collisions. The electrical lines will be designed in accordance with the Avian Power Line Interaction Committee (APLIC) guidelines and will have avian markers to reduce the risk of electrocution and collision. Because the transmission lines will be designed in accordance with APLIC guidelines, the impact on migratory birds during facility operation would be less than significant.

With the implementation of Mitigation Measures BIO-1, BIO-2, BIO-3, BIO-4, BIO-15, BIO-16, and BIO-17 outlined in Section 4.3.8, potential direct and indirect impacts to nesting birds due to the Project and associated gen-tie and power lines would be reduced to less than significant.

Fish

Project construction would involve installation of a new pipeline and bridge crossing IID's R Drain and gen-tie line crossing IID R, Q, and P Drains, which provide aquatic habitat for desert pupfish, which is protected under the CESA and ESA. The bridge and pipeline crossing the R Drain and gen-tie lines would span the IID drains. The S Berm access road has been designed using sheet piles to avoid any impacts within the drain waters and avoid associated potential impacts on desert pupfish.

The open water area adjacent to the Q Drain could provide suitable habitat for desert pupfish. Construction within the open water area could result in "take" of desert pupfish. A CDFW incidental take permit and USFWS authorization for take of desert pupfish would be required prior to construction in any areas containing suitable habitat for desert pupfish. The CDFW and USFWS take permits will include requirements for avoidance and mitigation of impacts on desert pupfish, including restrictions on the timing of construction activities, approaches to dewatering to avoid or minimize species take, and requirements for habitat compensation to support the species. The impact on desert pupfish would be less than significant due to compliance with the CDFW and USFWS incidental take permits and authorizations.

Project operation would not involve any activities that may directly or indirectly harm fish species. The Project has been designed to avoid discharge to any surface water resources. All drainage from the Project site would be contained within the stormwater retention basins and no stormwater runoff would flow to

areas that contain habitat for desert pupfish; therefore, no impact of desert pupfish would occur during operation.

In addition to obtaining CDFW and USFWS incidental take permits and authorizations, the implementation of Mitigation Measures BIO-1, BIO-2, BIO-3, BIO-4, BIO-6, BIO-7, and BIO-8 outlined in Section 4.3.8, will ensure direct and indirect impacts to desert pupfish would be reduced to less than significant.

Mammals

The Project includes removal of cattails and other vegetation that provide breeding habitat for Yuma hispid cotton rat. Yuma hispid cotton rat could be impacted by construction activities if the species were to occur in the construction area at the time of construction. In addition, construction activities include excavation of trenches and steep walled foundations where cotton rat could become trapped. Because a qualified biologist would be on site to observe all vegetation removal activities and could relocate Yuma hispid cotton rat out of harm's way if one were observed in the area, the impact from vegetation removal activities would be less than significant. In addition, because open trenches will be covered to avoid cotton rats from becoming trapped and a biologist will observe open excavations daily, the impact of open excavations on cotton rats will be less than significant.

With the implementation of Mitigation Measures BIO-1, BIO-2, BIO-3, BIO-4, and BIO-18 outlined in Section 4.3.8, direct and indirect impacts to Yuma hispid cotton rat would be reduced to less than significant.

Threshold b) Have a substantial adverse effect on any riparian habitat or other sensitive natural community identified in local or regional plans, policies, regulations or by the California Department of Fish and Wildlife or U.S. Fish and Wildlife Service?

As discussed in Section 4.3.4, the Project development area contains approximately 3.38 acres of Iodine Bush Scrub, a CDFW-designated sensitive natural community. Any ground disturbance, vegetation removal, or permanent land use conversion from Project activities within this vegetation community would be a potentially significant impact. The habitat mitigation plan developed for the Project should incorporate in kind compensatory mitigation for desert sink scrub habitats. With appropriate mitigation of desert sink scrub habitat, the impact from construction and operation of the Project on the sensitive natural community would be less than significant.

The Project study area contains wetlands and riparian habitats that are potentially subject to RWQCB, CDFW, and USACE jurisdiction. The removal of vegetation and discharge of fill to these wetland and riparian resources from temporary construction activities, or permanent conversion to a developed land use during operation of the proposed Project, could be a significant impact. Hell's Kitchen PowerCo 1 LLC and Hell's Kitchen LithiumCo 1 LLC will obtain all required USACE, CDFW, and RWQCB permits for impacts to wetlands and riparian areas prior to construction in any jurisdictional wetland or riparian area. The agencies permit processes requires compensatory mitigation for impacts to jurisdictional water resources. Because the Project will comply with all permit requirements, including development of compensatory wetland and riparian mitigation, the impacts on wetlands and riparian areas would be less than significant. Further details on the proposed wetland mitigation plan can be found in Section 4.3.8, Mitigation Measure BIO-19.

Threshold c) Have a substantial adverse effect on state or federally protected wetlands (including, but not limited to, marsh, vernal pool, coastal, etc.) through direct removal, filling, hydrological interruption, or other means?

The removal of sensitive vegetation communities and discharge of fill to these wetland and riparian resources from temporary construction activities, and permanent conversion to a developed land use during operation of the proposed Project, could be a significant impact. To prevent significant impacts to the nearby wetland and riparian habitat due to increased runoff from the Project site during operations, a stormwater retention basin will be developed on site. HKP1 and HKL1 will obtain all required USACE, CDFW, and RWQCB permits for impacts to wetlands and riparian areas prior to construction in any jurisdictional wetland or riparian area. The Project site is north of IID canals and agricultural drains that flow into these wetlands and the Salton Sea; however, to prevent offsite impacts to nearby wetlands resulting from stormwater runoff during construction the Project would be required to obtain coverage under a Construction General Permit to comply with National Pollutant Discharge Elimination System (NPDES) requirements. Compliance with the Construction General Permit would require the development and implementation of a Stormwater Pollution Prevention Plan (SWPPP) and associated Best Management Practices (BMPs). These BMPs will include measures that would be implemented to prevent discharges into adjacent wetland and riparian habitat from the Project site during construction activities. However, the impacts from the Project construction and operation on wetlands and riparian areas are potentially significant.

The implementation of Mitigation Measure BIO-19 outlined in Section 4.3.8 would reduce impacts to less than significant.

Threshold d) Interfere substantially with the movement of any native resident or migratory fish or wildlife species or with established native resident or migratory wildlife corridors, or impede the use of native wildlife nursery sites?

Project construction would occur within a relatively small area of comparatively low habitat quality along the roadside adjacent to the large, contiguous wetlands to the east. Following construction completion, vegetated areas and unvegetated open space would be converted permanently to developed land uses. The conversion of these vegetated and unvegetated open space areas would not result in a noteworthy loss of habitat compared to the large contiguous wetlands and open space areas to the north, west, and east, and would not impede wildlife access to foraging habitat, breeding habitat, water sources, or other areas necessary for their movement or reproduction. The Project impacts are collocated adjacent to Davis Road, IID's existing power line, and other infrastructure. As discussed in Section 4.3.4, the Project study area does not contain any wildlife nursery sites. The impact would be less than significant.

Threshold e) Conflict with any local policies or ordinances protecting biological resources, such as a tree preservation policy or ordinance?

Table 4.3-1 shows the goals, objectives, policies, and programs of Imperial County's General Plan as related to preservation of biological resources, along with an analysis of the consistency of the Project with these goals.

In accordance with the consistency analysis provided in Table 4.3-1, the proposed Project is not anticipated to conflict with the Imperial County General Plan. There are no other local policies or ordinances protecting biological resources that apply to the proposed Project. Therefore, construction

and operation of the proposed Project is anticipated to have a less-than-significant impact with respect to conflicting with any local policies or ordinances protecting biological resources. However, the Imperial County Board of Supervisors provides the ultimate determination regarding the proposed Project's consistency with the Imperial County General Plan.

Threshold f) Conflict with the provisions of an adopted Habitat Conservation Plan, Natural Community Conservation Plan, or other approved local, regional, or state habitat conservation plan?

As discussed under Section 4.3.2, the Project study area is not located within the coverage area of any adopted HCPs, NCCPs, or other approved local, regional, or state habitat conservation plan. Therefore, construction and operation of the proposed Project is anticipated to have no impact with respect to conflicting with such a plan.

4.3.6 Cumulative Impacts

Cumulative impacts are defined in CEQA as "two or more individual effects which, when considered together, are considerable or which compound or increase other environmental impacts" (CEQA Guidelines Section 15355). Stated in another way, "a cumulative impact consists of an impact which is created as a result of the combination of the Project evaluated in the EIR together with other projects causing relating impacts" (CEQA Guidelines Section 15130 [a][1]).

Implementation of the Project in combination with other proposed, approved, and reasonably foreseeable projects in the region could have cumulative impacts on the special status species including burrowing owl, western snowy plover, marsh birds [Yuma Ridgway's rail, black rail, least bittern, wood stork, white-faced ibis, and others], and other migratory birds; desert pupfish; Yuma hispid cotton rat; sensitive vegetation communities including desert sink scrub and riparian habitat; and wetlands. However, impacts associated with these special status species, sensitive vegetation communities, and wetlands would be reduced to less than significant with implementation of Mitigation Measures BIO-1 through BIO-19. Related projects would similarly undergo CEQA review, and determinations regarding the significance of impacts of the related projects on biological resources would be made on a case-by-case basis. If necessary, the applicants of the related projects would be required to implement appropriate mitigation measures. Therefore, implementation of related projects and other anticipated growth in Imperial County would not combine with the proposed Project to result in cumulatively considerable impacts on biological resources.

4.3.7 Mitigation Measures

The following measures are recommended to avoid or minimize impacts on biological resources. All impacts on biological resources would be less than significant with implementation of these recommended measures.

General Environmental Protection Measures

BIO-1. Designated Biologist:

The Applicant shall retain the services of a Qualified Biologist. The Qualified Biologist will be employed during construction and all vegetation removal and ground-disturbing activities. The Qualified Biologist will document compliance with the projects mitigation measures and permits. The Qualified Biologist will

have the authority to halt any Project activities that are in violation of the terms and conditions of the Project biological opinion(s) or incidental take permit, as appropriate.

BIO-2. Biological Monitors: Biological monitor(s) will be employed to assist the Designated Biologist in conducting preconstruction surveys and monitoring ground disturbance, grading, construction, decommissioning, and restoration activities. The biological monitor(s) will have sufficient education and field experience to understand resident wildlife species biology. To avoid and minimize effects to biological resources, the biological monitor(s) will assist the Designated Biologist with the following:

- Conduct inspections for listed species during ground-disturbing construction activities and document that habitat within the construction zone is not occupied by Yuma Ridgway's rail or desert pupfish.
- Document compliance with all conservation measures, including but not limited to monitoring for presence of listed species; halting construction activity in the area if an individual listed species is found; and checking the staking/flagging of all disturbance areas to be sure that they are intact and that all construction activities are being kept within the staked/flagged limits. If a Yuma Ridgway's rail or desert pupfish is found within a work area, the Biological Monitor(s) will immediately notify the Designated Biologist, who will determine measures to be taken to ensure that the individual is not harmed, such as temporarily halting construction.

BIO-3. Worker Environmental Awareness Program Training: A Worker Environmental Awareness Program will be implemented for construction crews prior to the commencement of Project activities. Training materials and briefings will include, but not be limited to, discussion of the federal and State statutes protecting threatened and endangered species, the consequence of noncompliance with these statutes, identification of values of wildlife and natural plant communities, hazardous substance spill prevention and containment measures, and review of all required conservation measures.

BIO-4. Flagging of Work Area Limits: All areas to be disturbed by the Project will be flagged prior to construction. All disturbance will be confined to these flagged areas, and all employees will be instructed that their activities must be confined to locations within the flagged areas.

BIO-5. Power Wash Equipment: All equipment used during construction of the Project will be required to be power washed prior to arrival at the Project site to prevent the transportation and establishment of noxious weeds in the area.

BIO-6. Sediment and Erosion Control: The Project proponent will acquire the appropriate Clean Water Act regulatory permits, prepare a Stormwater Pollution and Prevention Plan (SWPPP), and implement BMPs prior to construction and site restoration. The SWPPP will identify specific actions and BMPs relating to the prevention of stormwater pollution from Project-related construction sources by identifying a practical sequence for site restoration, BMP implementation, contingency measures, responsible parties, and agency contacts. The SWPPP reflects localized surface hydrological conditions and will be reviewed by the USFWS prior to commencement of work. A SWPPP will be a condition of the contract with each contractor selected to build and decommission the Project. The SWPPP(s) at a minimum will incorporate soil stabilization and erosion control practices (e.g., hydroseeding, erosion control blankets, mulching), dewatering and/or flow diversion practices, sediment control practices (temporary sediment basins, fiber rolls), temporary and post-construction onsite and offsite runoff controls, and special considerations and BMPs for water crossings, wetlands, and drainages. The SWPPP will be prepared by a qualified SWPPP practitioner with BMPs selected to achieve maximum pollutant removal and that represent the best

available technology that is economically achievable. Emphasis for BMPs is placed on controlling discharges of oxygen-depleting substances, floating material, oil and grease, acidic or caustic substances or compounds, and turbidity. Performance and effectiveness of these BMPs are determined either by visual means where applicable (i.e., observation of above-normal sediment release), or by actual water sampling in cases where verification of contaminant reduction or elimination (inadvertent petroleum release) is required to determine adequacy of the measure.

BIO-7. Solid Waste Management: Solid waste will be properly contained in designated collection areas on site and regularly disposed of.

Desert Pupfish Measures

~~**BIO-8. Desert Pupfish Protection and Relocation Plan:** A desert pupfish protection and relocation plan will be prepared prior to construction activities in any suitable habitat for desert pupfish. Its implementation will ensure construction in the drain mouths and channels will be conducted with minimal effects on desert pupfish. The plan will provide the following:~~

- ~~• Avoidance of construction activities within suitable habitat for desert pupfish during the desert pupfish spawning season (April to October).~~
- ~~• Protocols for preconstruction surveys to assess species presence and spawning within or immediately adjacent to work areas (i.e., areas with ponded water).~~
- ~~• Protocols for capture (e.g., trapping for construction) and transport methods that will minimize handling and stress as well as exposure to heat, low dissolve oxygen, and crowding.~~
- ~~• Identification of locations for release of captured desert pupfish.~~

A desert pupfish protection and relocation plan will be prepared prior to construction activities in any suitable habitat for desert pupfish. Its implementation will ensure construction in any suitable habitat for desert pupfish will be conducted with minimal effects on desert pupfish. This plan will be submitted to the Service and the CDFW for review and approval prior to any ground-disturbing activities that have a water component. This plan will provide:

1. Protocols for pre-construction or pre-maintenance surveys to assess species presence and spawning within or immediately adjacent to work areas (e.g., in, or at the end of, the irrigation drains/drain canals, open water areas, and around the open water margins). The protocols will also outline the qualifications required for biologists to conduct desert pupfish survey, capture, and relocation activities and the process for biologist approval.
2. Capture (e.g., trapping in the irrigation drains for construction and maintenance; or trapping, dip netting, and seining in open water areas that are drained or if the water level is dropped) and transport methods to minimize handling and stress as well as exposure to heat, low dissolved oxygen (DO), and crowding.
3. Identification of locations for release of captured desert pupfish.
4. Timing windows when construction or maintenance in open water areas and in the irrigation drain mouths/canals may be conducted with minimal effects on desert pupfish spawning.
5. Adaptive management procedures that include assessment of mitigation measure effectiveness, development of revised measures to improve effectiveness, and similar assessment of revised measures to verify effectiveness. Yuma Ridgway's Rail Measures, Black Rail, and Other Marsh Bird Measures.

Yuma Ridgway's Rail Measures, Black Rail, and Other Marsh Bird Measures

BIO-9. Construction Timing: Construction activities within habitat for Yuma Ridgway's rail (i.e., cattail marsh) will be scheduled to avoid the nesting and molting flightless season (i.e., February 15 – September 15). Pile driving activities adjacent to Yuma Ridgway's rail habitat will avoid Yuma Ridgway's rail nesting season.

BIO-10. Pre-Construction Surveys and Construction Monitoring for Yuma Ridgway's Rail and Black Rail: Pre-construction surveys for Yuma Ridgway's rail and black rail and construction monitoring will be conducted within all Project development areas within suitable habitat and a 500-foot buffer from suitable habitat. In the event that Yuma Ridgway's rail(s) or black rail(s) are detected within the work area (the area of active equipment use), all construction activities in the area will halt and the USFWS and CDFW will be notified no later than noon of the next business day. Project activities in the area may not proceed until the birds have left the work area. The USFWS and CDFW will also be notified if any Yuma Ridgway's rail are detected within 500 feet of the construction area. Project activities may proceed with caution in this buffer area under the direction of the Designated Biologist.

BIO-11. Reduced Vehicle Speed Adjacent to Rail Habitat: Vehicle speeds will be reduced to 15 miles per hour (mph) on access roads adjacent to Yuma Ridgway's rail habitat. These areas will be appropriately signed to identify the speed limit.

BIO-12. Noise Attenuation: The following noise attenuation measures will be implemented to minimize noise impacts on Yuma Ridgway's rail during the nesting season:

- At least 30 days prior to activities within 500 feet of Yuma Ridgway's rail habitat, the Applicant will conduct a noise study to evaluate the maximum predicted noise level within rail habitat.
- If the maximum predicted noise is less than 60 A-weighted decibel scale (dBA) equivalent continuous sound level (Leq), no additional measures are required.
- If the maximum predicted noise level exceeds 60 dBA Leq in rail habitat, noise attenuation measures such as noise walls or hay bales will be installed between the noise source and the suitable habitat. Noise monitors will be installed at the edge of the nearest Yuma Ridgway's rail habitat to assess the noise levels and verify that attenuation measures are successful. If necessary, additional noise reduction measures will be implemented to reduce the noise level to below 60 dBA at the edge of occupied habitat.

BIO-13. Habitat Conservation: To offset the loss of Yuma Ridgway's rail habitat, the Project proponent will preserve, create, or enhance habitat near the Project site for Yuma Ridgway's rail. The Project proponent will provide funding for construction and long-term management of the created habitat and will provide financial assurance for the construction of the wetland habitat in the form of performance bonds, escrow accounts, casualty insurance, or letters of credit. The performance bond, escrow account, casualty insurance, or letter of credit shall be of sufficient value to cover all construction, monitoring and reporting costs until the habitat is fully established. The financial assurance shall be in place prior to ground disturbance. Long-term management funding will be provided sufficient to cover, at a minimum, the management costs related to procurement of water from IID, weed control, levee and control structure maintenance, and control structure repair or replacement. The Applicant will prepare a detailed Habitat Enhancement Mitigation and Mitigation Monitoring Plan for review and approval by the USFWS,

Corps, and CDFW prior to Project construction. Habitat creation activities will be conducted outside of the bird breeding season (February 15 – September 15) to avoid potential noise impacts on Yuma Ridgway's rail.

Burrowing Owl Measure

BIO-14. Burrowing Owl. A pre-construction survey will be conducted for burrowing owls. The survey will be conducted during peak activity period (one hour before to two hours after sunrise or two hours before to one hour after sunset) no more than 14 days prior to the start of construction and within 500 feet surrounding the construction area. If owls are located during the pre-construction survey between February 1 and August 31 (nesting season), a buffer area will be established according to the guidelines in the 2012 Staff Report. A modified buffer reduction may be used with CDFW concurrence. If burrowing owls are located during the nonbreeding season, owls may be passively relocated in coordination with CDFW, by a qualified biologist according to the procedures outlined in the 2012 Staff Report on Burrowing Owl Mitigation. If burrowing owls are found on site during pre-construction surveys, the Project proponent shall contact CDFW to prepare a plan of action for buffers or passive relocation.

Nesting and Migratory Bird Measures

BIO-15. Lighting. Except as necessary for safety or security purposes, no lighting shall be allowed to impact wetland or riparian habitats.

BIO-16. Nesting Bird Plan. ~~A Nesting Bird Plan will be prepared that defines procedures for avoidance of nesting birds during Project construction. The Project will be scheduled to start construction activities outside the nesting season (February 1 through August 31), to the extent feasible. In the event that construction has to start during the nesting season, a qualified biologist will conduct surveys of the Project development area no more than 72 hours before any ground disturbance. If an active nest is observed in the Project development area, the qualified biologist will employ appropriate procedures for nest avoidance, and construction activities will not begin in the area of the active nest until all nesting activities have ceased and the young have fledged the nest.~~ Nesting Bird Plan. Construction activities shall take place outside the general bird breeding season (February 15 to September 30), to the maximum extent practicable. Regardless of the time of year, prior to ground-disturbing activities, a qualified biologist shall conduct a nesting bird survey to comply with CDFW Code 3503 and 3503.5 and the Migratory Bird Treaty Act. The survey shall occur no more than three (3) days prior to initiation of proposed Project activities and shall include any potential habitat (including trees, shrubs, the ground, or nearby structures). Any occupied passerine and/or raptor nests occurring within the proposed Project area or the Project's zone of influence (generally 100-300 feet) shall be delineated and a no-disturbance buffer zone (as determined by the avian biologist) shall be established and maintained during Project activities. Additional follow-up surveys may be required by the resource agencies and Imperial County. The buffer zone shall be sufficient in size to prevent impacts to the nest. A qualified biologist shall monitor active nests to determine whether construction activities are disturbing nesting birds or nestlings. If the qualified biologist determines that construction activities pose a disturbance to nesting, construction work shall be stopped in the area of the nest and the no disturbance buffer shall be expanded. Once nesting has ceased and the fledglings are no longer using the nest area as confirmed by a qualified biologist, the buffer may be removed. A nesting bird survey report shall be provided to Imperial County and CDFW. If an active nest is encountered during construction, construction shall stop immediately until a qualified biologist can determine the status of the nest and when work can proceed without risking violation to state or federal laws.

BIO-17. Bird Flight Diverters. Bird flight diverters will be installed on any new transmission and power lines serving the Project, to limit bird mortality associated with introducing new transmission lines in bird flyways. Flight diverters make transmission lines more visible to birds. The transmission and power lines will be designed to meet Avian Power Line Interaction Committee (APLIC) guidelines.

Mammal Mitigation Measure

BIO-18. Excavation Areas. Any open trench or excavated area shall be securely covered anytime Project activities within the excavated/trenched area have ceased. The designated biologist shall oversee the covering of all excavated, steep-walled holes or trenches by placing plywood or other barrier materials such that animals are unable to enter and become entrapped. The use of temporary fencing around the perimeter or trenches or holes may be an acceptable minimization measure, if deemed appropriate by the biological monitor. Before holes or trenches are filled, the Biological Monitors shall thoroughly inspect the areas for trapped animals. If any worker discovers that any animal has become trapped, they shall halt Project-related activities and notify the biological monitor immediately.

Wetlands and Riparian Areas

BIO-19. Wetland and Riparian Area Restoration/Compensation. The Project will provide restoration/compensation for all unavoidable impacts on areas under the jurisdiction of USACE, RWQCB, and CDFW. Impacts on jurisdictional areas will be avoided to the extent feasible. Where avoidance of jurisdictional areas is not feasible, the Project applicant will provide the necessary mitigation required as part of wetland permitting, by creation, restoration, or preservation of suitable jurisdictional or equivalent habitat along with adequate buffers to protect the function and values of jurisdictional areas. The Mitigation ratio will be 1:1 or as approved by the permitting agencies. The proposed Mitigation Plan area is located in Section 35 approximately 2 miles north of the HKP1 and HKL1 Projects at the corner of Beach Road and Access Road. The proposed mitigation area will total 159.61 acres; approximately 152 acres will be created native wetland/open water habitat and approximately 7 acres will be enhanced native upland habitat. Proposed native wetland communities include Willow Scrub Shrub, Cattail Bullrush Marsh and Desert Riparian Woodlands. Proposed upland communities include Sonoran Desert Scrub/Alkali Sink.

4.3.8 Level of Significance After Mitigation

With the implementation of Mitigation Measures BIO-1 through BIO-19, the Project would reduce potential impacts to biological resources to a less than significant level.

4.4 CULTURAL RESOURCES

This section describes the cultural resources at the Project site and general vicinity. Cultural resources include prehistoric and historic archaeological sites, archaeological districts, historic buildings and structures, and isolated occurrences of artifacts.

Information used in preparing this section and in evaluating potential impacts on cultural resources was derived from the Cultural Resource Survey prepared by Tierra Environmental Services, Inc. (Tierra) in June 2022. This document is contained in Appendix E of this EIR. Due to the confidential nature of the location of cultural resources, information regarding locations of these resources has been removed and is not included in the appendix.

4.4.1 Existing Environmental Setting

Existing Conditions

The Project area is relatively flat and is located in what was once the lakebed of the prehistoric Lake Cahuilla. Lake Cahuilla was a resource that had profound effects on the prehistoric people who lived in the Project area and groups in the surrounding region, lasting until the 1500s. It supplied the southern Coachella Valley and northern Imperial Valley with not only water but other lacustrine resources such as freshwater mussels, waterfowl, and fish. The Project area consists of flat, undeveloped areas and, in some areas, wetland habitat ranging in elevation between 229 and 219 feet below mean sea level (bmsl). There are three soils series (Fluvaquent, Imperial, and Imperial-Glenbar) within the Project area, all of which are found in basin floors between 230 feet above mean sea level and 200 feet bmsl. The three soils are derived of mixed parent materials with depths in excess of 80 inches to a restrictive feature, indicating depositional conditions.

Cultural Setting

Prehistory of the Project site is broken down into the Paleoindian period, Early Archaic period, Late Prehistoric period, and Ethnohistoric period. The earliest well-documented prehistoric sites in Southern California belong to the Paleoindian period, which has locally been termed the San Dieguito complex/tradition. The Paleoindian period is thought to have occurred between 9,000 (or earlier) and 8,000 years ago in this region. The Early Archaic period is differentiated from the earlier Paleoindian period by a shift to a more generalized economy and an increased focus on use of grinding and seed processing technology. Native Americans during the Archaic period had a generalized economic focus on hunting and gathering. In many parts of North America, Native Americans chose to replace this economy with others based on horticulture and agriculture. Around 2,000 Before Present (B.P.), during the Late Prehistoric period, Takic-speaking people from the Great Basin region began migrating into Southern California. The Late Prehistoric period in this portion of Imperial County is recognized archaeologically by smaller projectile points, the replacement of flexed inhumations with cremation, the introduction of ceramics, and an emphasis on inland plant food collection and processing, especially acorns and mesquite. The Ethnohistoric period refers to a brief period when Native American culture was initially being affected by Euroamerican culture; historical records on Native American activities during this time are limited.

The Kamia, or Desert Kumeyaay, occupied the Project area during the Late Prehistoric period. The Kamia are a subgroup of the Yuman family of the Hokan stock and, therefore, are closely related linguistically to the Mohave, Quechan, Maricopa, Paipai, Cocopa, and Kiliwa. The extreme diversity of Cahuilla territory

reflected the range of environmental habitats in inland Southern California. Topographically, their territory ranged from the New River and Alamo River sloughs to San Felipe Creek in the north to the Algodones Dunes in the east. Ecological habitats included the full range of mountains, valleys, passes, foothills, and desert area.

The extent to which the Kamia/Kumeyaay practiced agriculture at the time of European contact has not been established. Agriculture, which had been well established among the Colorado River groups at the time of Western influence, had diffused into the Imperial Valley and was practiced by all of the Kamia lineages. Lawton and Bean (1868) have suggested that certain Cahuilla groups cultivated corn, beans, squash and melons, like the neighboring Colorado River tribes.

Group size and the degree of social interaction varied over the course of an annual cycle. The basic unit of production was the family, which was capable of great self-sufficiency, but Kamia/Kumeyaay families, like other hunter-gatherers, moved in and out of extended family camps or villages opportunistically as problems or opportunities arose. Thus, whereas single families occasionally exploited low-density, dispersed resources on their own, camps or villages of several families formed at other times, particularly when key resources (such as water) were highly localized. Important plant foods exploited from the Kamia's diverse habitat included mesquite, screw beans, pinyon nuts, and various cacti. Important but less utilized plants included various seeds, wild fruits and berries, tubers, roots, and greens. Women were instrumental in the collection and preparation of vegetal foods.

When the Spanish colonists began to settle California, the Kamia were on the margins of the mission system. They retained more of their culture due to their distance from mission influence. Kamia culture and society remained stable during the period of missionization on the coast. It was not until the American period that the Kamia were heavily displaced. The introduction of European diseases greatly reduced the native population of Southern California and further disrupted the way of life of the native inhabitants.

Prior Research

Archival data has been provided by Hell's Kitchen Geothermal, LLC, from the previous 2017 cultural studies of the Project area conducted by ASM Affiliates, Inc. The records search was conducted by the South Coastal Information Center (SCIC) at San Diego State University to identify any previously recorded cultural resources within the Project area and to determine the types of resources that might occur in the Project area. In addition to the two studies conducted by ASM Affiliates, Inc., the records search indicated that 17 cultural resource investigations have taken place within a half-mile radius of the Project area. The entire Project area has been previously surveyed.

4.4.2 Applicable Regulations

State

Assembly Bill 4239

Assembly Bill (AB) 4239 established the Native American Heritage Commission (NAHC) as the primary government agency responsible for identifying and cataloging Native American cultural resources. The bill authorized the NAHC to act to prevent damage to and ensure Native American access to sacred sites and authorized the NAHC to prepare an inventory of Native American sacred sites located on public lands.

Public Resources Code 5097.97

Public Resources Code (PRC) 5097.97 states:

No public agency and no private party using or occupying public property or operating on public property under a public license, permit, grant, lease, or contract made on or after July 1, 1977, shall in any manner whatsoever interfere with the free expression or exercise of Native American religion as provided in the United States Constitution and the California Constitution; nor shall any such agency or party cause severe or irreparable damage to any Native American sanctified cemetery, place of worship, religious or ceremonial site, or sacred shrine located on public property, except on a clear and convincing showing that the public interest and necessity so require.

Public Resources Code 5097.98 (b) and (e)

PRC 5097.98 (b) and (e) require a landowner on whose property Native American human remains are found to limit further development activity in the vicinity until he/she confers with the NAHC-identified Most Likely Descendants (MLDs) to consider treatment options. In the absence of MLDs or of a treatment acceptable to all parties, the landowner is required to reinter the remains elsewhere on the property in a location not subject to further disturbance.

California Health and Safety Code 7050.5

California Health and Safety Code (HSC) 7050.5 makes it a misdemeanor to disturb or remove human remains found outside a cemetery. This code also requires a project owner to halt construction if human remains are discovered and to contact the county coroner.

Local

Imperial County General Plan

The Conservation and Open Space Element of the General Plan includes goals, objectives, and policies for the protection of cultural resources and scientific sites that emphasize identification, documentation, and protection of cultural resources. Table 4.4-1 provides a consistency analysis of the applicable Imperial County General Plan policies relevant to cultural resources as they relate to the Project. While this EIR analyzes the Project's consistency with the General Plan pursuant to State California Environmental Quality Act (CEQA) Guidelines Section 15125(d), the Imperial County Board of Supervisors ultimately determines consistency with the General Plan.

Table 4.4-1: General Plan Consistency

General Plan Policies	Consistency with General Plan	Analysis
Conservation and Open Space Element		
<i>Conservation of Environmental Resources for Future Generations</i>		
Goal 1 – Environmental resources shall be conserved for future generations by minimizing	Consistent	A Cultural Resources Survey Report was prepared for the Project by Tierra on June 7, 2022. The analysis examined the Project site for potential resources of cultural

Table 4.4-1: General Plan Consistency

General Plan Policies	Consistency with General Plan	Analysis
Conservation and Open Space Element		
environmental impacts in all land use decisions and educating the public on their value.		significance. The survey and accompanied report determined that resources may be uncovered during Project construction. The Project would, where feasible, avoid significant resources, or be redesigned to ensure resources are protected or preserved through various means. Mitigation measures would be implemented to ensure that construction would not result in a significant impact and that any resources discovered would be assessed by a qualified archaeologist who would determine the treatment of the resource. Therefore, the Project is consistent with this objective.
<i>Preservation of Cultural Resources</i>		
Goal 3 – Preserve the spiritual and cultural heritage of the diverse communities of Imperial County.	Consistent	A Cultural Resources Survey Report was prepared for the Project by Tierra on June 7, 2022. Archival research resulted in previously prepared studies of the area along with previously recorded resources within the search radius. A pedestrian survey and Tribal Consultation were conducted to identify the site conditions and to determine if the Project site contains any tribal cultural resources. Refer to Section 4.12: Tribal Cultural Resources for further discussion. The Project is consistent with this objective.
Objective 3.1 – Protect and preserve sites of archaeological, ecological, historical, and scientific value, and/or cultural significance.	Consistent	See above responses.
Objective 3.3 – Engage all local Native American Tribes in the protection of tribal cultural resources, including prehistoric trails and burial sites.	Consistent	A previous Native American contact program was conducted in 2017 and again in 2021. Additionally, as discussed in Section 4.12: Tribal Cultural Resources, the County also conducted AB 52 consultations with the Quechan Indian Tribe and the Torres-Martinez Indian Tribe to identify any concerns they may have regarding the Project. Thus, the Project is consistent with this objective.

4.4.3 Thresholds of Significance

To assist in determining whether a project would have a significant effect on the environment, the County utilizes the State CEQA Guidelines Appendix G Guidelines. Appendix G states that a project may be deemed to have impacts to cultural resources if it would:

Threshold a) Cause a substantial adverse change in the significance of a historical resource pursuant to §15064.5?

Threshold b) Cause a substantial adverse change in the significance of an archaeological resource pursuant to §15064.5?

Threshold c) Disturb any human remains, including those interred outside of formal cemeteries?

4.4.4 Methodology

Tierra conducted a Phase I archaeological investigation on the approximately 68 acres of land proposed for development of the Hell's Kitchen PowerCo 1 (HKP1) and Hell's Kitchen LithiumCo 1 (HKL1) Project area. Cultural resource work was conducted in accordance with CEQA and its respective implementing regulations and guidelines. The records search resulted in 19 cultural studies that, taken together, indicate the entire Project area has been previously surveyed. Four previously recorded resources were identified in the search radius, with only one of the resources, a historic-era isolated bottle base (HK-I-1), having been identified within the Project area.

Native American Heritage Commission

A previous Native American contact program was conducted for the Cultural Resource Study for the Hell's Kitchen Exploratory Well Project by ASM Affiliates in 2017. In October 2016, ASM Affiliates, Inc. reached out to the Native American Heritage Commission (NAHC) and was provided contact information for 36 Native American individuals, who were also contacted. Two tribes responded at the time. The Agua Caliente Band of Cahuilla Indians responded that the Project area is beyond their Traditional Use Area and opted to defer to Tribes more proximally located to the Project area. The Morongo Band of Mission Indians expressed concern for the Project and requested monitoring by a Cahuilla representative during construction activities.

Tierra has initiated an updated Native American Contact Program for the current effort. The NAHC was contacted via email on April 12, 2021. The NAHC responded in kind on April 27, 2021 with positive results for the Sacred Lands File search of the vicinity and suggested that all tribal individuals supplied by the NAHC be contacted, especially the Torres-Martinez Desert Cahuilla, regarding further information of the positive search results. Letters were sent to all contacts supplied thereafter. To date, no responses have been received from the tribal individuals contacted in April 2021. Any comments received will be documented in this report and supplied to the County. See Appendix E for details on the Native American Contact Program.

Survey Methods

The pedestrian survey was conducted on April 1 and October 11, 2021, by Ms. Hillary Murphy and Mr. Andres Berdeja of Tierra. The pedestrian survey was conducted by intensive survey in 10- to 15-meter interval transects. Part of the Project area was located within wetlands. In these locations, transects running parallel to the waterline were conducted. A windshield survey was conducted for small portions of the southern segment right-of-way (ROW) where the new ROW is being secured for the gen-tie line along the existing dirt/paved roads that were noticeably highly disturbed and near the road. The cultural survey was conducted to adequately identify cultural resources within the Project area.

Resources identified during the survey were assigned consecutive temporary numbers (e.g., TES-HK-001) in the field. Furthermore, temporary numbers may contain an "H" suffix, used to denote historic period

resources (e.g., TES-HK-001H) or, in the case of a resource representative of both historic and prehistoric periods, the suffix “/H” was added (e.g., TES-HK-001/H).

Resources identified as isolates received an “i” to indicate isolated finds. Per industry standards, historic artifacts or features were recorded in feet and inches, and prehistoric resources were recorded using the metric system. All resources assigned with a temporary number will be given permanent trinomials or primary numbers by the SCIC. No ground-disturbing activities or artifact collections were undertaken during the course of this study.

Regulatory Framework

For the purposes of this report, the term “cultural resources” describe any expression of human activity on the landscape whether past or present. Within the cultural resources framework are resource types including but not limited to, prehistoric archaeological sites, historical archeological sites, districts, historical buildings and structures, ethnographic sites, traditional cultural properties, and isolated artifacts and features. Each of these resources may be evaluated for its potential significance, and if determined eligible to the California Register, is designated as “historic property.”

This archaeological investigation was conducted in compliance with CEQA requirements pertaining to the determination of whether the Proposed Project may have an effect on significant cultural resources (PRC 21083.2 and California Code of Regulations 15064.5). According to CEQA, an impact is considered significant if it would disrupt or adversely affect a prehistoric or historic-era archaeological site or a property of historic or cultural significance to a community, ethnic or social group. The State CEQA Guidelines define a significant historical resource as a resource listed or eligible for listing on the California Register of Historic Resources (CRHR) (PRC 5024.1). A historical resource may be eligible for inclusion in the CRHR if it:

1. Is associated with events that have made a significant contribution to the broad patterns of California’s history and cultural heritage;
2. Is associated with the lives of persons important in our past;
3. Embodies the distinctive characteristics of a type, period, region, or method of construction, represents the work of an important creative individual, or possesses high artistic values; or
4. Has yielded, or is likely to yield, information important in prehistory or history. Significant cultural resources may be avoided by the Proposed Project through a redesign of the Project or construction planning, or protected and preserved through various means. If avoidance or protection of a significant cultural resource is not possible, mitigation measures shall be required as set forth in {TV 21083.2 (c-1)}. A nonsignificant cultural resource need not be given any further consideration (PRC 21083.2 [h]).

4.4.5 Project Impact Analysis

Threshold a) Would the project cause a substantial adverse change in the significance of a historical resource pursuant to §15064.5?

The record searches and pedestrian survey resulted in the confirmation and identification of previous cultural studies prepared for the Project area. Four previously recorded resources were identified with only one resource being identified in the Project area (a historic-era isolated bottle base (HK-I-1). Other

disturbances observed during the survey include vehicular tracks and modern refuse (tires, plastic, metal fragments etc.). The gen-tie right-of-way portion of the Project site consisted of minimal vegetation, signage, multiple cinderblock structures, historic structure (TES-HK-001H), field of telephone poles, and a geothermal pit to the north of the gen-tie line. The cinderblock structures appear to be modern additions. The structure currently associated with the geothermal pit is not present and appear to be a more modern addition.

The intensive pedestrian survey resulted in identification of a newly recorded resources which consists of a remnant of a historic-era house dating back to 1953(TES-HK-001H). The structure is comprised of adobe brick. However, the structure has been altered over the years. The structure no longer contains walls, windows, doors, and room, and shows evidence of damage, graffiti, and other modern effects such as furniture and refuse. Based on the condition of the structure, there is not enough original structure remaining to understand the original appearance of the structure. Standard DPR site records have been completed for this resource and are waiting permanent designation from the information center. Its severely dilapidated condition does not allow for the structure to meet the criteria needed for listing on the CRHR and is not known to be affiliated with anyone of significance or contribute to local cultural heritage or yield additional information to local history. Therefore, the Proposed Project would not result in significant impact to a historical resource. Impacts would be less than significant.

Threshold b) Would the project cause a substantial adverse change in the significance of an archaeological resource pursuant to §15064.5?

An archaeological investigation was conducted for the Project to determine if there are any impacts that would occur that would disrupt or adversely affect a prehistoric or historic-era archaeological site to a community, ethnic or social group. The investigation resulted in resources being found within the Project area. However, because of the conditions of these resources, these have not been determined to be significantly impacted by the Proposed Project. However, given the largely undeveloped nature of the Project site with no previous development, there remains potential that the Project's ground disturbing activity would impact undiscovered resources. These resources could include but not limited to lithic materials, faunal, pottery, ceramics, building materials, or glassware. Therefore, mitigation measure CUL-1 through CUL-5 would be implemented to ensure that impacts would be less than significant.

Threshold c) Would the project disturb any human remains, including those interred outside of formal cemeteries?

Construction of the Proposed Project would involve grading, which may have the potential to uncover unknown human remains. However, if human remains are encountered during the proposed work, no further excavation or disturbance may occur near the find until the County coroner has been contacted. HSC 7050.5 states (a) Every person who knowingly mutilates or disinters, wantonly disturbs, or willfully removes any human remains in or from any location other than a dedicated cemetery without authority of law is guilty of a misdemeanor, except as provided in Section 5097.99 of the Public Resources Code. (b) In the event of discovery or recognition of any human remains in any location other than a dedicated cemetery, there shall be no further excavation or disturbance of the site or any nearby area reasonably suspected to overlie adjacent remains until the coroner of the county in which the human remains area discovered has determined that the remains are not subject to the provisions of Section 27481. The coroner shall make his or her determination within two working days from the time the person responsible for the excavation, or to his or her authorized representative, notifying the coroner of the discovery if recognition of human remains. (c) If the coroner determines that the remains are not subject

to his or her authority and if the coroner recognizes the human remains to be those of a Native American, or has reason to believe that they are those of a Native American, he or she shall contact, by telephone within 24 hours, the Native American Heritage Commission. Compliance with these regulations would ensure impacts to human remains resulting from the Project would be less than significant.

4.4.6 Cumulative Impacts

Cumulative impacts are defined in CEQA as “two or more individual effects which, when considered together, are considerable or which compound or increase other environmental impacts” (CEQA Guidelines Section 15355). Stated in another way, “a cumulative impact consists of an impact which is created as a result of the combination of the project evaluated in the EIR together with other projects causing relating impacts” (CEQA Guidelines Section 15130 [a][1]).

As with the Proposed Project, ground-disturbing activities associated with cumulative projects would have the potential to uncover previously unknown archaeological resources and human remains. The Proposed Project, in combination with cumulative development, could contribute to the loss of undeveloped land, which could potentially contain cultural resources. Determinations regarding the significance of impacts of the related projects on cultural resources would be made on a case-by-case basis and, if necessary, the applicants of the related projects would be required to implement appropriate mitigation measures. All foreseeable projects may contribute to cumulative effects for cultural and paleontological resources because all are likely to involve ground-disturbing activities to some extent during construction. As discussed in the previous section, no designated historic resources would result in significant impact. However, while for further archaeological work was deemed to not be required, and the results of the Native American Contact Program received no responses regarding the Project, the potential of finding buried resources is low, but the possibility exists. Therefore, mitigation measures shall be implemented to reduce potential impacts associated with unanticipated discoveries. Additionally, future projects with potentially significant impacts to cultural resources would be required to comply with federal, State, and local regulations and ordinances protecting cultural resources by implementing similar project-specific mitigation during construction. Therefore, the Proposed Project would have a less than cumulatively considerable impacts on cultural resources.

4.4.7 Mitigation Measures

CUL-1 The Applicant shall retain the services of a Qualified Archaeologist, meeting the Secretary of the Interior Standards or County standards, whichever is greater, and require that all initial ground-disturbing work be monitored by archaeological specialist (monitor) proficient in artifact and feature identification in monitoring contexts. The Consultant (Qualified Archaeologist and/or monitor) shall be present at the Project construction phase kickoff meeting.

CUL-2 Prior to commencing construction activities and thus prior to any ground disturbance in the Proposed Project site, the Consultant shall conduct initial Worker Environmental Awareness Program (WEAP) training to all construction personnel, including supervisors, present at the outset of the Project construction work phase, for which the Lead Contractor and all subcontractors shall make their personnel available. A tribal monitor shall be provided an opportunity to attend the preconstruction briefing, if requested. This WEAP training will educate construction personnel on how to work with the monitor(s) to identify and minimize impacts to archaeological resources and maintain environmental

compliance. This WEAP training will educate the monitor(s) of construction procedures to avoid construction-related injury or harm. This training may be performed periodically, such as for new personnel coming on to the Project as needed.

CUL-3

The Contractor shall provide the Consultant with a schedule of initial potential ground-disturbing activities. A minimum of 48 hours will be provided to the Consultant of commencement of any initial ground-disturbing activities such as vegetation grubbing or clearing, grading, trenching, or mass excavation.

A monitor shall be present on-site at the commencement of ground-disturbing activities related to the Project. The monitor, in consultation with the Qualified Archaeologist, shall observe initial ground-disturbing activities and, as they proceed, adjust the number of monitors as needed to provide adequate observation and oversight. All monitors will have stop-work authority to allow for recordation and evaluation of finds during construction. The monitor will maintain a daily record of observations to serve as an ongoing reference resource and to provide a resource for final reporting upon completion of the Project.

The Consultant and the Lead Contractor and subcontractors shall maintain a line of communication regarding schedule and activity such that the monitor is aware of all ground-disturbing activities in advance to provide appropriate oversight.

CUL-4

In the event of the discovery of previously unidentified archaeological materials, the Contractor shall immediately cease all work activities within an area of no less than 100 feet of the discovery. After cessation of excavation, the Contractor shall immediately contact the County. Except in the case of cultural items that fall within the scope of the Native American Grave Protection and Repatriation Act (NAGPRA), California Health and Safety Code 7050.5, CEQA 15064.5, or California Public Resources Code 5097.98, the discovery of any cultural resource within the Project area shall not be grounds for a Project-wide "stop work" notice or otherwise interfere with the Project's continuation except as set forth in this paragraph. Additionally, all consulting Native American Tribal groups that requested notification of any unanticipated discovery of archaeological resources on the Project shall be notified appropriately. If a discovery results in the identification of cultural items that fall within the scope of NAGPRA, the Contractor shall immediately cease all work activities within an area of no less than 100 feet (30 meters) of the discovery. In the event of an unanticipated discovery of archaeological materials during construction, the Applicant-retained Qualified Professional Archaeologist shall be contacted to evaluate the significance of the materials prior to resuming any construction-related activities near the find. If the Qualified Archaeologist determines that the discovery constitutes a significant resource under CEQA and it cannot be avoided, the Applicant shall implement an archaeological data recovery program.

CUL-5

At the completion of all ground-disturbing activities, the Consultant shall prepare an Archaeological Resources Monitoring Report summarizing all monitoring efforts and observations, as performed, and any and all prehistoric or historic archaeological finds as well as providing follow-up reports of any finds to the SCCIC, as required.

In the event unanticipated, buried prehistoric archaeological resources (lithic material, faunal, pottery, etc.) or historical archaeological resources (ceramics, building materials,

glassware, etc.) are unearthed during construction or any ground disturbing activities within the Project area, additional resource treatments would become necessary. Once a potential resource has been identified, all work within 100 feet must be halted until the find can be assessed by a qualified archaeologist.

4.4.8 Level of Significance After Mitigation

With the implementation of mitigation measures CUL-1 through CUL-5, the Project would ensure potential impacts related to cultural resources would remain less than significant.

4.5 ENERGY

This section of the Draft Environmental Impact Report (EIR) describes the source and consumption of energy resources associated with the Project. This section provides further information on applicable regulation, policies, and potential impacts of the Project. The energy consumption modeling output is included in this EIR as Appendix H.

4.5.1 Background

According to the California Environmental Quality Act (CEQA) Guidelines, the goal of conserving energy implies the wise and efficient use of energy. The means of achieving this goal include:

- Decreasing overall per capita energy consumption
- Decreasing reliance on fossil fuels such as coal, natural gas and oil
- Increasing reliance on renewable energy sources

Energy conservation implies that a Project's cost effectiveness be reviewed not only in dollars but also in terms of energy requirements. For many Projects, cost effectiveness may be determined more by energy efficiency than by initial dollar costs. A lead agency may consider the extent to which an energy source serving the Project has already undergone environmental review that adequately analyzed and mitigated the effects of energy production.

A geothermal brine delivery pipeline from HKP1 will feed brine to the HKL1 Project's process area. Steam and steam condensate pipelines will also be constructed on the pipe rack. After minerals processing, the depleted brine will be delivered to the HKP1 injection system for reinjection into the geothermal reservoir. It should be noted that due to the sporadic nature of many renewable energy sources, lithium batteries are becoming an integral component of the electrical grid within the State. As such, implementation of the Project would help the State meet its goals for reducing reliance on fossil fuels and increasing use, production, and reliance on alternative renewable energy sources, such as the generation by HKP1 of renewable baseload electric energy and the production of critical materials for electric batteries such as lithium compounds.

4.5.2 Regulatory Setting

Federal

Public Utility Regulatory Policies Act of 1978

The Public Utility Regulatory Policies Act of 1978 (PURPA) was passed in response to the unstable energy climate of the late 1970s. PURPA sought to promote conservation of electric energy. Additionally, PURPA created a new class of nonutility generators (small power producers) from which, along with qualified cogenerators, utilities are required to buy power. PURPA was in part intended to augment electric utility generation with more efficiently produced electricity and to provide equitable rates to electric consumers. PURPA expanded participation of nonutility generators in the electricity market and requires utilities to buy whatever power is produced by QFs (usually cogeneration or renewable energy) at avoided cost (avoided costs are the incremental savings associated with not having to produce additional units of electricity). Utilities want these provisions repealed; critics argue that it will decrease competition and

impede development of the renewable energy industry. The Fuel Use Act of 1978 (repealed in 1987) also helped QFs become established. Under this act, utilities were not allowed to use natural gas to fuel new generating technologies; but QFs, which by definition were not utilities, were able to take advantage of abundant natural gas and abundant new technologies (such as combined-cycle). The technologies lowered the financial threshold for entrance into the electricity generation business as well as shortened the lead time for constructing new plants.

Energy Policy Act of 2005

On August 8, 2005, President George W. Bush signed the National Energy Policy Act of 2005 into law. This comprehensive energy legislation contains several electricity-related provisions that aim to:

- Help ensure that consumers receive electricity over a dependable, modern infrastructure
- Remove outdated obstacles to investment in electricity transmission lines
- Make electric reliability standards mandatory instead of optional; and,
- Give federal officials the authority to site new power lines in Department of Energy-designated national corridors in certain limited circumstances

State

Energy conservation management in the State was initiated by the 1974 Warren-Alquist State Energy Resources Conservation and Development Act that created the California Energy Resource Conservation and Development Commission (now the California Energy Commission [CEC]), which was originally tasked with certifying new electric generating plants based on the need for the plant and the suitability of the site of the plant. In 1976, the act was expanded to include new restrictions on nuclear generating plants, which effectively resulted in a moratorium on any new nuclear generating plants in the State. The following details specific regulations adopted by the State to reduce the consumption of energy.

California Code of Regulations Title 20

On November 3, 1976, the CEC adopted the Regulations for Appliance Efficiency Standards Relating to Refrigerators, Refrigerator-Freezers, and Freezers and Air Conditioners, which were the first energy-efficiency standards for appliances. The appliance efficiency regulations have been updated several times by the Commission; and the most current version is the 2016 Appliance Efficiency Regulations, adopted January 2017, which now includes almost all types of appliances and lamps that use electricity and natural gas as well as plumbing fixtures. The authority for the CEC to control the energy efficiency of appliances is detailed in CCR, Title 20, Division 2, Chapter 4, Article 4, Sections 1601-1609.

California Code of Regulations Title 24, Part 6

The CEC is also responsible for implementing CCR Title 24, Part 6: California's Energy Efficiency Standards for Residential and Nonresidential Buildings (Title 24), first established in 1978 in response to a legislative mandate to reduce California's energy consumption. In 2008 the State set an energy-use reduction goal of zero-net-energy use of all new homes by 2020, and the CEC was mandated to meet this goal through revisions to the Title 24, Part 6 regulations.

The Title 24 standards are updated on a three-year schedule, and since 2008 the standards have been incrementally moving to the 2020 goal of the zero-net-energy use. On, January 1, 2020, the 2019 standards went into effect. These standards have been designed so that the average new home built in California will now use zero-net-energy and nonresidential buildings will use about 30 percent less energy than the 2016 standards due mainly to lighting upgrades. The 2019 standards also encourage the use of battery storage and heat pump water heaters and require more widespread use of LED lighting as well as improve the building's thermal envelope through high-performance attics, walls, and windows. The 2019 standards also require improvements to ventilation systems by requiring highly efficient air filters to trap hazardous air particulates as well as requiring improvements to kitchen ventilation systems.

California Code of Regulations Title 24, Part 11

CCR Title 24, Part 11: California Green Building Standards (Title 24) was developed in response to continued efforts to reduce greenhouse gas (GHG) emissions associated with energy consumption. The California Green Building Standards Code (CALGreen) is updated every three years. The current version is the 2019 CALGreen Code, which became effective on January 1, 2020.

The CALGreen Code contains requirements for construction site selection, stormwater control during construction, construction waste reduction, indoor water use reduction, material selection, natural resource conservation, site irrigation conservation, and more. The code provides design options, thereby allowing the designer to determine how best to achieve compliance for a given site or building condition. The code also requires building commissioning, which is a process for verifying that all building systems (e.g., heating and cooling equipment and lighting systems) are functioning at their maximum efficiency.

The CALGreen Code provides standards for bicycle parking, carpool/vanpool/electric vehicle spaces, light and glare reduction, grading and paving, energy efficient appliances, renewable energy, graywater systems, water-efficient plumbing fixtures, recycling and recycled materials, pollutant controls (including moisture control and indoor air quality), acoustical controls, stormwater management, building design, insulation, flooring, and framing, among others. Implementation of the CALGreen Code measures reduced energy consumption and vehicle trips and encourages the use of alternative-fuel vehicles, which reduces pollutant emissions.

Some of the notable changes in the current 2019 CALGreen Code over the previous 2016 CALGreen Code include aligning building code engineering requirements with the national standards, including anchorage requirements for solar panels, providing design requirements for buildings in tsunami zones, increasing Minimum Efficiency Reporting Value (MERV) for air filters from 8 to 13, increasing electric vehicle charging requirements in parking areas, and setting minimum requirements for use of shade trees.

Senate Bill 100

Senate Bill (SB) 100 was adopted after September 2018 and requires that 100 percent of retail sales of electricity be generated from renewable or zero-carbon emission sources of electricity by December 1, 2045. SB 100 supersedes the renewable energy requirements set by SB 350, SB 1078, SB 107, and SB X1-2. However, the interim renewable energy thresholds from the prior bills of 44 percent by December 31, 2024, 52 percent by December 31, 2027, and 60 percent by December 31, 2030, remain in effect.

Executive Order B-48-18 and Assembly Bill 2127

Governor Gavin Newsom issued Executive Order (EO) B-48-18 on January 26, 2018, ordering all State entities to work with the private sector to put at least five million zero-emission vehicles on California roads by 2030 and to install 200 hydrogen fueling stations and 250,000 electric vehicle chargers by 2025. Currently in California, approximately 1,500,000 electric zero emission vehicles are operating¹, which represents approximately 1.6 percent of the 24 million vehicles total currently operating in the State. Implementation of EO B-48-18 would result in approximately 20 percent of all vehicles in California be zero emission electric vehicles. AB 2127 was codified into statute on September 13, 2018, and requires that the CEC work with the CARB to prepare biannual assessments of the Statewide electric vehicle charging infrastructure needed to support the levels of zero emission vehicle adoption required for the State to meet its goals of putting at least 5 million zero-emission vehicles on California roads by 2030.

Assembly Bill 1109

AB 1109, also known as the Lighting Efficiency and Toxics Reduction Act, was adopted October 2007 and prohibits the manufacturing of lights after January 1, 2010, that contain levels of hazardous substances prohibited by the European Union pursuant to its Restriction of Hazardous Substances Directive. AB 1109 also requires reductions in energy usage for lighting and is structured to reduce lighting electrical consumption by at least (1) 50 percent from 2007 levels for indoor residential lighting and (2) 25 percent reduction from 2007 levels for indoor commercial and all outdoor lighting by 2018. AB 1109 would reduce GHG emissions by reducing the amount of electricity required to be generated by fossil fuels in California.

Assembly Bill 1493

AB 1493 (also known as the Pavley Bill after its author, Fran Pavley) was enacted on July 22, 2002, and required CARB to develop and adopt regulations that reduce GHGs emitted by passenger vehicles and light-duty trucks. In 2004, CARB approved the Pavley I regulations limiting the amount of GHGs that could be released from new passenger automobiles that were being phased in between model years 2009 through 2016. These regulations were intended reduce GHG emissions by 30 percent from 2002 levels by 2016. In June 2009, the U.S. Environmental Protection Agency (USEPA) granted California the authority to implement GHG emission reduction standards for light-duty vehicles; in September 2009, amendments to the Pavley I regulations were adopted by CARB, and implementation started in 2009.

The second set of regulations, Pavley II, was developed in 2010 and is being phased in between model years 2017 through 2025 with the goal of reducing GHG emissions by 45 percent by the year 2020 as compared to the 2002 fleet. The Pavley II standards were developed by linking the GHG emissions and formerly separate toxic tailpipe emissions standards previously known as the LEV III (third stage of the Low Emission Vehicle standards) into a single regulatory framework. The new rules reduce emissions from gasoline-powered cars as well as promote zero-emissions auto technologies such as electricity and hydrogen and increase the infrastructure for fueling hydrogen vehicles. In 2009, the USEPA granted California the authority to implement the GHG standards for passenger cars, pickup trucks, and sport utility vehicles; these GHG emissions standards are currently being implemented nationwide. However, USEPA has performed a midterm evaluation of the longer-term standards for model years 2022 through 2025. Based on the findings of this midterm evaluation, the USEPA has proposed to amend the corporate average fuel economy (café) and GHG emissions standards for light vehicles for model years 2021 through 2026. The USEPA's proposed amendments do not include any extension of the legal waiver granted to California by the 1970 Clean Air Act, which has allowed the State to set tighter standards for vehicle pipe

emissions than the USEPA standards. On September 20, 2019, California filed suit over the USEPA decision to revoke California’s legal waiver; that suit has been joined by 22 other states.

Local

Relevant Imperial County General Plan policies related to energy are provided below. Table 4.5-1 discusses the Project’s consistency with the County’s General Plan policies. While this EIR analyzes the Project’s consistency with the General Plan pursuant to CEQA Guidelines Section 151250, the Imperial County Board of Supervisors ultimately determines consistency with the General Plan.

Table 4.5-1: General Plan Consistency

General Plan Polices	Consistency with General Plan	Analysis
Renewable Energy and Transmission Element		
Goal 1 – Support the safe and orderly development of renewable energy while providing for the protection of environmental resources.	Consistent	The Project provides protection to environmental resources while helping to produce renewable energy.
Objective 1.2 – Lessen impacts of site and design production facilities on agricultural, natural, and cultural resources.	Consistent	This EIR has analyzed the potential impacts related to these subjects.
Objective 1.3 – Require the use of directional geothermal drilling and “islands” when technically advisable in irrigated agricultural soils and sensitive or unique biological areas.	Consistent	The Project will drill multiple wells from individual well pads (‘islands’) to conserve farmland and sensitive areas.
Objective 1.4 – Analyze potential impacts on agricultural, natural, and cultural resources, as appropriate.	Consistent	This EIR has analyzed the potential impacts related to these subjects.
Objective 1.5 – Require appropriate mitigation and monitoring for environmental issues associated with developing renewable energy facilities.	Consistent	The Project provides a mitigation monitoring program.
Objective 1.6 – Encourage the efficient use of water resources required in the operation of renewable energy generation facilities.	Consistent	The Project is designed to meet Title 24 Part 11 requirements that require implementation of water-efficiency measures.
Objective 1.7 – Assure that development of renewable energy facilities and transmission lines comply with Imperial County Air Pollution Control District’s (ICAPCD) regulations and mitigation measures.	Consistent	The Project will be required to obtain all required air permits from the ICAPCD and to adhere to all the ICAPCD rules and regulations.
Goal 2 – Encourage development of electrical transmission lines along routes which minimize potential environmental effects.	Consistent	Any required improvements or extensions of existing IID electrical transmission lines will occur adjacent to existing routes.
Objective 2.1 – To the extent practicable, maximize utilization of IID’s transmission capacity in existing easements or rights-of-way. Encourage the location of all major transmission lines within designated corridors, easements, and rights-of-way.	Consistent	Any required improvements or extensions of IID electrical transmission lines will occur within existing easements or rights-of-way.

Table 4.5-1: General Plan Consistency

General Plan Polices	Consistency with General Plan	Analysis
Objective 2.2 – Where practicable and cost-effective, design transmission lines to minimize impacts on agricultural, natural, and cultural resources, urban areas, military operation areas, and recreational activities.	Consistent	Any required improvements or extensions of IID electrical transmission lines will occur within existing easements or rights-of-way.
Goal 3 – Support development of renewable energy resources that will contribute to and enhance the economic vitality of Imperial County.	Consistent	The Project will provide additional employment opportunities as well as contribute to the tax base of the County, which will enhance the economic vitality of the County.
Objective 3.2 – Encourage the continued development of the mineral extraction/production industry for job development using geothermal brines from the existing and future geothermal flash power plants.	Consistent	The Project implements this objective. HKL1 proposes to develop mineral extraction and processing facilities capable of producing lithium hydroxide, silica, polymetallic, and possibly boron products for commercial sale.
Objective 3.3 – Encourage the development of services and industries associated with renewable energy facilities.	Consistent	The Project implements this objective by developing the 49.9-MW geothermal power plant.
Objective 3.4 – Assure that revenues Projected from proposed renewable energy facility developments are sufficient to offset operational costs to the County from that particular development.	Consistent	The Project would generate more revenue and energy for the County than any costs incurred by the County.
Objective 3.5 – Encourage employment of County residents by the renewable energy industries wherever and whenever possible.	Consistent	The Project will provide additional employment opportunities to residents in the County (112 full-time positions).
Objective 3.7 – Evaluate environmental justice issues associated with job creation and displacement when considering the approval of renewable energy Projects.	Consistent	No sensitive receptors are within two miles of the Project site. No impacts to disadvantaged communities would occur from implementation, and no Health Risk Assessment is required.
Goal 4 – Support development of renewable energy resources that will contribute to the restoration efforts of the Salton Sea.	Consistent	The Project is being designed to minimize impacts to Salton Sea restoration areas.
Objective 4.1 – Prioritize the Salton Sea exposed seabed (playa) for renewable energy Development.	Consistent	The Project will be in the Salton Sea exposed seabed area.
Objective 4.4 – Encourage the development of renewable energy facilities that will contribute to the reduction or elimination of airborne pollutants created by exposure of the seabed of the Salton Sea as it recedes.	Consistent	The Project will be in the Salton Sea exposed seabed area and will be required to provide adequate landscaping and hardscaping to minimize airborne pollutants.
Objective 4.3 – Develop mitigation measures and monitoring programs to minimize impacts to avian species and other species that may be affected by	Consistent	This EIR has analyzed the biological impacts, including impacts to avian species.

Table 4.5-1: General Plan Consistency

General Plan Polices	Consistency with General Plan	Analysis
renewable energy facilities constructed near the Salton Sea.		
Goal 5 – Encourage development of innovative renewable energy technologies that will diversify Imperial County’s energy portfolio.	Consistent	The Project will produce lithium hydroxide, silica, polymetallic, and possibly boron products that are utilized in the production of batteries as well as other commercial uses that will diversify the County’s energy portfolio.
Objective 5.1 – Support the implementation of pilot Projects intended to test or demonstrate new and innovative renewable energy production technologies.	Consistent	Although the Project is for full production and is not a pilot project, it will demonstrate new and innovative renewable energy production technologies.
Goal 6 – Support development of renewable energy while providing for the protection of military aviation and operations.	Consistent	The Project will be designed to meet all aviation requirements.
Goal 7 – Actively minimize the potential for land subsidence to occur as a result of renewable energy operations.	Consistent	The Project will be designed to minimize land subsidence, by actively monitoring volumes of produced and injected fluids. .
Objective 7.1 – Require that all renewable energy facilities, where deemed appropriate, include design features that will prevent subsidence and other surface conditions from impacting existing land uses.	Consistent	The Project will be designed to minimize land subsidence, and will routinely conduct subsidence monitoring as required by Imperial County..
Objective 7.2 – For geothermal energy development facilities, establish injection standards consistent with the requirements of the California Division of the Geological Energy Management Division (CalGEM). Request a CalGEM subsidence review, if necessary, for consideration prior to setting injection standards.	Consistent	The Project will meet all CalGEM requirements for handling of the geothermal brine.
Objective 7.10 – Require operators of geothermal facilities to establish a notification system to warn or notify surrounding residents of the accidental release of potentially harmful emissions as part of an emergency response plan.	Consistent	The Project will be required to establish a system to notify nearby residents of the accidental release of potentially harmful emissions.

4.5.3 Thresholds of Significance

To assist in determining whether a project would have a significant effect on the environment, the County utilizes the State CEQA Guidelines Appendix G Guidelines. Appendix G states that a project may be deemed to have an energy impact if it would:

Threshold a) Result in potentially significant environmental impact due to wasteful, inefficient, or unnecessary consumption of energy resources, during project construction or operation?

Threshold b) Conflict with or obstruct a state or local plan for renewable energy or energy efficiency?

4.5.4 Project Impact Analysis

Threshold a) Result in potentially significant environmental impact due to wasteful, inefficient, or unnecessary consumption of energy resources, during project construction or operation?

The Project would impact energy resources during construction and operation. Energy resources that would potentially be impacted include electricity and petroleum-based fuel supplies and distribution systems. This analysis includes a discussion of the potential energy impacts of the Project, with particular emphasis on avoiding or reducing inefficient, wasteful, and unnecessary consumption of energy. A general definition of each of these energy resources is provided below.

Electricity, a consumptive utility, is a man-made resource. The production of electricity requires the consumption or conversion of energy resources, including water, wind, oil, gas, coal, solar, geothermal, and nuclear resources, into energy. The delivery of electricity involves a number of system components, including substations and transformers that lower transmission line power (voltage) to a level appropriate for on-site distribution and use. The electricity generated is distributed through a network of transmission and distribution lines commonly called a power grid. Conveyance of electricity through transmission lines is typically responsive to market demands. In 2019, IID, which provides electricity to the Project area, provided 3,322 gigawatt-hours (GWh) of electricity (CEC 2019).

Petroleum-based fuels currently account for a majority of the California's transportation energy sources and primarily consist of diesel and gasoline types of fuels. However, the State has been working on developing strategies to reduce petroleum use. Over the last decade California has implemented several policies, rules, and regulations to improve vehicle efficiency; increase the development and use of alternative fuels; reduce air pollutants and GHG emissions from the transportation sector; and reduce vehicle miles traveled. Accordingly, petroleum-based fuel consumption in California has declined. According to the CEC, in 2017, 83 million gallons of gasoline and 12 million gallons of diesel was sold in Imperial County (CEC 2018).

The following section calculates the potential energy consumption associated with the construction and operations of the Project and provides a determination whether any energy utilized by the Project is wasteful, inefficient, or unnecessary consumption of energy resources.

Construction Energy

The Project would consume energy resources during construction in three general forms:

1. Petroleum-based fuels used to power off-road construction vehicles and equipment on the Project site; construction worker travel to and from the Project site; and delivery and haul truck trips (e.g., hauling demolition material to offsite reuse and disposal facilities)

2. Electricity associated with the conveyance of water that would be used during Project construction for dust control (supply and conveyance) and electricity to power any necessary lighting during construction, electronic equipment, or other construction activities necessitating electrical power
3. Energy used in the production of construction materials, such as asphalt, steel, concrete, pipes; and of manufactured or processed materials, such as lumber and glass

Construction-Related Electricity

During construction, the Project would consume electricity to construct the new structures and infrastructure. Electricity would be supplied to the Project site by IID and would be obtained from the existing electrical lines near the Project site. The use of electricity from existing power lines rather than temporary diesel- or gasoline-powered generators would minimize impacts on fuel consumption. Electricity consumed during Project construction would vary throughout the construction period based on the construction activities being performed. Various construction activities include electricity associated with the conveyance of water that would be used during Project construction for dust control (supply and conveyance) and electricity to power any necessary lighting during construction, electronic equipment, or other construction activities necessitating electrical power; and, such electricity demand would be temporary and nominal and would cease upon the completion of construction. Overall, construction activities associated with the Project would require limited electricity consumption and would not be expected to have an adverse impact on available electricity supplies and infrastructure. Therefore, the use of electricity during Project construction would not be wasteful, inefficient, or unnecessary.

Given that power lines currently exist near the Project site, it is anticipated that only nominal improvements would be required to IID distribution lines and equipment with development of the Project. Compliance with the County's guidelines and requirements would ensure that the Project fulfills its responsibilities relative to infrastructure installation, coordinates any electrical infrastructure removals or relocations, and limits any impacts associated with construction of the Project. Construction of the Project's electrical infrastructure is not anticipated to adversely affect the electrical infrastructure serving the surrounding uses or utility system capacity.

Construction-Related Petroleum Fuel Use

Petroleum-based fuel usage represents the highest amount of transportation energy potentially consumed during construction, which would be utilized by off-road equipment operating on the Project site, on-road automobiles transporting workers to and from the Project site, and on-road trucks transporting equipment and supplies to the Project site.

The off-road construction equipment fuel usage was calculated through use of the off-road equipment assumptions and fuel use assumptions provided in Appendix H, which found that the off-road equipment utilized during construction of the Project would consume 636,310 gallons of diesel fuel. The on-road fuel consumption during construction was calculated through use of the construction vehicle trip assumptions and fuel use assumptions provided in Appendix H, which found that the on-road trips generated from construction of the Project would consume 8,554,787 gallons of fuel. As such, the combined fuel used from off-road construction equipment and on-road construction trips for the Project would result in the consumption of 9,191,096 gallons of diesel fuel.

Construction activities associated with the Project would be required to adhere to all State and Imperial County Air Pollution Control District regulations for off-road equipment and on-road trucks, which provide minimum fuel efficiency standards. Construction activities for the Project would not result in the wasteful, inefficient, and unnecessary consumption of energy resources. In addition, the operation of the Project would result in a net increase of 147,732,2kilowatt-hours (kWh) per year.

Impacts regarding transportation energy would be less than significant. Development of the Project would not result in the need to manufacture construction materials or create new building material facilities specifically to supply the Project. It is difficult to measure the energy used in the production of construction materials such as asphalt, steel, and concrete; therefore, it is reasonable to assume that the production of building materials such as concrete, steel, etc., would employ all reasonable energy conservation practices in the interest of minimizing the cost of doing business.

Operational Energy

~~These numbers are confusing, and unclear what the point is.~~ HKP1 will generate about 416,000 MW-hr/yr (assuming 50 MW at 95% availability), while HKL1 will consume about 276,000 MW-hr/yr, producing a surplus of 140,000 MW-hr/yr of renewable electric power (assumed to be “green” power avoiding the electrical grid); which results in an even greater reduction of GHG emissions.

The Project would comply with all federal, State, and County requirements related to the consumption of electricity, including CCR Title 24, Part 6, Building Energy Efficiency Standards and CCR Title 24, Part 11, the CALGreen Code. The CCR Title 24, Part 6 and Part 11 standards require numerous energy efficiency measures to be incorporated into the project, including enhanced insulation and use of energy-efficient lighting and appliances as well as requiring a variety of other energy efficiency measures to be incorporated into all the proposed structures.

Operations-Related Electricity

The ongoing operation of HKP1 and HKL1 would require the use of energy resources for multiple purposes including, but not limited to, operation of pumps and other electro-mechanical industrial equipment, heating/ventilating and air conditioning (HVAC), refrigeration, lighting, appliances, and electronics. Operation of HKP1 and HKL1 would result of the net generation of renewable electricity at the project site. HKL1 will have an average demand of 35 MW and peak power demand of up to 40 MW during operation. HKL1 would consume approximately 276,000,000 kWh per year of electricity (assuming 90 percent availability; assumed to be ‘brown’ power via the electrical grid). However, HKP1 would generate approximately 416,000,000 kWh per year of (renewable) electricity (assuming 95 percent availability); assumed to be ‘green’ power avoiding the electrical grid. Therefore, there will be a surplus of renewable electrical generation of approximately 140,000,000 kWh per year of electricity, which results in a net reduction of GHG emissions (see Section 11).

HKL1 may receive power from either HKP1 or IID. The electrical generation of the HKP1 will likely be greater than the electrical demand of the HKL1. Importantly, HKL1 will not operate if HKP1 is not operating due to maintenance or outage. The air quality analysis conservatively assumes that the electrical demand of the HKL1 would be provided by the electrical grid (‘brown’ power) instead of being provided by the HKP1 (“green” power). Nevertheless, under this conservative condition, operation of HKP1 and the HKL1

would have a net generation of 140,000,000 kWh per year of (renewable) electricity generation.
Operations-Related Transportation Energy

Operation of the Project would result in increased consumption of petroleum-based fuels related to vehicular travel to and from the Project site. Operations related to fuel consumption were calculated using information related to the estimated number of employees, their estimated vehicle miles traveled per day, and the number of operational days per year. Based on these assumptions, the Project would consume 25,217,394 gallons of transportation fuel per year (diesel and gasoline).

Additionally, the Project would comply with all federal, State, and County requirements related to the consumption of transportation energy, including CCR Title 24, Part 11, the CALGreen Code, which requires all new parking lots to provide preferred parking for clean air vehicles. Therefore, it is anticipated the Project will be designed and built to minimize transportation energy through the promotion of the use of electric-powered vehicles and that existing and planned capacity and supplies of transportation fuels would be sufficient to support the Project's demand. Thus, impacts regarding transportation energy supply and infrastructure capacity would be less than significant, and no mitigation measures would be required.

Threshold b) Conflict with or obstruct a state or local plan for renewable energy or energy efficiency?

The Project would not conflict with or obstruct a State or local plan for renewable energy or energy efficiency. The applicable Renewable Energy and Transmission Element for the Project is included in the County's General Plan. The Proposed Project's consistency with the applicable energy-related policies in the Renewable Energy and Transmission Element of the General Plan are shown in Table 4.5-1.

4.5.5 Cumulative Impacts

Cumulative impacts are defined in CEQA as "two or more individual effects which, when considered together, are considerable or which compound or increase other environmental impacts" (CEQA Guidelines Section 15355). Stated in another way, "A cumulative impact consists of an impact which is created as a result of the combination of the Project evaluated in the EIR together with other Projects causing relating impacts" (CEQA Guidelines Section 15130 [a][1]).

The geographic scope of cumulative energy impacts associated with the Project comprises the IID service area. Average electricity consumption within the County is below the regional average of consumption and is in decline due to stricter policies for building codes and energy conservation practices. The Project, in combination with cumulative projects, would have less than significant impacts within the service area of IID.

4.5.6 Mitigation Measures

No mitigation measures are required, as all Project impacts regarding energy are less than significant.

4.5.7 Level of Significance After Mitigation

No mitigation measures are required; thus, impacts related to energy would remain less than significant.

4.6 GEOLOGY AND SOILS

This section addresses the potential for the Proposed Project to impact geologic and soil conditions on the Project site. More specifically, this section evaluates impacts associated with the Project that may potentially affect public health and safety or degrade the environment. Issues analyzed in this section include the potential paleontological sensitivity of the Project site, as well as geologic and seismic hazards such as earthquakes, expansion, landform alteration, erosion, and liquefaction that could occur with implementation of the Project.

A Geohazard Evaluation Report was prepared for the Project by Converse Consultants on August 17, 2022. The purpose of the report was to utilize existing geologic maps, reports, and databases to characterize the Project's surface and subsurface conditions and to identify any geologic hazards that may impact Project development. This is included in Appendix F of this Environmental Impact Report (EIR).

4.6.1 Existing Environmental Setting

Regional Setting

The Project area is located within the southern portion of the Salton Trough in the central portion of the Colorado Desert Geomorphic Province of Southern California. The Colorado Desert is bounded on the north by the Transverse Ranges, on the west by the Peninsular Ranges, on the south by the Sonoran Desert, and on the east by the Chocolate Mountains. This province is a seismically active region characterized by alluviated basins, elevated erosional surfaces, and northwest-trending mountain ranges bounded by northwest-trending strike-slip faults. The Salton Trough is a sunken desert basin with surface elevations lower than 275 feet below sea level. It is situated between active branches of the San Jacinto and San Andreas Fault Zones. Sediment deposited in the basin from marine, nonmarine, and lacustrine sources exceeds 15,000 feet in depth. The Proposed Project area is underlain by Holocene and late Pleistocene age lake deposits consisting of unconsolidated sand, silt, and clay. Results of the site reconnaissance indicated few stockpiles and berms, which may indicate the presence of undocumented fill. Current and historical high groundwater levels within the Project area are not known with certainty but are anticipated at depths ranging from 6 to 12 feet below ground surface. Several test pits were excavated (by others) where groundwater was recorded within a foot of the surface. The shallow groundwater was attributed to agriculture runoff. Thus, groundwater depth within the site may vary between 1 and 12 feet. It should be noted that the groundwater levels could vary depending upon the seasonal precipitation and possible groundwater pumping activity in the project area vicinity. Shallow perched groundwater may be present locally, particularly following precipitation.

Project Site Characteristics

Faulting

Surface rupture is an offset of the ground surface when fault rupture extends to the Earth's surface. Normal and reverse (collectively called dip-slip) faulting surface ruptures feature vertical offsets, while strike-slip faulting produces lateral offsets. Many earthquake surface ruptures are combinations of both. Surface rupture represents a primary or direct potential hazard to structures built on an active fault zone.

No portion of the Project area is located within a State of California Fault Zone, with the nearest being 11.7 miles northwest (San Jacinto Fault Zone). The closest regional known fault capable of seismic activity

is Elmore Ranch, located approximately 4.2 miles from the Project site. Because the Project is in a highly seismic region that regularly experiences episode of surface rupture, the potential for surface rupture resulting from the movement of nearby or distant faults is high.

Dynamic Settlement (Liquefaction and Dry Seismic Settlement)

One of the seismic hazards most likely to impact the Project site is strong ground shaking during an earthquake. Ground shaking from seismic events could reach the Project site if certain seismic factors (e.g., Richter magnitude, focal depth, distance from the causative fault, source mechanism, duration of shaking, high rock accelerations, type of surficial deposits or bedrock, degree of consolidation of surficial deposits, etc.) occur nearby.

Liquefaction occurs when granular soil below the water table is subjected to vibratory motions, such as those produced by earthquakes. With strong ground shaking, an increase in pore water pressure develops because the soil tends to reduce in volume. If the increase in pore water pressure is sufficient to reduce the vertical effective stress (suspending the soil particles in water), the soil strength decreases, and the soil behaves as a liquid (similar to quicksand). Liquefaction can produce excessive settlement, ground rupture, lateral spreading, or failure of shallow bearing foundations. Four conditions are generally required for liquefaction to occur: (1) the soil must be saturated (relatively shallow groundwater), (2) the soil must be loosely packed (low to medium relative density), (3) the soil must be relatively cohesionless (not clayey), and (4) ground shaking of sufficient intensity must occur to function as a trigger mechanism.

The Project area is within an area that is currently unevaluated by the State of California for liquefaction. Based on the expected presence of shallow groundwater and the nature of subsurface soils, the potential for liquefaction in the Project area is considered high. Site-specific liquefaction and dynamic settlement should be evaluated with data from the soil borings during the geotechnical investigation phase.

Landslides

Landslides occur when slopes become unstable and collapse. Landslides are typically caused by natural factors such as fractured or weak bedrock, heavy rainfall, erosion, earthquake activity, and fire, but also by human alteration of topography and water content. Due to the relatively flat nature of the of the Project site, the risk of land sliding is considered remote.

Lateral Spreading

Seismically-induced lateral spreading involves primarily lateral movement of earth materials over underlying materials that are liquefied due to ground shaking. It differs from slope failure in that complete ground failure involving large movement does not occur due to the relatively smaller gradient of the initial ground surface. Lateral spreading is demonstrated by near-vertical cracks with predominantly horizontal movement of the soil mass involved. Due to the high potential of liquefaction, the potential of lateral spreading is considered high. Site-specific potential for lateral spreading should be evaluated with data from the soil borings during the geotechnical investigation phase.

Subsidence

Land subsidence is a gradual caving or sinking of an area of land that can occur as a result of either tectonic deformations (e.g., earthquakes) or anthropogenic causes, such as mining or groundwater extraction. According to the Imperial County Seismic and Public Safety Element, subsidence from earthquakes and

other activities, including geothermal resources development, can disrupt drainage systems and cause localized flooding.

Tsunamis

Tsunamis are large waves generated in open bodies of water by fault displacement or major ground movement. Due to the inland location and elevation of the site, tsunamis are not considered to be a risk.

Seiches

Seiches are large waves generated by enclosed bodies of water in response to ground shaking. Due to its proximity to the Salton Sea, the Project area has a potential for seiching.

Earthquake-Induced Flooding

Dams or other water-retaining structures may fail as a result of large earthquakes. The Project site is not located within a designated dam inundation area; thus, the risk of earthquake-induced flooding is low.

Soils

Expansive soils are characterized by their potential “shrink-swell” behavior. Shrink-swell is the cyclic change in volume (expansion and contraction) that occurs in certain fine-grained clay sediments from the process of wetting and drying. Clay minerals such as smectite, bentonite, montmorillonite, beidellite, vermiculite, and others are known to expand with changes in moisture content. The higher the percentage of expansive minerals present in near-surface soils, the higher the potential for significant expansion. The greatest effects occur when moisture content changes significantly or repeatedly. Expansions of 10 percent or more in volume are not uncommon. This change in volume can exert enough force on a building or other structure to cause cracked foundations, floors, and basement walls. Damage to structures can also occur when movement in the foundation is significant. Structural damage typically occurs over a long period of time, usually the result of inadequate soil and foundation engineering or the placement of structures directly on expansive soils. Based on the anticipated soil types of the Project area, expansive soils may be present.

4.6.2 Regulatory Setting

Federal

Federal Earthquake Hazards Reduction Act

This act is also cited as the National Earthquake Hazards Reduction Program Reauthorization Act of 2018. The purpose of this act is to reduce the risks to life and property from future earthquakes in the United States through the establishment and maintenance of an effective earthquake hazards reduction program. Loss of life, injury, destruction of property, and economic and social disruption can be substantially reduced through the development and implementation of earthquake hazard reduction measures. To accomplish this, the act established the National Earthquake Hazards Reduction Program (NEHRPA). This program was significantly amended in November 2020 by the National Earthquake Hazards Reduction Program Act, which refined the description of agency responsibilities, program goals, and objectives. The NEHRPA designates FEMA as the lead agency of the program and assigns it several

planning, coordinating, and reporting responsibilities. Other NEHRPA agencies include the National Institute of Standards and Technology, National Science Foundation, and U.S. Geological Survey (USGS).

International Building Code

Published by the International Code Council, the scope of this code covers major aspects of construction and design of structures and buildings, except for detached one- and two-family dwellings and townhouses not more than three stories in height. The International Building Code (IBC) contains provisions for structural engineering design. Published every three years (most recently in 2021) by the International Code Council, the IBC addresses the design and installation of structures and building systems through requirements emphasizing performance. The IBC includes codes governing structural strength (including seismic loads and wind loads) as well as fire- and life-safety provisions covering accessibility, egress, occupancy, and roofs.

State

Alquist-Priolo Earthquake Fault Zoning Act of 1972

The Alquist-Priolo Earthquake Fault Zoning Act was passed in 1972 to mitigate the hazard of surface faulting to structures for human occupancy. The Alquist-Priolo Earthquake Fault Zoning Act's main purpose is to prevent the construction of buildings used for human occupancy on the surface trace of active faults. The Act addresses only the hazard of surface fault rupture and is not directed toward other earthquake hazards.

The law requires the State Geologist to establish regulatory zones (known as Earthquake Fault Zones or, prior to January 1, 1994, Special Studies Zones) around the surface traces of active faults and to issue appropriate maps. The maps are distributed to all affected city, county, and State agencies for their use in planning and controlling new or renewed construction. Local agencies must regulate most development projects within the zones. Projects include all land divisions and most structures for human occupancy.

Before a project can be permitted for construction, cities and counties must require a geologic investigation to demonstrate that proposed buildings will not be constructed across active faults. An evaluation and written report of a specific site must be prepared by a licensed geologist. If an active fault is found, a structure for human occupancy cannot be placed over the trace of the fault and must be set back from the fault.

Seismic Hazards Mapping Act of 1990

The Seismic Hazards Mapping Act of 1990 (7.8 Public Resources Code [PRC] 2690-2699.6) directs the Department of Conservation, California Geological Survey to identify and map areas prone to earthquake hazards of liquefaction, earthquake-induced landslides, and amplified ground shaking. The purpose of this Act is to reduce the threat to public safety and minimize the loss of life and property by identifying and mitigating these seismic hazards. The Seismic Hazard Zone maps identify where a site investigation is required, and the site investigation determines whether structural design or modification of the Project site is necessary for safer development. The Seismic Hazards Mapping Act requires site-specific geotechnical investigations identifying the seismic hazard and formulating mitigation measures, when needed, prior to permitting most developments designed for human occupancy within the Zones of Required Investigation.

California Building Code (2019)

Development within California is required at a minimum to adhere to the provisions of the Uniform Building Code (UBC). The UBC establishes minimum standards related to development, seismic design, building siting, and grading. The purpose of the UBC is to provide minimum standards to preserve public peace, health, and safety by regulating the design, construction, quality of materials, certain equipment, location, grading, use, occupancy, and maintenance of all buildings and structures. UBC standards address foundation design, shear wall strength, and other structural related conditions. The most recently adopted building code is the 2022 California Building Code (CBC), which applies to projects filing for building permits on or after January 1, 2023.

Public Resources Code, Chapter 1.7, Sections 5097.5

Several sections of the California PRC protect paleontological resources. Section 5097.5 prohibits the “knowing and willful” excavation, removal, destruction, injury, and defacement of any paleontological feature on state lands (broadly defined as lands under state, county, city, district, or public authority jurisdiction, or the jurisdiction of a public corporation), except where the agency with jurisdiction has granted express permission.

Local

County of Imperial Grading Ordinance

The Purpose of Title 9, the Land Use Ordinance for the County of Imperial, is to provide comprehensive land use regulations for all unincorporated areas of the County. These regulations are adopted to promote and protect the public health, safety, and general welfare through the orderly regulation of land uses throughout the unincorporated areas of the County. Title 9 Division 15 (Geological Hazards) of the County Land Use Ordinance has established procedures and standards for development within earthquake fault zones. Per County regulations, the construction of buildings intended for human occupancy which are located across the trace of an active fault are prohibited. An exception exists when such buildings located near the fault or within a designated Special Studies Zone are demonstrated through a geotechnical analysis and report not to expose a person to undue hazard created by the construction.

County of Imperial General Plan

Relevant Imperial County General Plan policies related to geology, soils, and seismicity are provided below. Table 4.6-1 discusses the Project’s consistency with the County’s General Plan policies. While this EIR analyzes the Project’s consistency with the General Plan pursuant to CEQA Guidelines Section 151250, the Imperial County Board of Supervisors ultimately determines consistency with the General Plan. The Imperial County General Plan does not specify any goals or objectives for paleontological resources. However, paleontological resources are a subcategory of cultural resources, which are analyzed in Section 4.4 of this EIR.

Table 4.6-1: General Plan Consistency

General Plan Policies	Consistency with General Plan	Analysis
Seismic and Public Safety Element		
<i>Land Use Planning and Public Safety</i>		
Objective 1.1 – Ensure that data on geological hazards is incorporated into the land use review process, and future development process.	Consistent	The Geohazard Evaluation Report identified geologic hazards that may impact Project development. The report recommends conducting a geotechnical investigation to properly identify the soil conditions and to identify appropriate design considerations for construction of the Project. The Project site is not located within published geohazard areas other than high seismic ground motions, subsidence, lateral spreading, and liquefaction risks. The Project would be designed in accordance with the California Building Code; and appropriate mitigation measures (GEO-1, GEO-2) have been incorporated into this EIR to address potential geologic or seismic hazards. The Project is consistent with this objective.
Objective 1.4 – Require, where possessing the authority, that avoidable seismic risks be avoided; and that measures, commensurate with risks, be taken to reduce injury, loss of life, destruction of property, and disruption of service.	Consistent	See response for Objective 1.1.
Objective 1.7 – Require developers to provide information related to geologic and seismic hazards when siting a proposed project.	Consistent	See response for Objective 1.1.
<i>Emergency Preparedness</i>		
Objective 2.8 – Prevent and reduce death, injuries, property damage, and economic and social dislocation resulting from natural hazards including flooding, land subsidence, earthquakes, other geologic phenomena, levee or dam failure, urban and wildland fires and building collapse by appropriate planning and emergency measures.	Consistent	See response for Objective 1.1.
<i>Seismic/Geologic Hazards</i>		
Policy 4 – Ensure that no structure for human occupancy, other than one-story wood frame structures, shall be permitted within fifty feet of an active fault trace as designated on maps compiled by the State Geologist under the Alquist-Priolo Geologist Hazards Zone Act.	Consistent	The Project site is not located within 50 feet of an active fault. Therefore, the Project is consistent with this policy.

4.6.3 Thresholds of Significance

In order to assist in determining whether a project would have a significant effect on the environment, the County utilizes the State CEQA Guidelines Appendix G Guidelines. Appendix G states that a project may be deemed to have impacts to geology and soils if it would:

- Threshold a)**
- i) Directly or indirectly cause potential substantial adverse effects, including the risk of loss, injury, or death involving rupture of a known earthquake fault, as delineated on the most recent Alquist-Priolo Earthquake Fault Zoning Map issued by the State Geologist for the area or based on other substantial evidence of a known fault? Refer to Division of Mines and Geology Special Publication 42.**
 - ii) Directly or indirectly cause potential substantial adverse effects, including the risk of loss, injury, or death involving strong seismic ground shaking?**
 - iii) Directly or indirectly cause potential substantial adverse effects, including the risk of loss, injury, or death involving seismic-related ground failure, including liquefaction?**
 - iv) Landslides?**
- Threshold b)** **Result in substantial soil erosion or the loss of topsoil?**
- Threshold c)** **Be located on a geologic unit or soil that is unstable, or that would become unstable as a result of the project, and potentially result in on- or off-site landslide, lateral spreading, subsidence, liquefaction or collapse?**
- Threshold d)** **Be located on expansive soil, as defined in Table 18-1-B of the Uniform Building Code (1994), creating substantial direct or indirect risks to life or property?**
- Threshold e)** **Have soils incapable of adequately supporting the use of septic tanks or alternative waste water disposal systems where sewers are not available for the disposal of waste water?**
- Threshold f)** **Directly or indirectly destroy a unique paleontological resource or site or unique geological feature?**

Please refer to Section 6.1: Effects Found Not to Be Significant for an evaluation of those topics that were determined to be less than significant or have no impact and do not require further analysis in the EIR.

4.6.4 Methodology

Geologic Investigation

The purpose of the report was to utilize existing geologic maps, reports, and databases to characterize the Project's surface conditions, subsurface conditions, and identify any geologic hazards that may impact Project development. The investigation included the following tasks:

- Field reconnaissance of the proposed project area;
- Review of geologic and seismic hazard maps;
- Review of aerial photographs;
- Review of groundwater data resources;
- Review of faulting, seismicity, and other sources of readily available published and unpublished geologic and geotechnical documents pertinent to the Project area; and

4.6.5 Compiled relevant geological and geotechnical data to present findings and conclusions in final preliminary report. Project Impact Analysis

Threshold a) i) Directly or indirectly cause potential substantial adverse effects, including the risk of loss, injury, or death involving rupture of a known earthquake fault, as delineated on the most recent Alquist-Priolo Earthquake Fault Zoning Map issued by the State Geologist for the area or based on other substantial evidence of a known fault? Refer to Division of Mines and Geology Special Publication 42.

Threshold a) ii) Directly or indirectly cause potential substantial adverse effects, including the risk of loss, injury, or death involving strong seismic ground shaking?

As discussed above, no portion of the Project area is located within a fault zone. However, given the Project's location, which is within a seismically active region, the potential exists for ground shaking and surface rupture to occur.

The CBC requires that a site-specific ground motion hazard analysis be performed in accordance with American Society of Civil Engineers (ASCE) 7-16 Section 11.4.8 for structures. The parameters were determined and provided in the Geohazard Evaluation Report. General earthwork considerations pertaining to the Project include remedial grading/over excavation, excavatability, and fill materials. Design considerations would take into account expansion potential, collapse potential, and corrosivity. The Geohazard Evaluation Report notes that based on the preliminary site plans, no conditions on the Project site would preclude development of the Proposed Project, provided that Mitigation Measures GEO-1 and GEO-2 would be implemented. Therefore, the Proposed Project would be less than significant and is considered feasible from a geotechnical standpoint.

Threshold a) iii) Directly or indirectly cause potential substantial adverse effects, including the risk of loss, injury, or death involving seismic-related ground failure, including liquefaction?

As discussed, based on the presence of shallow groundwater and the nature of subsurface soils, the potential for liquefaction is high. As such, site-specific liquefaction and dynamic settlement shall be evaluated with data obtained through the soils borings during the Project's geotechnical investigation

phase. Implementation of Mitigation Measures GEO-1 and GEO-2, in addition to compliance with the CBC, would result in less than significant impacts.

Threshold c) Be located on a geologic unit or soil that is unstable, or that would become unstable as a result of the project, and potentially result in on- or off-site landslide, lateral spreading, subsidence, liquefaction or collapse?

Threshold d) Be located on expansive soil, as defined in Table 18-1-B of the Uniform Building Code (1994), creating substantial direct or indirect risks to life or property?

Based on the Project's topography and relatively flat nature of the Project site, the risk of landslides is considered remote. However, unstable soils could result in subsidence, expansive soil, liquefaction and lateral spreading. Therefore, site-specific potential for these instabilities shall be evaluated with data from the soil borings during the geotechnical investigation phase. Implementation of Mitigation Measures GEO-1 and GEO-2, as well as the considerations provided in the Geohazard Evaluation Report, would ensure that construction of the Proposed Project would not result in significant impacts due to subsidence, expansive soil, liquefaction and lateral spreading.. Impacts would be less than significant with mitigation incorporated.

Threshold e) Have soils incapable of adequately supporting the use of septic tanks or alternative waste water disposal systems where sewers are not available for the disposal of waste water?

The Proposed Project would include a septic system that would be constructed to handle wastewater generated during Project operation. The Geohazard Evaluation Report notes that based on the anticipated soil types, Project site soils are expected to be moderately to severely corrosive to ferrous metals in contact. Therefore, the Proposed Project's soils shall be evaluated with data from the soil borings during the geotechnical investigation phase and will include consultation with a corrosion engineer to identify the appropriate protective measures based on the soils samples. Therefore, impacts would be less than significant with mitigation measures GEO-1 and GEO-2 incorporated.

Threshold f) Directly or indirectly destroy a unique paleontological resource or site or unique geological feature?

Based on information in the Geohazards Evaluation Report, sensitive Late Pleistocene- to Holocene-age Lake Cahuilla Beds exist within the Proposed Project area, and subsurface ground-disturbing activities have the potential to impact sensitive paleontological resources. Therefore, Mitigation Measures PALEO-1 through PALEO-5 would be implemented to reduce impacts to a less than significant level.

4.6.6 Cumulative Impacts

Cumulative impacts are defined in CEQA as "two or more individual effects which, when considered together, are considerable or which compound or increase other environmental impacts" (CEQA Guidelines Section 15355). Stated in another way, "a cumulative impact consists of an impact which is created as a result of the combination of the project evaluated in the EIR together with other projects causing relating impacts" (CEQA Guidelines Section 15130 [a][1]).

Geology and Soils

The geographic scope for the cumulative geology and soils setting is the Imperial Valley portion of the Salton Trough Physiographic Province of Southern California. A list of large-scale proposed, approved, and reasonably foreseeable renewable energy projects is identified in Table 3.0-1: Related Projects of Section 3.0: Environmental Setting. None of these projects are adjacent to or in close proximity to the Project. In general, geology and soils impacts are site-specific and limited to the boundaries of each individual project rather than cumulative in nature.

As discussed above, the Project is susceptible to geologic hazards such as ground shaking, lateral spreading, liquefaction and expansive soils. Implementation of Mitigation Measures GEO-1 and GEO-2 would reduce the Project's exposure to damage resulting from these hazards to less than significant levels. Furthermore, ground shaking, liquefaction, subsidence, and lateral spreading impacts are site specific and would not combine with similar impacts of large scale proposed, approved, and reasonably foreseeable renewable energy projects identified in Table 3.0-1 in Section 3.0. The Project would have a less than cumulatively considerable contribution to ground shaking and expansive soil impacts and would result in a less than cumulatively considerable impact.

Paleontological Resources

The geographic scope of the cumulative setting for paleontological resources includes Lake Cahuilla, which encompasses the entire Imperial Valley. Due to the abundance of invertebrate and vertebrate fossils discovered in the Lake Cahuilla Beds, this formation has a high paleontological potential. Cumulative development occurring within the boundaries of Lake Cahuilla has the potential to destroy or otherwise impact paleontological resources. Excavation activities associated with the Project, in conjunction with other large-scale proposed, approved, and reasonably foreseeable renewable energy projects in the region, could contribute to the progressive loss of fossil remains. While the potential for paleontological resources beneath the Project area is unknown, this does not negate the presence of such resources given the underlying Lake Cahuilla Beds. If present, paleontological resources beneath the Project area, as well as within the boundaries of the cumulative projects listed in Table 3.0-1 in Section 3.0, could be impacted during construction.

A cumulative impact would occur if the Project, in combination with other cumulative projects, would damage or destroy paleontological resources. However, with the implementation of Mitigation Measures PALEO-1 through PALEO-5, the Project would have a less than cumulatively considerable contribution to impacts to paleontological resources during construction. Likewise, other projects in the cumulative setting would be required to comply with existing regulations and undergo CEQA review to ensure that any paleontological impacts are appropriately evaluated and, if necessary, mitigated on a project-by-project basis. Therefore, through compliance with regulatory requirements and standard conditions of approval, cumulative impacts to paleontological resources during construction would be considered less than cumulatively considerable.

4.6.7 Mitigation Measures

To minimize potential impacts to geology and soils, the following mitigation measures should be implemented:

- GEO-1:** A complete geotechnical engineering investigation shall be completed, with a Final Geotechnical Report to be prepared prior to submittal of a grading permit. The Final Geotechnical Report shall be prepared by a qualified consultant and be submitted to the County for review and approval. The investigation will include soil test borings; specific and detailed recommendations; soil and sediment analysis; detailed analysis and design standards; geotechnical design criteria; and detailed design recommendations.
- GEO-2:** All grading operations and construction shall be conducted in conformance with the recommendations included in the Geohazard Evaluation Report prepared on August 17, 2022, and Final Geotechnical Report on the Project site. Design, grading, and construction shall be performed in accordance with the recommendations of the project geotechnical consultant and corrosion engineer, subject to review by the County, prior to commencement of grading activities.
- PALEO-1:** The Applicant shall retain the services of a Qualified Paleontologist and require that all initial ground-disturbing work be monitored by someone trained in fossil identification in monitoring contexts. The Qualified Paleontologist shall prepare a Paleontological Resource Mitigation Plan to be implemented during ground-disturbing activity for the proposed Project. This program should outline the procedures for paleontological monitoring, including extent and duration; protocols for salvage and preparation of fossils; and the requirements for a final mitigation and monitoring report. The Qualified Paleontologist and a paleontological monitor shall be present at the Project construction-phase kickoff meeting.
- PALEO-2:** Prior to commencing construction activities and, thus, prior to any ground disturbance in the Proposed Project site, the Qualified Paleontologist and paleontological monitor shall conduct initial Worker Environmental Awareness Program (WEAP) training to all construction personnel, including supervisors, present at the start of the Project construction work phase, for which the Applicant, or their designated Contractor, and all subcontractors shall make their personnel available. This WEAP training will educate construction personnel on how to work with the monitor(s) to identify and minimize impacts to paleontological resources and maintain environmental compliance, and it shall be performed periodically for new personnel coming on to the Project as needed.
- PALEO-3:** The Applicant, or their designated Contractor, shall provide the Qualified Paleontologist with a schedule of initial potential ground-disturbing activities. A minimum of 48 hours will be provided to the consultant prior to the commencement of any initial ground-disturbing activities, such as vegetation grubbing or clearing, grading, trenching, or mass excavation.
- As detailed in the schedule provided, a paleontological monitor shall be present on-site at the commencement of ground-disturbing activities related to the Project. The monitor, in consultation with the Qualified Paleontologist, shall observe initial ground-disturbing activities and, as they proceed, make adjustments to the number of monitors as needed to provide adequate observation and oversight. All monitors will have stop-work authority to allow for recordation and evaluation of finds during construction. The monitor will maintain a daily record of observations as an ongoing reference resource and to provide a resource for final reporting upon completion of the Project.

The Qualified Paleontologist, paleontological monitor, and the Applicant, or their designated Contractor, and subcontractors shall maintain a line of communication regarding schedule and activity such that the monitor is aware of all ground-disturbing activities in advance to provide appropriate oversight.

PALEO-4: If paleontological resources are discovered, construction shall be halted within 50 feet of any paleontological finds and shall not resume until the Qualified Paleontologist can determine the significance of the find and/or the find has been fully investigated, documented, and cleared.

PALEO-5: At the completion of all ground-disturbing activities, the Qualified Paleontologist shall prepare a Paleontological Resources Monitoring Report summarizing all monitoring efforts and observations, as performed, and any and all paleontological finds and shall provide follow-up reports of any finds to the preferred paleontological repository, as required.

4.6.8 Level of Significance After Mitigation

With the implementation of Mitigation Measures GEO-1, GEO-2, and PALEO-1 through PALEO-5, the Project would ensure potential impacts related to geology and soils would remain less than significant.

4.7 GREENHOUSE GAS EMISSIONS

This section provides information on potential impacts from the greenhouse gas (GHG) emissions generated either directly or indirectly by the Project. This section also addresses the potential of the Project to conflict with an applicable plan, policy, or regulation adopted for the purpose of reducing the emissions of GHGs. Information contained in this section is from the GHG modeling parameter and output prepared for the Project in the *Air Quality Technical Report for the Hell's Kitchen Geothermal Power Plant and Lithium Production Plant*, dated May 6, 2022, prepared by RCH Group (Appendix B). This analysis follows the Imperial County Air Pollution Control District (ICAPCD) recommendations for preparing a GHG emissions analysis under the California Environmental Quality Act (CEQA).

4.7.1 Background Information

Climate change is a recorded change in the Earth's average weather measured by variables such as wind patterns, storms, precipitation, and temperature. Global temperatures are moderated by naturally occurring atmospheric gases—GHGs—including water vapor, carbon dioxide (CO₂), methane (CH₄), and nitrous oxide (N₂O). Historical records show that global temperature changes have occurred naturally in the past, such as during previous ice ages. However, it has been shown that emissions from human activities, such as electricity production and vehicle use, have elevated the concentration of these gases in the atmosphere. The years 2016 and 2020 are tied for the Earth's warmest year since recordkeeping began in 1880, and 16 of the 17 warmest years in the instrumental record occurred since 2001. The average global temperature has risen more than 2.0 °F (1.2 °C) since 1880 (NASA 2021).

The global atmospheric concentration of CO₂ has increased from a preindustrial (roughly 1750) value of about 280 parts per million (ppm) to a monthly mean value of 414 ppm in December 2020 (NOAA 2021). According to the Global Greenhouse Emissions Data website (USEPA 2014), the breakdown of global GHG emissions by sector consists of: 25 percent from electricity and heat production; 21 percent from industry; 24 percent from agriculture, forestry and other land use activities; 14 percent from transportation; 6 percent from building energy use; and 10 percent from all other sources of energy use.

According to Inventory of U.S. Greenhouse Gas Emissions and Sinks 1990-2018, prepared by USEPA, April 13, 2020, in 2018 total U.S. GHG emissions were 6,676.6 million metric tons of CO₂ equivalent (MMTCO_{2e}) emissions. Total U.S. emissions have increased by 3.7 percent between 1990 and 2018, which is down from a high of 15.2 percent above 1990 levels in 2007. Emissions increased by 2.9 percent or 188.4 MMTCO_{2e} between 2017 and 2018. The recent increase in GHG emissions was largely driven by an increase in CO₂ emissions from fossil fuel combustion, the result of multiple factors, including greater heating and cooling needs due to a colder winter and hotter summer in 2018 compared to 2017.

According to the California Air Resources Board (CARB), the State of California created 425 MMTCO_{2e} in 2018 (CARB 2020). The breakdown of California GHG emissions by sector consists of 39.9 percent from transportation, 21.0 percent from industrial, 14.8 percent from electricity generation, 7.7 percent from agriculture, 6.1 percent from residential buildings, and 3.7 percent from commercial buildings. In 2018, GHG emissions were 0.8 MMTCO_{2e} higher than 2017 levels and are 6 MMTCO_{2e} below the 2020 GHG limit of 431 MMTCO_{2e} established by Assembly Bill (AB) 32.

4.7.2 Greenhouse Gases

GHGs are global pollutants and, therefore, are unlike criteria air pollutants such as ozone (O₃), particulate matter (PM₁₀ and PM_{2.5}), and toxic air contaminants (TACs), which are pollutants of regional and local

concern (see Section 4.2: Air Quality, of this EIR). While pollutants with localized air quality effects have relatively short atmospheric lifetimes (generally on the order of a few days), GHGs have relatively long atmospheric lifetimes, ranging from one year to several thousand years. Long atmospheric lifetimes allow GHGs to disperse around the globe. Therefore, GHG effects are global, as opposed to the local and/or regional air quality effects of criteria air pollutant and TAC emissions.

California AB 32 defines greenhouse gases as any of the following compounds: CO₂, CH₄, N₂O, hydrofluorocarbons (HFCs), perfluorocarbons (PFCs) and sulfur hexafluoride (SF₆) (California Health and Safety Code [HSC] Section 38505[g]). CO₂, followed by CH₄ and N₂O, are the most common GHGs that result from human activity. The following provides a description of each of the listed GHGs.

Water Vapor. Water vapor is the most abundant, important, and variable GHG in the atmosphere. Water vapor is not considered a pollutant; in the atmosphere it maintains a climate necessary for life. Changes in its concentration are primarily considered a result of climate feedbacks related to the warming of the atmosphere rather than a direct result of industrialization. As the temperature of the atmosphere rises, more water is evaporated from ground storage (rivers, oceans, reservoirs, soil). Because the air is warmer, the relative humidity can be higher, leading to more water vapor in the atmosphere. As a GHG, the higher concentration of water vapor is then able to absorb more thermal indirect energy radiated from the Earth, thus further warming the atmosphere.

Carbon Dioxide. The natural production and absorption of CO₂ is achieved through the terrestrial biosphere and the ocean. However, humankind has altered the natural carbon cycle by burning coal, oil, natural gas, and wood. Since the industrial revolution began in the mid-1700s, each of these activities has increased in scale and distribution. Prior to the industrial revolution, concentrations were fairly stable at 280 ppm. The International Panel on Climate Change (IPCC) indicates that concentrations were 379 ppm in 2005, an increase of more than 30 percent compared to pre-industrial levels. Left unchecked, the IPCC projects that concentration of CO₂ in the atmosphere is projected to increase to a minimum of 540 ppm by 2100 as a direct result of anthropogenic sources. This could result in an average global temperature rise of at least 2 °C or 3.6 °F (Appendix B of this Environmental Impact Report [EIR]).

Methane. CH₄ is an extremely effective absorber of radiation, although its atmospheric concentration is less than that of CO₂. Its lifetime in the atmosphere is brief (10 to 12 years), compared to some other GHGs, such as CO₂, N₂O, and chlorofluorocarbons (CFCs). CH₄ has both natural and anthropogenic sources. It is released as part of the biological processes in low oxygen environments, such as in swamplands or in rice production. Over the last 50 years, human activities such as growing rice, raising cattle, using natural gas, and mining coal have added to the atmospheric concentration of methane. Other anthropocentric sources include fossil-fuel combustion and biomass burning.

Nitrous Oxide. N₂O is produced by microbial processes in soil and water, including those reactions that occur in fertilizer containing nitrogen. In addition to agricultural sources, some industrial processes (fossil fuel-fired power plants, nylon production, nitric acid production, and vehicle emissions) also contribute to its atmospheric load. N₂O is also commonly used as an aerosol spray propellant.

Chlorofluorocarbons. CFCs are nontoxic, nonflammable, insoluble, and chemically unreactive in the troposphere (the level of air at the Earth's surface). CFCs have no natural source but were first synthesized in 1928. They were used for refrigerants, aerosol propellants, and cleaning solvents. Due to the discovery that they are able to destroy stratospheric ozone, a global effort to halt their production was undertaken, and in 1989 the European Community agreed to ban CFCs by 2000; subsequent treaties banned CFCs

worldwide by 2010. This effort was extremely successful, and the levels of the major CFCs are now remaining level or declining. However, their long atmospheric lifetimes mean that some of the CFCs will remain in the atmosphere for over 100 years.

Hydrofluorocarbons. HFCs are synthetic chemicals that are used as a substitute for CFCs and man-made for applications such as automobile air conditioners and refrigerants. Out of all the GHGs, HFCs are one of three groups with the highest global warming potential (GWP). The HFCs with the largest measured atmospheric abundances are (in order), HFC-23 (CHF_3), HFC-134a ($\text{CF}_3\text{CH}_2\text{F}$), and HFC-152a (CH_3CHF_2). Prior to 1990, the only significant emissions were of HFC-23. The use of HFC-134a is increasing due to its utilization as a refrigerant. Concentrations of HFC-23 and HFC-134a in the atmosphere are now about 10 parts per trillion (ppt) each. Concentrations of HFC-152a are about 1 ppt.

Perfluorocarbons. PFCs have stable molecular structures and do not break down through the chemical processes in the lower atmosphere. High-energy ultraviolet rays about 60 kilometers above Earth's surface are able to destroy the compounds. Because of this, PFCs have very long lifetimes, between 10,000 and 50,000 years. Two common PFCs are tetrafluoromethane (CF_4) and hexafluoroethane (C_2F_6). Concentrations of CF_4 in the atmosphere are over 70 ppt. The two main sources of PFCs are primary aluminum production and semiconductor manufacturing.

Sulfur Hexafluoride. SF_6 is an inorganic, odorless, colorless, nontoxic, nonflammable gas. SF_6 has the highest GWP of any gas evaluated; 23,900 times that of CO_2 . Atmospheric concentrations in the 1990s were about 4 ppt. Sulfur hexafluoride is used for insulation in electric power transmission and distribution equipment, in the magnesium industry, in semiconductor manufacturing, and as a tracer gas for leak detection.

Aerosols. Aerosols are particles emitted into the air through burning biomass (plant material) and fossil fuels. Aerosols can warm the atmosphere by absorbing and emitting heat and can cool the atmosphere by reflecting light. Sulfate aerosols are emitted when fuel containing sulfur is burned. Black carbon (or soot) is emitted during biomass burning due to the incomplete combustion of fossil fuels. Particulate matter regulation has been lowering aerosol concentrations in the United States; however, global concentrations are likely increasing.

GHGs have varying GWP. The GWP is the potential of a gas or aerosol to trap heat in the atmosphere; it is the "cumulative radiative forcing effect of a gas over a specified time horizon resulting from the emission of a unit mass of gas relative to a reference gas." The reference gas for GWP is CO_2 ; therefore, CO_2 has a GWP of 1. The other main greenhouse gases that have been attributed to human activity include CH_4 , which has a GWP of 21, and N_2O , which has a GWP of 310. Table 4.6-1 presents the GWP and atmospheric lifetimes of common GHGs.

Table 4.7-1: Global Warming Potentials, Atmospheric Lifetimes, and Abundances of GHGs

Gas	Atmospheric Lifetime (year) ^a	Global Warming Potential (100-Year Horizon) ^b	Atmospheric Abundance
Carbon dioxide (CO ₂)	50–200	1	379 ppm
Methane (CH ₄)	9–15	25	1,774 ppb
HFC-152a	1.4	124	3.9 ppt
Nitrous oxide (N ₂ O)	114	298	319 ppb
HFC-134a	14	1,430	35 ppt
PFC: tetrafluoromethane (CF ₄)	50,000	7,390	74 ppt
HFC-23	270	14,800	18 ppt
PFC: hexafluoroethane (C ₂ F ₆)	10,000	12,200	2.9 ppt
Sulfur hexafluoride (SF ₆)	3,200	22,800	5.6 ppt

Notes:

^a Defined as the half-life of the gas.

^b Compared to the same quantity of CO₂ emissions and is based on the Intergovernmental Panel On Climate Change (IPCC) 2007 standard, which is utilized in CalEEMod (Version 2020.4.0), that is used in this report (CalEEMod user guide: Appendix A).

Definitions: ppb = parts per billion; ppm = parts per million; ppt = parts per trillion,

Source: CAPCOA, 2021

Other GHGs are present in trace amounts in the atmosphere and are generated from various industrial or other uses. The sources of GHG emissions, GWP, and atmospheric lifetime of GHGs are all important variables to be considered in the process of calculating CO₂e for discretionary land use projects that require a climate change analysis.

4.7.3 Regulatory Setting

The regulatory setting related to global climate change is addressed through the efforts of various federal, State, regional, and local government agencies. These agencies work jointly, as well as individually, to reduce GHG emissions through legislation, regulations, planning, policy-making, education, and a variety of programs. The agencies responsible for global climate change regulations are discussed below.

Federal

The USEPA is responsible for implementing federal policy to address global climate change. The federal government administers a wide array of public-private partnerships to reduce U.S. GHG intensity. These programs focus on energy efficiency, renewable energy, methane and other non-CO₂ gases, agricultural practices, and implementation of technologies to achieve GHG reductions. USEPA implements several voluntary programs that substantially contribute to the reduction of GHG emissions. On December 7, 2009, the USEPA Administrator signed two distinct findings regarding GHGs under section 202(a) of the Clean Air Act. The findings state:

- **Endangerment Finding:** The Administrator finds that the current and projected concentrations of the six key well-mixed greenhouse gases: carbon dioxide (CO₂); methane (CH₄); nitrous oxide (N₂O); hydrofluorocarbons (HFCs); perfluorocarbons (PFCs); and sulfur hexafluoride (SF₆), into the atmosphere, threaten the public health and welfare of current and future generations.

- **Cause or Contribute Finding:** The Administrator finds that the combined emissions of these well-mixed greenhouse gases from new motor vehicles and new motor vehicle engines contribute to the greenhouse gas pollution which threatens public health and welfare.

These findings did not impose any requirements on industry or other entities; however, since 2009 the USEPA has been providing GHG emission standards for vehicles and other stationary sources of GHG emissions that are regulated by the USEPA. On September 13, 2013, the USEPA Administrator signed 40 CFR Part 60, which limits emissions from new sources to 1,100 pounds of CO₂ per megawatt hour (MWh) for fossil-fuel-fired utility boilers and 1,000 pounds of CO₂ per MWh for large natural gas-fired combustion units.

On August 3, 2015, the USEPA announced the Clean Power Plan—emissions guidelines for U.S. states to follow in developing plans to reduce GHG emissions from existing fossil-fuel-fired power plants (Federal Register Vol. 80, No. 205, October 23, 2015). On February 9, 2016, the Supreme Court stayed implementation of the Clean Power Plan due to a legal challenge from 29 states; and, in April 2017, the Supreme Court put the case on a 60-day hold and directed both sides to make arguments for whether it should keep the case on hold indefinitely or close it and remand the issue to the USEPA. On October 11, 2017, the USEPA issued a formal proposal to repeal the Clean Power Plan; however, the repeal of the Plan will require following the same rule-making system used to create regulations and will likely result in court challenges.

Corporate Average Fuel Standards

Established by the U.S. Congress in 1975, the Corporate Average Fuel Economy (CAFE) standards reduce energy consumption by increasing the fuel economy of cars and light trucks. The National Highway Traffic Safety Administration (NHTSA) and USEPA jointly administer the CAFE standards. The U.S. Congress has specified that CAFE standards must be set at the “maximum feasible level” with consideration given for: (1) technological feasibility; (2) economic practicality; (3) effect of other standards on fuel economy; and (4) need for the nation to conserve energy.

As such, fuel efficiency standards for medium- and heavy-duty trucks have been jointly developed by USEPA and NHTSA. The Phase 1 heavy-duty truck standards apply to combination tractors, heavy-duty pickup trucks and vans, and vocational vehicles for model years 2014 through 2018, resulting in a reduction in fuel consumption from 6 to 23 percent over the 2010 baseline, depending on the vehicle type (USEPA 2011). In 2012, the USEPA and NHTSA also adopted the Phase 2 heavy-duty truck standards, which cover model years 2021 through 2027 and require the phase-in of a 5 to 25 percent reduction in fuel consumption over the 2017 baseline depending on the compliance year and vehicle type (USEPA 2016).

State

CARB has the primary responsibility for implementing state policy to address global climate change; however, State regulations related to global climate change affect a variety of State agencies. CARB, which is a part of the California Environmental Protection Agency, is responsible for the coordination and administration of both the federal and State air pollution control programs within California. In this capacity, the CARB conducts research, sets the California Ambient Air Quality Standards, compiles emission inventories, develops suggested control measures, provides oversight of local programs, and prepares the State Implementation Plan. In addition, the CARB establishes emission standards for motor vehicles sold in California, consumer products (e.g., hairspray, aerosol paints, and barbeque lighter fluid),

and various types of commercial equipment. It also sets fuel specifications to further reduce vehicular emissions.

In 2008, CARB approved a Climate Change Scoping Plan (Scoping Plan) that proposes a “comprehensive set of actions designed to reduce overall carbon GHG emissions in California, improve our environment, reduce our dependence on oil, diversify our energy sources, save energy, create new jobs, and enhance public health” (CARB 2008). The Scoping Plan had a range of GHG reduction actions that included direct regulations; alternative compliance mechanisms; monetary and nonmonetary incentives; voluntary actions; and market-based mechanisms such as a cap-and-trade system. In 2014, CARB approved the First Update to the Climate Change Scoping Plan, which identifies additional strategies moving beyond the 2020 targets to the year 2050. On December 14, 2017, CARB adopted California’s 2017 Climate Change Scoping Plan (CARB 2017), which provides specific statewide policies and measures to achieve the 2030 GHG reduction target of 40 percent below 1990 levels by 2030 and the aspirational 2050 GHG reduction target of 80 percent below 1990 levels by 2050. In addition, the State has passed the following laws directing CARB to develop actions to reduce GHG emissions, which are listed below in chronological order, with the most current first.

Executive Order N-79-20

On September 23, 2020, Governor Gavin Newsom issued Executive Order (EO) N-79-20, which requires all new passenger cars and trucks and commercial drayage trucks sold in California to be zero emissions by the year 2035 and all medium-heavy-duty vehicles (commercial trucks) sold in the state to be zero emissions by 2045 for all operations where feasible. EO N-79-20 also requires all off-road vehicles and equipment to transition to 100 percent zero-emission equipment, where feasible, by 2035.

Title 24, Part 6, Energy Efficiency Standards

California Code of Regulations (CCR) Title 24, Part 6: California’s Energy Efficiency Standards for Residential and Nonresidential Buildings (Title 24) was first established in 1978 in response to a legislative mandate to reduce California’s energy consumption. The standards are updated periodically to allow consideration and possible incorporation of new energy efficiency technologies and methods. Although it was not originally intended to reduce GHG emissions, electricity production by fossil fuels results in GHG emissions; and energy efficient buildings require less electricity. Therefore, increased energy efficiency results in decreased GHG emissions.

Title 24 standards are updated on a three-year schedule, and the most current 2019 standards went into effect on January 1, 2020. The Title 24 standards now require that the average new home built in California use zero-net energy and nonresidential buildings use about 30 percent less energy than the 2016 standards due mainly to lighting upgrades. The 2019 standards also encourage the use of battery storage and heat pump water heaters and require the more widespread use of LED lighting as well as improve a building’s thermal envelope through high performance attics, walls, and windows. The 2019 standards also require improvements to ventilation systems by requiring highly efficient air filters to trap hazardous air particulates as well as improvements to kitchen ventilation systems.

Title 24, Part 11, California Green Building Standards

CCR Title 24, Part 11: California Green Building Standards (Title 24) was developed in response to continued efforts to reduce GHG emissions associated with energy consumption. The most current

version is the 2019 CALGreen Code, which became effective on January 1, 2020, and replaced the 2016 CALGreen Code.

The CALGreen Code contains requirements for construction site selection, storm water control during construction, construction waste reduction, indoor water use reduction, material selection, natural resource conservation, site irrigation conservation, and more. The code provides for design options that allow the designer to determine how best to achieve compliance for a given site or building condition. The code also requires building commissioning, which is a process for verifying that all building systems (e.g., heating and cooling equipment and lighting systems) are functioning at their maximum efficiency.

The CALGreen Code provides standards for bicycle parking; carpool, vanpool, and electric vehicle spaces; light and glare reduction; grading and paving; energy-efficient appliances; renewable energy; graywater systems; water-efficient plumbing fixtures; recycling and recycled materials; pollutant controls (including moisture control and indoor air quality); acoustical controls; storm water management; building design; insulation; flooring; and framing among others. Implementation of the CALGreen Code measures reduces energy consumption and vehicle trips and encourages the use of alternative-fuel vehicles, which reduces pollutant emissions.

Some of the notable changes in the 2019 CALGreen Code over the prior 2016 CALGreen Code include an alignment of building code engineering requirements with the national standards that include anchorage requirements for solar panels, provide design requirements for buildings in tsunami zones, increase the minimum efficiency reporting value for air filters from 8 to 13, increase electric vehicle charging requirements in parking areas, and set minimum requirements for use of shade trees.

Renewable Portfolio Standards

The State of California requires that utility providers provide renewable energy to their customers. Senate Bill (SB) 100 was adopted September 2018 and requires that by December 1, 2045, 100 percent of retail sales of electricity be generated from renewable or zero-carbon emission sources of electricity. SB 100 supersedes the renewable energy requirements set by SB 350, SB 1078, SB 107, and SB X1-2. SB 100 codified the interim renewable energy thresholds from the prior Bills of: 33 percent by 2020; 40 percent by December 31, 2024; 45 percent by December 31, 2027; and 50 percent by December 31, 2030.

Executive Order B-30-15, Senate Bill 32 & Assembly Bill 197 (Statewide Year 2030 GHG Targets)

California EO B-30-15 (April 29, 2015) set an interim Statewide emission target to reduce GHG emissions to 40 percent below 1990 levels by 2030 and directed State agencies with jurisdiction over GHG emissions to implement measures pursuant to statutory authority to achieve this 2030 target and the 2050 target of 80 percent below 1990 levels. Specifically, the EO directed CARB to update the Scoping Plan to express this 2030 target in metric tons. Assembly Bill 197 (AB 197) (September 8, 2016) and SB 32 (September 8, 2016) codified into statute the GHG emissions reduction targets of at least 40 percent below 1990 levels by 2030 as detailed in EO B-30-15. AB 197 also requires additional GHG emissions reporting to CARB from stationary sources and requires CARB to provide sources of GHG emissions on its website that is broken down to subcounty levels. AB 197 requires CARB to consider the social costs of emissions impacting disadvantaged communities.

Executive Order B-29-15 and Senate Bill X7-7, Water Conservation Measures

The Water Conservation Act of 2009 set an overall goal of reducing per capita urban water use by 20 percent by December 31, 2020. The State was required to make incremental progress toward this goal by reducing per capita water use by at least 10 percent by December 31, 2015. This is an implementing measure of the Water Sector of the AB 32 Scoping Plan. Reduction in water consumption directly reduces the energy necessary and the associated emissions to convey, treat, and distribute the water; it also reduces emissions from wastewater treatment.

The Department of Water Resources adopted a regulation on February 16, 2011, that set forth criteria and methods for exclusion of industrial process water from the calculation of gross water use for purposes of urban water management planning. The regulation applied to all urban retail water suppliers required to submit an Urban Water Management Plan, as set forth in the Water Code, Division 6, Part 2.6, Sections 10617 and 10620.

On April 1, 2015, Governor Jerry Brown issued Executive Order B-29-15, which directed the State Water Resources Control Board (SWRCB) to impose restrictions to achieve a Statewide 25 percent reduction in urban water usage and directed the Department of Water Resources to replace 50 million square feet of lawn with drought-tolerant landscaping through an update to the State's Model Water Efficient Landscape Ordinance. The ordinance also required installation of more efficient irrigation systems, promoted usage of greywater and on-site stormwater capture, limited the turf planted in new residential landscapes to 25 percent of the total area, and restricted turf from being planted in median strips or in parkways unless the parkway is next to a parking strip where a flat surface is required to enter and exit vehicles. EO B-29-15 and SB X7-7 would reduce GHG emissions associated with the energy used to transport and filter water.

Senate Bill 97 and Amendments to the California Environmental Quality Act Guidelines

SB 97 directed the California Natural Resources Agency (CNRA) to adopt amendments to the CEQA Guidelines that require evaluation of GHG emissions or the effects of GHG emissions by January 1, 2010. The CNRA has done so, and the amendments to the CEQA Guidelines, in a new Section 15064.4, entitled Determining the Significance of Impacts from Greenhouse Gas Emissions, provide that:

- a) The determination of the significance of greenhouse gas emissions calls for a careful judgment by the lead agency consistent with the provisions in Section 15064. A lead agency should make a good-faith effort, based to the extent possible on scientific and factual data, to describe, calculate, or estimate the amount of greenhouse gas emissions resulting from a project.
- b) A lead agency should consider the following factors, among others, when assessing the significance of impacts from greenhouse gas emissions on the environment.
 - 1) The extent to which the project may increase or reduce greenhouse gas emissions as compared to the existing environmental setting;
 - 2) Whether the project emissions exceed a threshold of significance that the lead agency determines applies to the project; and
 - 3) The extent to which the project complies with regulations or requirements adopted to implement a statewide, regional, or local plan for the reduction or mitigation of greenhouse gas emissions. Such requirements must be adopted by the relevant public

agency through a public review process and must reduce or mitigate the project's incremental contribution of greenhouse gas emissions.

The amendments also add a new Section 15126.4(c), Mitigation Measures Related to Greenhouse Gas Emissions. Generally, this State CEQA Guidelines section requires lead agencies to consider feasible means—supported by substantial evidence and subject to monitoring or reporting—of mitigating the significant effects of GHG emissions. Potential measures to mitigate the significant effects of GHG emissions are identified, including those outlined in Appendix F, Energy Conservation, of the State CEQA Guidelines.

Senate Bill 375

SB 375 was adopted September 2008 to support the State's climate action goals to reduce GHG emissions through coordinated regional transportation planning efforts, regional GHG emission reduction targets, and land use and housing allocation. SB 375 requires CARB to set regional targets for GHG emissions reductions from passenger vehicle use. In 2010, CARB established targets for 2020 and 2035 for each Metropolitan Planning Organization (MPO) within the state. It was up to each MPO to adopt a sustainable communities strategy (SCS) that will prescribe land use allocation in that MPO's Regional Transportation Plan (RTP) to meet CARB's 2020 and 2035 GHG emission reduction targets. These reduction targets are required to be updated every eight years; in June 2017, CARB released its *Staff Report Proposed Update to the SB 375 Greenhouse Gas Emission Reduction Target*, which provided recommended GHG emissions reduction targets for the Southern California Association of Governments (SCAG) of 8 percent by 2020 and 21 percent by 2035.

The 2016–2040 Regional Transportation Plan/Sustainable Communities Strategy (RTP/SCS), adopted by SCAG April 7, 2016, provides a 2020 GHG emission reduction target of 8 percent and a 2035 GHG emission reduction target of 18 percent. SCAG will need to develop additional strategies in its next revision of the RTP/SCS in order to meet CARB's new 21-percent GHG emission reduction target for 2035. CARB is also charged with reviewing SCAG's RTP/SCS for consistency with its assigned targets.

City and County land use policies, including General Plans, are not required to be consistent with the RTP and associated SCS. However, new provisions of CEQA incentivize, through streamlining and other provisions, qualified projects that are consistent with an approved SCS and categorized as “transit priority projects.”

Assembly Bill 32, The California Global Warming Solutions Act of 2006

The California Legislature adopted the public policy position that global warming is “a serious threat to the economic well-being, public health, natural resources, and the environment of California” (HSC Section 38501). Further, the State Legislature has determined the following:

[T]he potential adverse impacts of global warming include the exacerbation of air quality problems, a reduction in the quality and supply of water to the state from the Sierra Nevada snowpack, a rise in sea levels resulting in the displacement of thousands of coastal businesses and residences, damage to marine ecosystems and the natural environment, and an increase in the incidences of infectious disease, asthma, and other human health-related problems.

The State Legislature also states:

Global warming will have detrimental effects on some of California's largest industries, including agriculture, wine, tourism, skiing, recreational and commercial fishing, and forestry. It will also increase the strain on electricity supplies necessary to meet the demand for summer air-conditioning in the hottest parts of the State (California Health and Safety Code, Section 38501).

These public policy statements became law with the enactment of AB 32, the California Global Warming Solutions Act of 2006, signed by Governor Arnold Schwarzenegger in September 2006. AB 32 is now codified as HSC Sections 38500 through 38599.

AB 32 required that statewide GHG emissions be reduced to 1990 levels by 2020. This reduction was to be accomplished through an enforceable statewide cap on GHG emissions to be phased in starting in 2012. AB 32 directed CARB to establish this statewide cap based on 1990 GHG emissions levels, to disclose how it arrived at the cap, to institute a schedule to meet the emissions cap, and to develop tracking, reporting, and enforcement mechanisms. Emissions reductions under AB 32 were to include carbon sequestration projects and best management practices that are technologically feasible and cost effective. As of the date of this Draft EIR, CARB has not promulgated GHG emissions or reporting standards that are directly applicable to the Project.

Executive Order S-3-05

On June 1, 2005, Governor Schwarzenegger signed EO S-3-05, which proclaims that California is vulnerable to the impacts of climate change. It declares that increased temperatures could reduce snowpack in the Sierra Nevada Mountains, could further exacerbate California's air quality problems, and could potentially cause a rise in sea levels. In an effort to avoid or reduce the impacts of climate change, EO S-3-05 called for a reduction in GHG emissions to the year 2000 level by 2010, to year 1990 levels by 2020, and to 80 percent below 1990 levels by 2050. It should be noted that the 80 percent below 1990 levels by 2050 is currently an aspirational goal by EO S-3-05 but has not yet been codified into law.

Assembly Bill 1493, Clean Car Standards

AB 1493, adopted September 2002, also known as Pavley I, requires the development and adoption of regulations to achieve the maximum feasible reduction of GHGs emitted by noncommercial passenger vehicles, light-duty trucks, and other vehicles used primarily for personal transportation in the State. Although setting emissions standards on automobiles is solely the responsibility of the USEPA, the federal Clean Air Act allows California to set State-specific emission standards on automobiles if the State first obtains a waiver from the USEPA. The USEPA granted California that waiver on July 1, 2009. The emission standards became increasingly more stringent through the 2016 model year. California also committed to further strengthening these standards beginning in 2017 to obtain a 45-percent GHG reduction from 2020 model year vehicles (CARB 2009).

The second set of regulations, Pavley II, was developed in 2010 and is being phased in between model years 2017 through 2025 with the goal of reducing GHG emissions by 45 percent by the year 2020 as compared to the 2002 fleet. The Pavley II standards were developed by linking the GHG emissions and formerly separate toxic tailpipe emissions standards previously known as LEV III (third stage of the Low Emission Vehicle standards) into a single regulatory framework. The new rules reduce emissions from gasoline-powered cars as well as promote zero-emissions auto technologies such as electricity and hydrogen through increasing the infrastructure for fueling hydrogen vehicles. In 2009, the USEPA granted California the authority to implement the GHG standards for passenger cars, pickup trucks, and sport

utility vehicles, and these GHG emissions standards are currently being implemented nationwide. However, USEPA has performed a midterm evaluation of the longer-term standards for model years 2022-2025; and, based on the findings of this midterm evaluation, the USEPA has proposed to amend the CAFE and GHG emissions standards for light vehicles for model years 2021 through 2026. The USEPA's proposed amendments do not include any extension of the legal waiver granted to California by the 1970 Clean Air Act, which has allowed the State to set tighter standards for vehicle pipe emissions than the USEPA standards.

Local – Imperial County Air Pollution Control District

The ICAPCD develops rules and regulations, establishes permitting requirements for stationary sources, inspects emission sources, and enforces such measures through educational programs or fines, when necessary. ICAPCD is directly responsible for reducing emissions from stationary, mobile, and indirect sources. The ICAPCD has not established formal quantitative or qualitative GHG emissions thresholds through a public rulemaking process. However, the ICAPCD has adopted the federal Prevention of Significant Deterioration (PSD) and Title V GHG air permitting requirements by reference for stationary sources in Regulation IX in Rules 900 and 903, which are described below.

ICAPCD Rule 900

ICAPCD Rule 900 provides procedures for issuing permits to operate for industrial projects that are subject to Title V of the federal Clean Air Act Amendments of 1990 (Major Sources) of emissions, which is defined as a source that exceeds 100 tons per year of any regulated pollutant, including GHG emissions.

ICAPCD Rule 903

ICAPCD Rule 903 applies to any stationary source that would have the potential to emit hazardous air pollutants (HAPs). Rule 903 provides a de minimis emissions level of 20,000 MTCO_{2e} per year, where if a stationary source produces less emissions than the de minimis emissions levels, the source is exempt from the Rule 903 recordkeeping and reporting requirements.

Thresholds of Significance

In order to assist in determining whether a project would have a significant effect on the environment, the County utilizes the State CEQA Guidelines Appendix G Guidelines. Appendix G states that a project may be deemed to have greenhouse gas impacts if it would:

- Threshold a) Generate greenhouse gas emissions, either directly or indirectly, that may have a significant impact on the environment?**

- Threshold b) Conflict with an applicable plan, policy, or regulation adopted for the purpose of reducing the emissions of greenhouse gases?**

As discussed in Section 15064.4 of the CEQA Guidelines, the determination of the significance of GHG emissions calls for a careful judgment by the lead agency consistent with the provisions in Section 15064. A lead agency should make a good-faith effort, based to the extent possible on scientific and factual data, to describe, calculate or estimate the amount of GHG emissions resulting from a project. A lead agency shall have discretion to determine, in the context of a particular project, whether to:

1. Quantify greenhouse gas emissions resulting from a project; and/or
2. Rely on a qualitative analysis or performance-based standards.

A lead agency should consider the following factors, among others, when assessing the significance of impacts from GHG emissions on the environment:

1. The extent to which the project may increase or reduce GHG emissions as compared to the existing environmental setting;
2. Whether the project emissions exceed a threshold of significance that the lead agency determines applies to the project; and
3. The extent to which the project complies with regulations or requirements adopted to implement a statewide, regional, or local plan for the reduction or mitigation of GHG emissions. Such requirements must be adopted by the relevant public agency through a public review process and must reduce or mitigate the project's incremental contribution of GHG emissions. If there is substantial evidence that the possible effects of a particular project are still cumulatively considerable notwithstanding compliance with the adopted regulations or requirements, an EIR must be prepared for the project. In determining the significance of impacts, the lead agency may consider a project's consistency with the State's long-term climate goals or strategies, provided that substantial evidence supports the agency's analysis of how those goals or strategies address the project's incremental contribution to climate change and its conclusion that the project's incremental contribution is not cumulatively considerable.

4.7.4 Methodology

The GHG emissions related to construction and annual operations for both the Proposed Project and operational scenario were calculated through use of the CalEEMod Version 2020.4.0. The GHG emissions modeling and CalEEMod printouts are provided in the GHG Analysis (Appendix B).

4.7.5 Project Impact Analysis

Threshold a) Generate greenhouse gas emissions, either directly or indirectly, that may have a significant impact on the environment?

The Proposed Project may generate GHG emissions, either directly or indirectly, that may have a significant impact on the environment. Implementation of the Proposed Project is anticipated to generate GHG emissions from construction and operational activities, which have been analyzed separately below.

Project-Related Construction Emissions

Construction activities for the Proposed Project were calculated to occur over a three-year time frame that would occur over portions of the years 2022, 2023, and 2024. Although the Project has missed the start of the original construction commencement date, this analysis includes a worst-case scenario given that technologies and emissions are anticipated with future years. The CalEEMod model calculated that grading and construction of the Project will produce approximately 10,307 metric tons of CO₂e (MTCO₂e). It should also be noted that a direct comparison of construction GHG emissions with long-term thresholds would not be appropriate since construction emissions are short term in nature and would cease upon completion of construction. Other air districts, including the SCAQMD, recommend that GHG emissions from construction activities be amortized over 20 years when construction emissions are compared to operational-related GHG emissions thresholds. Given this, the annual construction emission for the

Proposed Project is 515 MTCO₂e per year, as shown in Table 4.7-2. It should be noted that no thresholds of significance are provided for construction-related GHG emissions; however, the 20-year amortized construction-related GHG emissions have been accounted for in the operational emissions analysis discussed below.

Table 4.7-2: Proposed Project Construction-Related GHG Emissions

Construction Year	GHG Emissions (Metric Tons/Year)
	CO ₂ e
2022	868
2023	6,940
2024	2,499
Total	10,307
Yearly Average Construction Emissions (Averaged over 20 years)	515

Source: RCH Group, 2022 (see Appendix B)

Project-Related Operational Emissions

GHG emissions created from the operation of the Proposed Project are shown in Table 4.7-3.

Table 4.7-3: Proposed Project Operations-Related GHG Emissions

Emissions Sources	GHG Emissions (Metric Tons/Year)
	CO ₂ e
Hell's Kitchen PowerCo1	
Employee vehicles	202
Haul trucks	5
Vendor vehicles	7
Onsite equipment	66
Area sources	<1
Energy sources (avoided)	-37,103
Cooling towers	—
Standby/Black start diesel generator testing	106
Standby diesel generator testing	134
Standby fire pumps testing	13
Standby/black start diesel generator operation	1,270
Subtotal Hell's Kitchen PowerCo 1	-35,300
Hell's Kitchen LithiumCo1	
Employee Vehicles	826

Emissions Sources	GHG Emissions (Metric Tons/Year)
	CO ₂ e
Haul Trucks	170
Onsite Equipment	63
Area Sources	<1
Cooling Towers	—
Standby diesel generator testing	28
Rock muffler	—
Material transfer and packaging	—
Subtotal Hell's Kitchen LithiumCo 1	24,865
Grand total	-10,435

Source: RCH Group, 2022 (see Appendix B)

The GHG emissions shown in Table 4.7-3 are based on the proposed design detailed in the Project Description as well as IID's adherence to the State's Renewable Portfolio Standards (RPS) that require 60 percent of electricity provided by IID to be from zero-carbon emissions sources by the year 2030. Table 4.7-3 shows that the operational GHG emissions do not exceed either the USEPA's 25,000 MTCO₂e emissions threshold or ICAPCD Rule 903 – 20,000 MTCO₂e emissions threshold, where exceedance of either threshold would require the Project to perform additional GHG emissions recordkeeping and reporting. Therefore, the Project would offset greenhouse gas emissions, and a less than significant impact would occur.

Threshold b) Conflict with an applicable plan, policy, or regulation adopted for the purpose of reducing the emissions of greenhouse gases?

The Proposed Project would not conflict with any applicable plan, policy, or regulation of an agency adopted for the purpose of reducing GHG emissions. As detailed above, neither the ICAPCD nor the County of Imperial has adopted a climate action plan; as such, the only applicable plan for reducing GHGs is the CARB's 2017 Climate Change Scoping Plan, which is discussed below.

Consistency with CARB's 2017 Scoping Plan

The Project's consistency with the list of feasible mitigation measures for individual projects provided in the CARB's 2017 Scoping Plan is shown in Table 4.7-4.

Table 4.7-4: Consistency with CARB's 2017 Scoping Plan Measures for Individual Projects

Measures from Scoping Plan	Project Consistency
Construction	
Enforce idling time restrictions for construction vehicles	Consistent. The Project Applicant will require that all off-road equipment utilized on the Project site be registered with CARB and adhere to CARB's idling limitation rules.
Require construction vehicles to operate with the highest tier engines commercially available	Consistent. The Project Applicant has committed to Project Design Features (PDFs) that require all off-road

Table 4.7-4: Consistency with CARB’s 2017 Scoping Plan Measures for Individual Projects

Measures from Scoping Plan	Project Consistency
	equipment greater than 50 horsepower to utilize Tier 4 equipment, when commercially available.
Divert and recycle construction and demolition waste, and use locally sourced building materials with a high recycled material content to the greatest extent feasible.	Consistent. The Project Applicant will require all contractors to adhere to the Title 24 Part 11 requirements that require diversion of a minimum of 65 percent of construction waste from landfills.
Minimize tree removal, and mitigate indirect GHG emissions increases that occur due to vegetation removal, loss of sequestration, and soil disturbance.	Consistent. Various vegetation communities are present on the Project site; however, implementation of the Project would result in landscaping that would minimize vegetation loss to the Project site.
Utilize existing grid power for electric energy rather than operating temporary gasoline/diesel powered generators.	Consistent. The Project site currently does not have electrical service, but the Project would create a new power source to power the mineral extraction activities. Any excess power would be sold off.
Increase use of electric and renewable fuel powered construction equipment and require renewable diesel fuel where commercially available.	Consistent. The Project Applicant has committed to PDFs that encourage the use of alternative-fueled construction equipment.
Require diesel equipment fleets to be lower emitting than any current emission standard.	Consistent. The Project Applicant has committed to PDFs that encourage the use of alternative-fueled, lower emitting construction equipment.
Operation	
Comply with lead agency’s standards for mitigating transportation impacts under SB 743	Consistent. The Project Applicant has committed to PDFs that require charging stations for electric vehicles and providing onsite eating opportunities, which conform with the goals of SB 743. Additionally, the Project would utilize electric trucks, when appropriately available, for material movement for the transportation of mining materials.
Require on-site EV charging capabilities for parking spaces serving the project to meet jurisdiction-wide EV proliferation goals.	Consistent. The Proposed Project will be required to meet the Title 24 Part 11 requirements with regard to onsite electric vehicle parking and charging stations.
Allow for new construction to install fewer on-site parking spaces than required by local municipal building code, if appropriate.	Consistent. The Project Applicant will review the parking provided to determine if reducing the number of parking spaces provided is possible.
Dedicate on-site parking for shared vehicles.	Consistent. The Proposed Project will be required to meet the Title 24 Part 11 requirements with regard to dedicated spaces for carpools and clean air vehicles.
Provide adequate, safe, convenient, and secure on-site bicycle parking storage in multi-family residential projects and in non-residential projects.	Consistent. Since there is very limited housing and no commercial uses located within bike riding distance of the Project site, the Project Applicant has committed to PDFs that require providing charging stations for electric vehicles.
Provide on- and off-site safety improvements for bike, pedestrian, and transit connections, and/or implement relevant improvements identified in an applicable bicycle and/or pedestrian master plan.	Inconsistent. The Proposed Project will not include pedestrian and bicycle pathways on site that connect to the offsite roads, due to the distance from the nearest community centers located in Niland.

Table 4.7-4: Consistency with CARB’s 2017 Scoping Plan Measures for Individual Projects

Measures from Scoping Plan	Project Consistency
Require on-site renewable energy generation.	Consistent. The Proposed Project will be designed to meet Title 24 part 6 requirements that any industrial structure constructed be designed to be solar ready, which requires that all roofs be designed to structurally support solar PV panels as well as the installation of conduit from the main panel to the roof for future PV connections. However, it should be noted that the Project would generate renewable energy that would offset Project operations.
Prohibit wood-burning fireplaces in new development, and require replacement of wood-burning fireplaces for renovations over a certain size developments.	Not applicable. The Proposed Project would not include any wood-burning fireplaces.
Require cool roofs and “cool parking” that promotes cool surface treatment for new parking facilities as well as existing surface lots undergoing resurfacing.	Consistent. The Proposed Project will be designed to meet the CALGreen building requirements that require installation of cool roofs and cool asphalt for parking.
Require solar-ready roofs	Consistent. The Proposed Project will be designed to meet the CALGreen building requirements that require all new nonresidential structures to be designed with solar-ready roofs.
Require organic collection in new developments	Consistent. The Project Applicant will not include any landscaping as part of the Project, and no organic waste collection would be provided as part of the Project.
Require low-water landscaping in new developments. Require water efficient landscape maintenance to conserve water and reduce landscape waste.	Consistent. No landscaping is proposed as part of the Project; thus, no increase demand for water for landscaping.
Achieve Zero Net Energy performance building standards prior to dates required by the Energy Code.	Consistent. All structures would be designed to exceed Title 24 Part 6 building energy efficiency standards. Additionally, the Project would generate renewable energy in excess of what the Project operations would require.
Encourage new construction including municipal building construction, to achieve third-party green building certifications, such as the GreenPoint Rated program, LEED rating system, or Living Building Challenge.	Not applicable. The Project would not include any municipal buildings.
Require the design of bike lanes to connect to the regional bicycle network.	Inconsistent. The Proposed Project would not include onsite bikeways that connect to the offsite roads. No bikeways are located adjacent to the site, with the nearest Class II bikeway on Highway 111 and located 3.5 miles east of the Project site.
Expand urban forestry and green infrastructure in new land development.	Consistent. 10% of the developed Project site will be landscaped per County requirements..
Require preferential parking spaces for park and ride to incentive carpooling.	Consistent. The Proposed Project would be designed to meet the Title 24 Part 11 requirements that require dedicated spaces for carpools and clean air vehicles.

Table 4.7-4: Consistency with CARB’s 2017 Scoping Plan Measures for Individual Projects

Measures from Scoping Plan	Project Consistency
Require a transportation management plan for specific plans which establishes a numeric target for non-SOV travel and overall vehicle-miles traveled (VMT).	Consistent. A VMT analysis was completed for the Project, which found that the Project VMT impacts were less than significant.
Develop a rideshare program targeting commuters to major employment centers.	Not Applicable. The Proposed Project would not be considered a major employment center.
Require the design of bus stops/shelters/express lanes in new development to promote the usage of mass-transit.	Not Applicable. Currently no bus service is provided in the Project vicinity, nor is any bus service planned for the Project vicinity.
Require gas outlets in residential backyards for use with outdoor cooking appliances such as gas barbeques if natural gas service is available.	Not Applicable. No residential backyards would be a part of the Proposed Project.
Require the installation of electrical outlets on the exterior walls of both the front and back of residences to promote the use of electric landscape maintenance equipment	Not Applicable. No residential homes would be a part of the Proposed Project.
Require the design of the electric outlets and/or wiring in new residential unit garages to promote electric vehicle usage.	Not Applicable. No residential homes would be a part of the Proposed Project.
Require electric vehicle charging station and signage for non-residential developments.	Consistent. The Proposed Project will be designed to meet the Title 24 Part 11 requirements that require the installation electric vehicle charging stations.
Provide electric outlets to promote the use of electric landscape equipment to the extent feasible on parks and public/quasi-public lands.	Consistent. The Proposed Project will be designed to meet the CALGreen building requirements that require installation of outdoor outlets on nonresidential structures.
Require each residential unit to be “solar ready,” including installing the appropriate hardware and proper structural engineering.	Not Applicable. No residential homes would be a part of the Proposed Project.
Require the installation of energy conservation appliances such as on-demand tank-less water heaters and whole-house fans.	Not Applicable. These energy conservation appliances are for residential uses and would not operate efficiently in industrial buildings.
Require each residential and commercial building equip buildings with energy efficient AC units and heating systems with programmable thermostats/timers.	Consistent. The Proposed Project will be designed to meet the CALGreen building requirements that require installation of programmable thermostats.
Require large-scale residential developments and commercial buildings to report energy use, and set specific targets for per-capita energy use.	Not Applicable. The Proposed Project consists of an industrial project, which is neither a residential nor a commercial use.
Require each residential and commercial building to utilize low flow water fixtures such as low flow toilets and faucets.	Consistent. The Proposed Project will be designed to meet the CALGreen building requirements that require installation of low-flow water fixtures.
Require the use of energy-efficient lighting for all street, parking, and area lighting	Consistent. The Proposed Project will be designed to meet the CALGreen building requirements that require installation of energy-efficient lighting.
Require the landscaping design for parking lots to utilize tree cover and compost/mulch.	Consistent. All parking lots will be designed to meet County standards and will include landscaping.

Table 4.7-4: Consistency with CARB’s 2017 Scoping Plan Measures for Individual Projects

Measures from Scoping Plan	Project Consistency
Incorporate water retention in the design of parking lots and landscaping, including using compost/mulch.	Consistent. All parking lots and other improvements included in the Proposed Project will be required to meet the water-retention requirements detailed in the WQMP.
Require the development project to propose an off-site mitigation project which should generate carbon credits equivalent to the anticipated GHG emission reductions.	Not Applicable. The GHG emissions calculations for the Proposed Project that are provided above did not find an exceedance of the applicable GHG emissions thresholds; and, therefore, no offsite mitigation is needed or required.
Require the project to purchase carbon credits from the CAPCOA GHG Reduction Exchange Program, American Carbon Registry (ACR), Climate Action Reserve (CAR) or other similar carbon credit registry determined to be acceptable by the local air district.	Not Applicable. The GHG emissions calculations for the Proposed Project that are provided above did not find an exceedance of the applicable GHG emissions thresholds; and, therefore, no offsite mitigation is needed or required.
Encourage the applicant to consider generating or purchasing local and California-only carbon credits as the preferred mechanism to implement its off-site mitigation measure for GHG emissions and that will facilitate the State’s efforts in achieving the GHG emission reduction goal.	Not Applicable. The GHG emissions calculations for the Proposed Project that are provided above did not find an exceedance of the applicable GHG emissions thresholds; and, therefore, no offsite mitigation is needed or required.

Source: CARB 2017

Notes: CAPCOA: California Air Pollution Control Officers Association; GHG: greenhouse gas; LEED: Leadership in Energy and Environmental Design; PV: photovoltaic; VMT: Vehicle Miles Traveled; WQMP: Water Quality Management Plan

As shown in Table 4.7-4, with implementation of the Project Design Features committed to by the Project applicant and Statewide regulatory requirements including the CALGreen building standards, the Proposed Project would be consistent with all feasible mitigation measure for individual projects provided in the CARB’s 2017 Scoping Plan. Therefore, implementation of the Proposed Project would not conflict with any applicable plan that reduces GHG emissions. Impacts would be less than significant.

4.7.6 Cumulative Impacts

Cumulative impacts are defined in CEQA as “two or more individual effects which, when considered together, are considerable or which compound or increase other environmental impacts” (CEQA Guidelines Section 15355). Stated in another way, “a cumulative impact consists of an impact which is created as a result of the combination of the project evaluated in the EIR together with other projects causing relating impacts” (CEQA Guidelines Section 15130 [a][1]).

The California Air Pollution Control Officers Association’s (CAPCOA’s) *CEQA and Climate Change Report* states, “GHG impacts are exclusively cumulative impacts; there are no non-cumulative GHG emission impacts from a climate change perspective” (CAPCOA 2008). Because the magnitude of global GHG emissions is extremely large compared with the emissions of typical development projects, it is accepted as very unlikely that any individual development project would have GHG emissions of a magnitude to directly impact global climate change. As detailed above, the GHG emissions created from the Proposed

Project would not exceed either the USEPA's 25,000-MTCO₂e emissions threshold or ICAPCD Rule 903 – 20,000 MTCO₂e emissions threshold and would be consistent with all applicable plans for reducing GHG emissions. Additionally, the Project would provide a net benefit and help reduce overall GHG emissions. Cumulative impacts would be less than significant.

4.7.7 Mitigation Measures

No mitigation measures would be required.

4.7.8 Level of Significance After Mitigation

Impacts related to GHGs would be less than significant. No mitigation measures would be required.

4.8 HAZARDS AND HAZARDOUS MATERIALS

This section discusses the potential hazards and hazardous materials impacts that would occur in association with implementation of the Proposed Project. The discussion focuses on hazardous materials and hazards requiring remediation or mechanisms to prevent accidental release. Measures are identified to reduce or avoid adverse impacts anticipated from construction, operation, and decommissioning of the Project.

Information contained in this section is summarized from the *Phase I ESA Report Proposed CTR Development Area NWC Davis Road and Alcott Road Calipatria, California* (Phase I ESA [Environmental Site Assessment]), prepared by GS Lyon Consultants, Inc. (GS Lyon) in August 2021, included as Appendix G of this EIR. Phase I ESAs are location dependent and describe the existing potential hazards on a site. Therefore, the contents of the Phase I ESA are applicable to the Proposed Project.

4.8.1 Existing Environmental Setting

Regional Setting

The Project is located in the unincorporated portion of Imperial County (County), which is in the southeasternmost portion of the State of California. The County encompasses an approximately 4,597-square-mile area and is bordered by Riverside County to the north, the State of Arizona on the east, Mexico to the south, and San Diego County to the west.

According to the County's General Plan, contributors to the potential for a hazardous material accident to occur in Imperial County include the agricultural economy, proliferation of fuel tanks and transmission facilities, the intricate canal system, and the confluence of major surface arteries and rail systems. The potential for an accident is increased in regions near roadways that are frequently used for transporting hazardous material and in regions with agricultural or industrial facilities that use, store, handle, or dispose of hazardous material (County 1997a).

Project Site

The Project site is located 6 miles northwest of Calipatria. The Project site is located on Assessor's Parcels 020-010-012 and 020-010-013, on the west side of David Road between Pound and Noffsinger Roads. The properties, approximately 640 acres in total, consists of vacant land, with the Hell's Kitchen geothermal well pad located on the eastern boundary of the Project site at the northwest corner of Davis and Alcott Roads. The generation interconnect (gen-tie) route transits three parcels along the east side of Davis Road and the north side of McDonald Road.

Review of aerial photographs from 1937 and 1949 show the Project site as being vacant land with natural washes and earthen canal laterals, as well as field roads at boundaries and across the middle of the site. The 1976, 1984, 1992, 1996, 2002, 2006, 2009, 2012 and 2016 aerial photographs are similar, with the Salton Sea shoreline moving in and out within the subject property, creating wetlands and inland ponds during years that the shoreline receded. Adjacent and nearby properties show previous agricultural fields and an abandoned warm-water spa and dry-ice plant southeast of the Project site at the southeast corner of Davis Road and Pound Road. Old carbon dioxide wells are visible in these photographs. The wells have been abandoned and are visible currently as mud pots, pools, and dried craters. A former State 2-14 geothermal test facility was located about 230 feet west of Davis Road (Appendix G).

Federal and State Database Review

Various hazardous materials sites were reviewed as part of the Phase I ESA to determine whether any government-regulated properties with known environmental conditions and potential environmental concerns are located near the Project site.

The primary reason for defining potentially hazardous sites is to protect health and safety and to minimize the public's exposure to hazardous materials during Project construction and waste handling. Exposure can occur during normal use, handling, storage, transportation, and disposal of hazardous materials. Exposure may also occur due to hazardous compounds existing in the environment, such as fuels in underground storage tanks, pipelines, or areas where chemicals have leaked into the soil or groundwater. If encountered, contaminated soil may qualify as hazardous waste, thus requiring handling and disposal according to local, State, and federal regulations. EnviroStor, which is administered by the Department of Toxic Substances Control (DTSC), provides existing information on permits and corrective action at hazardous waste facilities, as well as site cleanup projects. GeoTracker is a geographic information system (GIS) maintained by the California State Water Resources Control Board (SWRCB) that provides online access to environmental data. GeoTracker tracks regulatory data about underground fuel tanks, fuel pipelines, and public drinking water supplies. Site information from the Spills, Leaks, Investigations, and Cleanups (SLIC) Program is also included in GeoTracker. A review of EnviroStor and GeoTracker found no reported cases or risk sites within one-half mile of the Project.

The U.S. Environmental Protection Agency's (USEPA) Superfund Sites National Priorities List provides geographic information, such as locations of federal Superfund sites and other hazardous materials sites. Review of the maps indicate that no designated Superfund or hazardous material sites are within one mile of the Project site (USEPA 2023).

According to the California Department of Conservation Geologic Energy Management Division's (CalGEM) Well Finder database, no oil or gas wells are located on the Project site.

The California Environmental Protection Agency (CalEPA) Regulated Site Portal is a website that combines data about environmentally regulated sites and facilities in California into a single, searchable database and interactive map. The portal was created to provide a more holistic view of regulated activities statewide. The portal combines information from the following databases: Division of Occupational Safety and Health (DOSH), better known as Cal/OSHA; California Environmental Reporting System; California Integrated Water Quality System; USEPA's Air Emission Inventory System; EnviroStor; GeoTracker; Stormwater Multiple Application and Report Tracking System; Solid Waste Information System; and Toxics Release Inventory. Results of the query show one risk site listed (Hell's Kitchen Exploratory Well 1 for a Storm Water Application and Report Tracking System); and two risk sites are listed for Hudson Ranch 1, the location where the gen-tie line ends.

The Unified Hazardous Waste and Hazardous Materials Management Regulatory Program (Unified Program) consolidates, coordinates, and makes consistent the administrative requirements, permits, inspections, and enforcement activities of six environmental and emergency response programs. CalEPA and other State agencies set the standards for their programs while local governments implement the standards—these local implementing agencies are called Certified Unified Program Agencies (CUPA). CUPA records were reached and indicated that records are filed per address; with no known address associated with the subject property, no records were found.

Sanborn Fire Insurance Maps are large-scale maps depicting the commercial, industrial, and residential sections of various cities across the United States. Given that the primary use of the fire insurance maps, which were published in the 19th and 20th centuries, was to assess the buildings that were being insured, the existence and location of fuel storage tanks, flammable or other potentially toxic substances, and the nature of businesses are often shown on these maps. Due to the rural, undeveloped nature of the Project area for the years the insurance maps were available, no maps are available for the subject property.

Sensitive Receptors

Sensitive receptors that may be susceptible to health and safety impacts resulting from the construction and operation of renewable energy facilities generally include on-site workers and the young and elderly sectors of the population.

The Town of Niland is approximately 3.6 miles east of the Project site. The nearest residence is approximately 0.5 mile east of the Project site, along Pound Road. The closest school is the Grace Smith Elementary School, which is located approximately 3.6 miles to the east.

Phase I ESA Report

As previously mentioned, a Phase I ESA for the HR1 Facility was prepared (Appendix G). The footprint of the existing CTR facility, located at 409 West McDonald Road, encompasses some of the Project site and the land directly adjacent to the Project site, as it relates to the potential gen-tie alignment.

The purpose of the Phase I ESA is to identify, to the extent feasible, recognized environmental conditions (RECs) associated with past and present activities on the subject property or in the immediate subject property vicinity in general conformance to ASTM Standard E1527-13, Standard Practice for Environmental Site Assessments: Phase I Environmental Site Assessment Process, that may affect future uses of the subject property. The term "REC" includes hazardous substances and petroleum products even under conditions that might be in compliance with laws. The term is not intended to include de minimis conditions, which refers to a condition that generally does not present a threat to human health and/or the environment and that generally would not be subject to an enforcement action if brought to the attention of appropriate governmental agencies (Appendix G).

The Phase I ESA included results of a site reconnaissance to identify current conditions of the Project site parcels and adjoining properties; a review of various readily available federal, State, and local government agency records; and review of available historical site and site vicinity information.

Site Observations

Hazardous Substances and Petroleum Products

No operations that use, treat, store, dispose of, or generate hazardous materials or petroleum products were observed on the subject property.

Storage Tanks

No obvious visual evidence indicating the current presence of underground storage tanks (i.e., vent pipes, fill ports, etc.) was noted.

No obvious visual evidence indicating the historical presence of aboveground storage tanks (i.e., secondary containments, concrete saddles, etc.) was observed.

Odors

No obvious strong, pungent, or noxious odors were noted during the site reconnaissance.

Pools of Liquid

The only pools of liquid observed during the site reconnaissance were the wetlands/ponds and mud pots.

Drums and Containers

No observation of drums or storage containers on the subject property.

Unidentified Substance Containers

No observed open or damaged containers containing unidentified substances at the subject property.

Suspect Polychlorinated Biphenyl (PCB) Containing Equipment

No potential PCB-containing equipment, such as electrical transformers, capacitors, and hydraulic equipment, were observed during the site reconnaissance on the subject property or immediate vicinity.

Interior Observations

The subject property is vacant and has no structures. No heating/cooling conduits, stains or corrosion, or drains and sumps were found.

Exterior Observations

Pits, Ponds, and Lagoons

The subject property does not contain any man-made fire-ponds, lagoons or pits. Geological features such as a mud pot associated with the geothermal activity of the region was observed in the southeast corner of the subject property. Stained Soils or Pavement

No evidence of significantly stained soil or pavement was noted on the subject property.

Stressed Vegetation

No evidence of stressed vegetation attributed to potential contamination was noted on the subject property other than areas that had salt crust along the old Salton Sea shoreline along the east side of the subject property.

Solid Waste

No dumpsters or solid waste containers exist on the subject property. There were small quantities of shoreline debris along the west side of Davis Road within the north side of the subject property.

Wastewater

No wastewater is found on the subject property other than stormwater that flows into the wetlands/ponds on the west side of the parcels.

Wells

No evidence of wells (dry wells, drinking water, observation wells, groundwater monitoring wells, irrigation wells) was noted on the subject property. Abandoned carbon dioxide wells and geothermal exploratory wells were noted on the subject property and gen-tie route.

Septic Systems

Septic systems may be present on the subject property (gen-tie route) at the old dry-ice facility. The presence of a septic system associated with the dry-ice and spa buildings is anticipated, but their usage for residential-commercial operations only requires no further investigation.

Non-Scope Issues

Asbestos-Containing Building Materials

There is a potential for asbestos-containing materials existing at the north 10-acre parcel of the gen-tie route, where the abandoned dry-ice facility and warm-water spa are, due to the age of the building.

The Phase I ESA did not include interior reconnaissance of the abandoned buildings; however, if building demolition is required for site redevelopment, an asbestos inspection is recommended.

Lead-Based Paint

The potential exists for lead-based paint at the north end of the gen-tie route where the abandoned warm-water spa and dry-ice structures are located.

The Phase I ESA did not include evaluation for lead-based paints within the abandoned buildings; however, if building demolition is proposed as part of the redevelopment of the property construction debris should be analyzed and discarded appropriately based on the results. No further investigation is recommended.

Radon

Radon gas is not believed to present a hazard on site because the property is located in Zone 3 of the EPA Radon Zone Map. This zone is characterized on average as having less than 2 picocuries per liter in basement air. Proposed redevelopment is also projected to have slab on grade infrastructure and therefore there is no potential for vapor intrusion. No further action is warranted. *Wetlands*

Wetlands are located within one mile of the subject property and consist of duck habitat ponds (for recreational hunting) and the Salton Sea, a migratory bird flyaway. Refer to Section 4.3: Biological Resources for further discussion.

Agricultural Use

Based on review of environmental records, historical documents, and property conditions, no agricultural uses occur on the Project site, but it contains agricultural tailwater runoff from the IID's drains that flow into the Salton Sea and the subject property. Pesticides may be present in near-surface soils in limited concentrations. The concentrations of these pesticides found on other Imperial Valley agricultural sites are typically less than 25% of the current regulatory threshold limits and, at those levels, are not considered a significant environmental hazard.

4.8.2 Regulatory Setting

Federal

Resource Conservation and Recovery Act

The Resource Conservation and Recovery Act (RCRA) grants authority to the USEPA to control hazardous waste from start to finish. This covers the production, transportation, treatment, storage, and disposal of hazardous waste. The RCRA also sets forth a framework for the management of nonhazardous solid waste. The 1986 amendments to the RCRA enabled the USEPA to address environmental problems that could result from underground tanks storing petroleum and other hazardous substances.

Hazardous Materials Transport Regulations

The U.S. Department of Transportation (USDOT) regulates transportation of hazardous materials between states. The USDOT Federal Railroad Administration enforces the hazardous materials regulations, which are promulgated by the Pipeline and Hazardous Materials Safety Administration for rail transportation. These regulations include requirements that railroads and other transporters of hazardous materials, as well as shippers, have and adhere to security plans and also train employees involved in offering, accepting, or transporting hazardous materials on both safety and security matters. Additionally, the Federal Hazardous Materials Transportation Law is enforced by the USDOT's Federal Highway Administration with the purpose of protecting risks to life, property, and the environment resulting from the transportation of hazardous materials.

National Pollutant Discharge Elimination System

The National Pollutant Discharge Elimination System (NPDES) is a program created to implement the Clean Water Act. The SWRCB and the nine regional water boards administer NPDES to regulate and monitor discharged waters and to ensure they meet water quality standards.

Occupational Safety and Health Act (OSHA)

Congress passed the Occupational Safety and Health Act (OSHA) to ensure safe and healthful working conditions for workers. OSHA assists states with ensuring these conditions and provides research, information, education, and training in the field of occupational safety and health. The Project would be subject to OSHA requirements during construction, operation, and maintenance.

State

Title 22 of the California Code of Regulations

Hazardous Materials Defined

A material is considered hazardous if it appears on a list of hazardous materials prepared by a federal, state, or local agency or if it has characteristics defined as hazardous by such an agency. According to Title 22, Section 66260.10 of the CCR, a hazardous material is defined as:

A substance or combination of substances which, because of its quantity, concentration, or physical, chemical or infectious characteristics, may either (1) cause, or significantly contribute to an increase in mortality or an increase in serious irreversible, or incapacitating reversible, illness; or, (2) pose a substantial present or potential hazard to human health or environment when improperly treated, stored, transported or disposed of or otherwise managed.

Chemical and physical properties that cause a substance to be considered hazardous include the properties of toxicity, ignitability, corrosivity, and reactivity (Title 22, Sections 66261.20 through 66261.24). Factors that influence the health effects of exposure to hazardous materials include dosage, frequency, the exposure pathway, and individual susceptibility. The Proposed Project would require use of small amounts of hazardous materials (such as diesel fuel, oil, and grease for heavy equipment) during construction, operation, and reclamation.

California Environmental Protection Agency

CalEPA and the SWRCB establish rules governing the use of hazardous materials and the management of hazardous waste. Applicable State and local laws include the following:

- Public Safety/Fire Regulation/Building Codes
- Hazardous Waste Control Law
- Hazardous Substances Information and Training Act
- Air Toxics Hot Spots and Emissions Inventory Law
- Underground Storage of Hazardous Substances Act
- Porter-Cologne Water Quality Control Act

Small quantities of hazardous materials will be used and stored on-site for miscellaneous, general maintenance activities that would be subject to State and local laws.

California/Occupational Safety and Health Act (OSHA)

Cal/OSHA protects workers from health and safety hazards on the job in almost every workplace in California through its research and standards, enforcement, and consultation programs.

Hazardous Materials Management Plans

In January 1996, CalEPA adopted regulations implementing a Unified Hazardous Waste and Hazardous Materials Management Regulatory Program (Unified Program). The six program elements of the Unified Program are hazardous waste generators and hazardous waste on-site treatment, underground storage

tanks, aboveground storage tanks, hazardous material release response plans and inventories, risk management and prevention program, and Uniform Fire Code hazardous materials management plans and inventories. The program is implemented at the local level by a local agency—the Certified Unified Program Agency (CUPA). The CUPA is responsible for consolidating the administration of the six program elements within its jurisdiction.

State and federal laws require detailed planning to ensure that hazardous materials are properly handled, used, stored, and disposed of, and, in the event that such materials are accidentally released, to prevent or to mitigate injury to health or the environment.

Hazardous Materials Disclosure Program

The Hazardous Materials Disclosure Program is found within the provisions of the California Health and Safety Code, Division 20, Chapter 6.95, Article 1. CUPAs are required to implement this Hazardous Materials Disclosure Program by reporting and disclosing the storage, use, or handling of hazardous materials on a site as a strategic measure to minimize loss of life and property. In addition, Hazardous Materials Business Plans must be submitted by all businesses that handle more than a threshold quantity of hazardous materials.

California Accidental Release Prevention Program

The California Accidental Release Prevention Program (CalARP) is found within the provisions of the California Health and Safety Code, Division 2, Chapter 4.5. CalARP is implemented at the local level by CUPAs as a strategy to minimize the accidental releases of stationary substances that can cause harm to the general public and the environment. Businesses are required to develop risk management plans if more than a threshold quantity of regulated substances is handled.

California Hazardous Materials Release Response Plans and Inventory Law

The California Hazardous Materials Release Response Plans and Inventory Law of 1985 (Business Plan Act) requires hazardous materials business plans to be prepared and inventories of hazardous materials to be disclosed. A business plan includes an inventory of the hazardous materials handled, facility floor plans showing where hazardous materials are stored, an emergency response plan, and provisions for employee safety and emergency response training (Health and Safety Code, Division 20, Chapter 6.95, Article 1.).

Department of Toxic Substances Control

The DTSC has primary regulatory responsibility for the management of hazardous materials and the generation, transport, and disposal of hazardous waste under the authority of the Hazardous Waste Control Law. Enforcement is delegated to local jurisdictions that enter into agreements with the DTSC.

California's Secretary of Environmental Protection established a unified hazardous waste and hazardous materials management regulatory program as required by Health and Safety Code Chapter 6.11. The Unified Program consolidates, coordinates, and makes consistent portions of the following six existing programs:

- Hazardous waste generations and hazardous waste on-site treatment
- Underground storage tanks
- Hazardous Material Release Response Plans and Inventories

- California Accidental Release Prevention Program
- Aboveground storage tanks (spill control and countermeasure plan only)
- Uniform Fire Code Hazardous Material Management Plans and Inventories

The statute requires all counties to apply to the CalEPA Secretary for the certification of a local CUPA. Qualified cities are also permitted to apply for certification. The local CUPA is required to consolidate, coordinate, and make consistent the administrative requirements, permits, fee structures, and inspection and enforcement activities for these six program elements within the county. Most CUPAs have been established as a function of a local environmental health or fire department.

The Office of the State Fire Marshal participates in all levels of the CUPA program including regulatory oversight, CUPA certifications, evaluations of the approved CUPAs, training, and education. The DTSC serves as the CUPA in Imperial County.

Small quantities of hazardous materials will be transported to and from the Project area and used and stored on-site for miscellaneous general operations and maintenance activities.

Government Code Section 65962.5 (Cortese List)

The provisions of Government Code Section 65962.5 are commonly referred to as the Cortese List. The Cortese List is a planning document used by State and local agencies to provide information about hazardous materials release sites. Government Code Section 65962.5 requires CalEPA to develop an updated Cortese List annually, at minimum. DTSC is responsible for a portion of the information contained in the Cortese List. Other State and local government agencies are required to provide additional hazardous material release information for the Cortese List.

California Emergency Response Plan

California has developed an emergency response plan to coordinate emergency services provided by federal, State, and local governments and private agencies. Response to hazardous material incidents is one part of this plan. The plan is managed by the Governor's Office of Emergency Services, which coordinates the responses of other agencies, including CalEPA, the California Highway Patrol (CHP) and the RWQCB.

Local

County of Imperial General Plan

Both natural and man-made hazards are addressed in the County of Imperial General Plan. The Seismic and Public Safety Element also contains a set of goals and objectives for land use planning and safety, emergency preparedness, and the control of hazardous materials. The goals and objectives, together with the implementation programs and policies, provide direction for development. Table 4.8-1 analyzes the consistency of the Project with specific policies contained in the Imperial County General Plan associated with biological resources.

Table 4.8-1: General Plan Consistency

General Plan Policies	Consistency with General Plan	Analysis
Conservation and Open Space Element		
<i>Seismic and Public Safety Element</i>		
Goal 1 – Include public health and safety considerations in land use planning.	Consistent	The Project includes health and safety measures such as lighting of the facility, fire suppression, and secondary containment that would be utilized in the event of accidental releases of hazardous and acutely hazardous materials.
Goal 2 – Minimize potential hazards to public health, safety, and welfare, and prevent the loss of life and damage to health and property resulting from both natural and human-related causes.	Consistent	See above response.
Objective 2.5 – Minimize injury, loss of life, and damage to property by implementing all state codes where applicable.	Consistent	The Project would comply with California Occupational Safety and Health Administration (Cal/OSHA) regulations and standards. These requirements address numerous worker safety issues including emergency action/evacuation, personal protective equipment, first aid, bloodborne pathogens, cranes and hoists, vehicle/traffic, and chemical exposures.
Goal 3 – Protect the public from exposure to hazardous materials and wastes.	Consistent	During construction of the Project, environmental monitoring and regular routine visual inspections of the development site would be performed in conjunction with County of Imperial Building Inspection. During operations, job hazard analyses would be prepared to identify any additional hazards associated with a job or task prior to performance. This would provide an opportunity to evaluate whether additional measures must be taken to minimize impacts from potential hazards. In addition, the Project would comply with Cal/OSHA regulations and standards. These requirements address numerous worker safety issues, including emergency action and evacuation; personal protective equipment; first aid; blood-borne pathogens; cranes and hoists; vehicles and traffic; and chemical exposures.
Objective 3.1 – Discourage the transporting of hazardous materials/waste near or through residential areas and critical facilities.	Consistent	The Project is located within an area of the County that is not close to any residences or critical facilities such as a hospital or fire station or school. An Emergency Response Plan (ERP) and Hazardous Materials Business Plan (HMBP) would be prepared and implemented. The ERP and HMBP would identify proper hazardous materials handling, use, and storage; emergency response; spill control and prevention; employee training; and reporting and recordkeeping. The ERP and HMBP would help limit risks associated with exposure to hazardous materials,

Table 4.8-1: General Plan Consistency

General Plan Policies	Consistency with General Plan	Analysis
Conservation and Open Space Element		
<i>Seismic and Public Safety Element</i>		
		with special consideration given to the residential and critical facilities in the area.
Objective 3.2 – Minimize the possibility of hazardous materials/waste spills.	Consistent	See above response for Goal 3 and Objective 3.1.
Objective 3.4 – Adopt and implement ordinances, policies, and guidelines that assure the safety of County ground and surface waters from toxic or hazardous materials and wastes.	Consistent	The Project would preserve ground- and surface water quality from hazardous materials and wastes during construction, operation, and decommissioning activities. The Project would protect water quality during construction through compliance with the NPDES General Construction Permit, Stormwater Pollution Prevention Plan, which would incorporate the requirements referenced in the State Regulatory Framework and best management practices (BMPs). The Project would be designed to include site design, source control, and treatment-control BMPs. The use of these BMPs would result in a decreased potential for stormwater pollution. It is anticipated that Project decommissioning activities would be subject to similar, or more stringent ground and surface water regulations than those currently required.

4.8.3 Thresholds of Significance

To assist in determining whether a project would have a significant effect on the environment, the County utilizes the State CEQA Guidelines Appendix G Guidelines. Appendix G states that a project may be deemed to have an impact on hazards and hazardous materials if it would:

- Threshold a) Create a significant hazard to the public or the environment through the routine transport, use, or disposal of hazardous materials?**
- Threshold b) Create a significant hazard to the public or the environment through reasonably foreseeable upset and accident conditions involving the release of hazardous materials into the environment?**
- Threshold c) Emit hazardous emissions or handle hazardous or acutely hazardous materials, substances, or waste within one-quarter mile of an existing or proposed school?**
- Threshold d) Be located on a site which is included on a list of hazardous materials sites compiled pursuant to Government Code Section 65962.5 and, as a result, create a significant hazard to the public or the environment?**

- Threshold e)** Located within an airport land use plan or, where such a plan has not been adopted, within 2 miles of a public airport or public use airport, result in a safety hazard or excessive noise for people residing or working in the project area?
- Threshold f)** Impair implementation of or physically interfere with an adopted emergency response plan or emergency evacuation plan?
- Threshold g)** Expose people or structures, either directly or indirectly, to a significant risk of loss, injury or death involving wildland fires?

Please refer to **Section 6.1: Effects Found Not to Be Significant** for an evaluation of those topics that were determined to be less than significant or have no impact and do not require further analysis in the EIR.

4.8.4 Methodology

The analysis of hazardous materials evaluates materials potentially existing on the Project site and those that would be used as part of Project construction, operations, and maintenance. Potential existing hazards were assessed based on information contained in the Phase I ESA Report (Appendix G).

As noted earlier, the purpose of the Phase I ESA was to identify, to the extent feasible, RECs associated with past and present activities on the subject property or in the immediate vicinity in general conformance to ASTM Standard E1527-13 that may affect future uses of the subject property. The assessment included reconnaissance of the Project site and adjacent properties, review of user-provided information, interviews with persons with significant knowledge of the subject property, review of a regulatory database report provided by a third-party vendor, and review of readily available historical sources, including but not limited to aerial photographs, fire insurance maps, property tax files, recorded land title records, and topographical maps.

4.8.5 Project Impact Analysis

- Threshold a)** Create a significant hazard to the public or the environment through the routine transport, use, or disposal of hazardous materials?

Hazardous materials that are expected to be used during construction and operation may include the following:

- Adhesives
- Calcium oxide
- Diesel fuel
- Hydraulic fluids
- Hydrochloric acid (32% by weight)
- Lubricants
- Manganese
- Oil
- Paint material
- Sodium hydroxide
- Sodium sulfide
- Solvents
- Transformer oil
- Unleaded gasoline

Hazardous material carriers and hazardous waste transporters are required to adhere to applicable local, State, and federal regulations regarding proper truck signage; indicating the materials being transported; carrying a shipping/waste manifest of the types and concentrations of materials being transported; and other appropriate measures. Hazardous material carriers also are responsible, from the point of origin up to the destination of the hazardous material delivery, for ensuring secure transport of their loads,

reporting spills, and initiating appropriate emergency response to releases of any transported hazardous materials. It should be noted that hydrochloric acid, sodium hydroxide, and sodium sulfide are highly reactive atmospheric vapors; however, they would be used in de minimus quantities and would be containerized to prevent fire.

Construction of the Project would require the limited transport and temporary use of materials deemed to be hazardous, including unleaded gasoline, diesel fuel, oil, lubricants (i.e., motor oil, transmission fluid, and hydraulic fluid), solvents, adhesives, and paint materials. The mineral extraction process would not generate any waste but would result in products, beyond lithium compounds, that would be sold. The geothermal plant and its mineral processing would generate waste oil, aerosol cans, filters, etc. during plant overhaul and would generate general waste and solid scale. It is anticipated that no more than 25 tons per year of nonhazardous waste and approximately 10 tons of hazardous waste would be generated; said waste would be shipped out of state for processing and disposal. Refer to Section 4.13: Utilities and Service Systems for additional discussion on waste handling.

Project operations would create new sources of particulate matter from drying, transfer, and packing lithium products; operation of the cooling tower; and maintenance, testing, and emergency operations of the diesel-engine generators. Some products may contain hazardous material that would be transported for sale, and waste would be transported to an approved hazardous waste landfill. The hazardous materials used during construction and operation of the Project would be handled, stored, and disposed in accordance with the manufacturer's standards and local, State, and federal regulations.

To prevent accidental release of hazardous materials, spill containment areas and sumps subject to spills of immiscible chemicals would be drained to a dilution water tank. Any oil contamination spills would be collected with absorbent pads and disposed of as required by law. All staff working with chemicals would be trained in proper handling and emergency response to chemical spills or accidental releases.

An ERP and HMBP would be prepared and implemented to identify proper hazardous materials handling, use, and storage, emergency response, spill control and prevention, employee training; and reporting and record keeping. This would help limit risks associated with exposure to hazardous materials, with special consideration of the residential and critical facilities in the area.

During construction and operations of the Project, hazardous materials would be transported to and from the Project site. Traffic barriers would protect piping and tanks on the site from potential traffic hazards. The Project Applicant would be required to follow all applicable federal, State, and local laws and regulations. Further, transportation would be subject to licensing and inspection by the CHP. With adherence to the regulatory measures and requirements for hazardous materials, impacts would be less than significant.

Threshold b) Create a significant hazard to the public or the environment through reasonably foreseeable upset and accident conditions involving the release of hazardous materials into the environment?

A REC refers to the presence or likely presence of any hazardous substances or petroleum products in, on, or at a property (1) due to any release to the environment; (2) under conditions indicative of a release to the environment; or (3) under conditions that pose a material threat of a future release to the environment. As noted earlier, the term includes hazardous substances and petroleum products even under conditions that might be in compliance with laws. The term is not intended to include de minimis

conditions. A de minimis condition is a condition that generally does not present a threat to human health or the environment and that generally would not be the subject of an enforcement action if brought to the attention of appropriate governmental agencies. Conditions determined to be de minimis conditions are not recognized environmental conditions or controlled recognized environmental conditions.

The Phase I ESA revealed evidence of several RECs in connection with the Project site, as detailed below:

- The potential exists for evaporite deposits located around the abandoned carbon dioxide wells and active mud pot containing potential hazardous substances. The chemical characteristics of the deposits is unknown.
- Former exploratory geothermal Imperial 1-13 well site is located approximately .5 mile southeast of the subject property. Geothermal fluids resulting from drilling operations in the area are known to contain hazardous metals. The well has been plugged and abandoned; however, the site may contain residual wastes at the well location or at the test well containment basin that has since been backfilled.
- Former State 2-14 geothermal testing facility located west of David Road and within the gen-tie route. Residual pieces of scrap metal and pond liner have been found on the former site. The records for cleanup and backfill of the test facility and basins are not complete; therefore, the site may contain additional residual wastes at the test facility location.
- Two active geothermal wells pads (HR1 Production Pad #1 and #2) with a total of three wells (13-1, 13-2, 13-3) are present at the south end of the gen-tie route. The drilling operations generate hazardous brine; therefore, these areas may contain residual wastes at the active well locations.

The Phase I ESA has revealed de minimis conditions or environmental concerns in connection with the subject property with the potential for asbestos- and/or lead-containing materials existing near the gen-tie route. This is possible due to the age of the abandoned warm-water spa and dry-ice facility structures.

Based on the assessment conducted at the Project site, further investigations may be required if the areas containing RECs cannot be avoided by future development. Therefore, for the Project to not have a significant impact to the public and environment, the Project shall comply with local, State and federal guidelines and to the Mitigation Measures HAZ-1 and HAZ-2 to ensure the any accidental releases would be mitigated to a less than significant impact.

Threshold g) Expose people or structures, either directly or indirectly, to a significant risk of loss, injury or death involving wildland fires?

The Seismic and Public Safety Element of the County General Plan states that the potential for a major fire in the unincorporated areas of the County is generally low (County 1993). According to the California Department of Forestry and Fire Protection's (CAL FIRE) Fire Hazard Severity Zone Viewer, no very high, high, or moderate fire hazard severity zones in the local or State responsibility areas are within 30 miles of the Project site (CAL FIRE 2022). Additionally, the Project will include fire suppression systems designed in accordance with federal, State, and local fire codes; occupational health and safety regulations; and other jurisdictional codes, requirements, and standard practices. Included in the fire suppression system is a 100,000 gallon aboveground water tank to be installed on-site that would as the primary water supply for the joint fire suppression system. In addition, during construction, the Project site and access road would be cleared of all vegetation, and cleared areas would be maintained throughout construction. Fire extinguishers would be available around the construction site as well.

During operations, a brush control program would be prepared and implemented on those portions of the Project site that will not be developed. The Imperial County Fire District would be consulted to review and approve all proposed fire equipment, apparatus, and related fire prevention plans. Due to compliance with the measures identified above, and the distance from an identified area of high fire hazard risk, the Project would result in a less than significant impact associated with wildfires.

4.8.6 Cumulative Impacts

Cumulative impacts are defined in CEQA as “two or more individual effects which, when considered together, are considerable or which compound or increase other environmental impacts” (CEQA Guidelines Section 15355). Stated in another way, “a cumulative impact consists of an impact which is created as a result of the combination of the project evaluated in the EIR together with other projects causing relating impacts” (CEQA Guidelines Section 15130 [a][1]).

The geographic scope of the cumulative setting for hazards and hazardous materials is a one-mile radius from the geographical center point of the Project site. One mile is the standard ASTM standard search distance for hazardous materials. This geographic scope encompasses an area larger than the Project area and provides a reasonable context wherein cumulative projects near the Proposed Project could affect hazards and hazardous materials. Based on Table 3.0-1: Related Projects in Chapter 3.0: Environmental Setting, no other projects from the cumulative projects list are within the geographic scope.

The Project would involve the storage, use, disposal, and transport of hazardous materials in various quantities during construction and operations. Accidental release of hazardous materials can be mitigated to less than significant levels through compliance with various federal, State, and local laws, regulations, and policies regarding transport, storage, and use of hazardous materials. Therefore, the Project's contribution to cumulative hazardous materials impacts is considered less than cumulatively considerable.

4.8.7 Mitigation Measures

MM HAZ-1: To avoid health risks to construction workers, the Applicant shall require the contractor to prepare and implement a site Health and Safety Plan (HSP) if areas containing hazardous materials are to be disturbed. This plan will outline measures that will be employed to protect construction workers and the public from exposure to hazardous materials during construction activities. This plan shall be prepared prior to any ground-disturbing activities and shall be reviewed and approved by the Project Applicant. Workers shall review and sign the site HSP prior to proceeding with the assigned work.

MM HAZ-2: For any gen-tie structures or other areas of project ground disturbance that are close to a REC, a Phase 2 limited soil sampling shall be conducted to determine if there are any hazardous materials present on-site. The soil sampling shall be conducted during final design and prior to construction. Soil sampling will determine the California Human Health Screening Levels (CHHSL) of the testing protocol (CAM 17 metals, a list of 17 metals found typically in hazardous materials and mining sites). The CHHSLs are a list of 54 hazardous chemicals in soil or soil gas that the California Environmental Protection Agency (CalEPA) considers to be below thresholds for risks to human health. The Imperial County Public Health Department, Division of Environmental Health (DEH) shall review the soil sampling results. If the results are above the CHHSLs, then the DEH would refer

the project to the California Department of Toxic Substances Control for proper soil handling and removal procedures.

4.8.8 Level of Significance After Mitigation

After implementation of Mitigation Measures HAZ-1 and HAZ-2, impacts related to hazards and hazardous materials would be less than significant.

4.9 HYDROLOGY AND WATER QUALITY

This section discusses the potential hydrological and water quality impacts that would occur in association with implementation of the proposed Hell's Kitchen Power Co 1 and Lithium Co 1 Project. This analysis describes the regional hydrologic setting, existing hydrology/drainage (on-site and off-site), and existing flood hazards in the Project area. Water quality is also described in terms of groundwater beneath the Project area and surface waters in the region and the Imperial Valley. Information contained in this section is from the Conceptual Hydrology Study prepared by Q3 Consulting and the Conceptual Storm Water Quality Analysis prepared by Q3 Consulting, included in Appendix H and Appendix I of this Draft Environmental Impact Report (EIR), respectively.

4.9.1 Existing Environmental Setting

Regional Setting

Imperial Valley, located in the Northern Sonoran Desert, has an arid desert climate characterized by hot, dry summers and mild winters. Clear and sunny conditions typically prevail, and frost is rare. The region receives 85 to 90 percent of possible sunshine each year, the highest in the United States. Winter temperatures are mild, rarely dropping below 32°F, but summer temperatures are very hot, with more than 100 days over 100°F each year. The remainder of the year has a relatively mild climate with temperatures averaging in the mid-70s.

Rainfall contributes around 50,000 acre-feet (AF) of effective agricultural water per inch of rain. Most rainfall occurs from November through March; however, summer storms can be significant in some years. The 30-year, 1990 to 2019, average annual air temperature was 73.6°F; and average rainfall was 2.59 inches. During this period, average annual rainfall has fluctuated, and the 10-year average temperatures have slightly increased over the 30-year average.

The Imperial Valley is bounded on the north by the south shore of the Salton Sea, on the south by the All-American Canal (AAC), on the east by the East Highline Canal, and on the west by the Westside Main Canal. The existence of most surface waters in the area is dependent primarily on the inflow of irrigation water from the Colorado River via the AAC.

The Imperial Valley lies entirely within the State's Colorado River Hydrologic Region (IWF 2012). The shallow aquifers beneath the Imperial Valley are affected by the inflow of Colorado River waters, the rate of evaporation, the depth of the agricultural tile drains beneath farmlands, and seepage from drains and rivers. The Colorado River is probably the most important source of recharge into shallow groundwater aquifers; approximately 10 percent is percolated to underlying aquifers. Canals, such as the AAC and the East Highline, contribute to recharge because they are unlined; they are sometimes up to 200 feet wide; the AAC flows across many miles of sandy terrain; and the water surface of the canals is higher than the general groundwater levels (County 1997b).

Groundwater basins within the Imperial Region include portions of the Coyote Wells Valley Basin, Borrego Valley Basin, Ocotillo-Clark Valley Basin, West Salton Sea Basin, Ogilby Valley Basin, and all of the Imperial Valley Basin, East Salton Basin, and East Amos Valley Basin, for a total of approximately 2,800 square miles (IWF 2012). The major surface water body within the region is the Salton Sea, and drainage is to the Salton Sea via the New River and Alamo River, a few direct-to-sea drains, and various washes.

Project Site

The Project is located in the Frontal Salton Sea Hydrologic Area, in the Imperial Hydrologic Unit (#1810020413). The Imperial Hydrologic Unit consists of the majority of the Imperial Valley, encompassing over 1.3 million acres of land. The watershed covers the southeast drainage area of the Salton Sea and includes vast acreages of agricultural land; towns, including Frink, Niland, Pope, and Camp Dunlap; and a large network of IID-operated canals and drains. The watershed is atypical of most watersheds in California in that it currently and historically has been shaped by man-made forces. The watershed's primary watercourses, the Alamo River and the New River, flow northwesterly, from the Mexican border toward their final destination, the Salton Sea. The Salton Sea, a 376-square-mile closed inland lake, was created in 1905 through a routing mistake and subsequent flood on the Colorado River. The sea has been fed primarily by agricultural runoff and from the New and Alamo Rivers ever since.

The IID has constructed a network of canals and drains that are located along portions of the perimeter of the Project. The canals convey water to customers, and the drains collect and convey agricultural and stormwater runoff (surface and subsurface). The Project site is served by canals that are on and adjacent to it. Except during extreme events, discharges from the site are not anticipated because all on-site stormwater runoff will be fully retained. Emergency overflows from the retention basins will discharge to the Salton Sea, just outside of the limits of the 100-year floodplain as mapped by the Federal Emergency Management Agency.

IID facilities, including the adjacent P drain, Q drain and R laterals, do not accept flows from the Project site. Existing graded berms prevent run-on from discharging into the IID facilities. These Drains discharge to the Salton Sea approximately one and one-half miles west of the Project. Pending findings during final engineering, the Project concept intends to retain the full 5 inches of stormwater runoff required by the Environmental Health Services (EHS) Department of the County of Imperial. During extreme storm events (rarer than the 100- year event), emergency overflows from the proposed on-site drainage swales could eventually reach the IID facilities.

4.9.2 Regulatory Setting

Federal

Clean Water Act

The U.S. Environmental Protection Agency (USEPA) is the lead federal agency responsible for managing water quality. The Clean Water Act (CWA) of 1972 is the primary federal law that governs and authorizes the USEPA and the states to implement activities to control water quality. The various elements of the CWA that address water quality and that are applicable to the Project are discussed below.

Under federal law, the USEPA has published water quality regulations under Volume 40 of the Code of Federal Regulations (CFR). Section 303 of the CWA requires states to adopt water quality standards for all surface waters of the United States. As defined by the CWA, water quality standards consist of two elements: (1) designated beneficial uses of the water body in question, and (2) criteria that protect the designated uses. Section 304(a) requires the USEPA to publish advisory water quality criteria that accurately reflect the latest scientific knowledge on the kind and extent of all effects on health and welfare that may be expected from the presence of pollutants in water. Where multiple uses exist, water quality

standards must protect the most sensitive use. The USEPA is the federal agency with primary authority for implementing regulations adopted under the CWA. The USEPA has delegated to the State of California the authority to implement and oversee most of the programs authorized or adopted for CWA compliance through the Porter-Cologne Water Quality Control Act of 1969 (Porter-Cologne Act), described below.

Under CWA Section 401, applicants for a federal license or permit to conduct activities that may result in the discharge of a pollutant into waters of the United States must obtain a water quality certification from the State Water Resources Control Board (SWRCB) in which the discharge would originate or, if appropriate, from the interstate water pollution control agency with jurisdiction over affected waters at the point where the discharge would originate.

CWA Section 402 establishes the National Pollution Discharge Elimination System (NPDES) permit program to control point source discharges from industrial, municipal, and other facilities if their discharges go directly to surface waters. The 1987 amendments to the CWA created a new section of the CWA devoted to regulating stormwater or nonpoint source discharges (Section 402[p]). The USEPA has granted California primacy in administering and enforcing the provisions of the CWA and the NPDES program through the SWRCB. The SWRCB is responsible for issuing both general and individual permits for discharges from certain activities. At the local and regional levels, general and individual permits are administered by Regional Water Quality Control Boards (RWQCBs).

Clean Water Act Section 303(d) Impaired Waters List

Section 303(d) of the CWA requires states to develop lists of water bodies that will not attain water quality standards after implementation of minimum required levels of treatment by point-source dischargers. Section 303(d) requires states to develop a total maximum daily load (TMDL) for each of the listed pollutants and water bodies. A TMDL is the amount of loading that the water body can receive and still be in compliance with applicable water quality objectives and applied beneficial uses. TMDLs can also act as a planning framework for reducing loadings of a specific pollutant from various sources to achieve compliance with water quality objectives. TMDLs prepared by the state must include an allocation of allowable loadings to point and nonpoint sources, with consideration of background loadings and a margin of safety. The TMDL must also include an analysis that shows links between loading reductions and the attainment of water quality objectives.

NPDES General Industrial and Construction Permits

The NPDES General Industrial Permit requirements apply to the discharge of stormwater associated with industrial sites. The permit requires implementation of management measures that will achieve the performance standard of the best available technology economically achievable and best conventional pollutant control technology. Under the statute, operators of new facilities must implement industrial best management practices (BMPs) in the project's Storm Water Pollution Prevention Plan (SWPPP) and perform monitoring of stormwater discharges and unauthorized non-stormwater discharges.

Construction activities are regulated under the NPDES General Permit for Discharges of Storm Water Runoff Associated with Construction Activity (General Construction Permit), (Order 2009-0009-DWQ as amended by Order 2010-0014-DWQ and Order 2021-0006-DWQ), which cover stormwater runoff requirements for projects where the total amount of ground disturbance during construction exceeds one acre. Coverage under a General Construction Permit requires the preparation and implementation of a

SWPPP and submittal of a Notice of Intent (NOI) to comply with the General Construction Permit. The SWPPP includes a description of BMPs to minimize the discharge of pollutants from the sites during construction. Typical BMPs include temporary soil stabilization measures (e.g., mulching and seeding); storing materials and equipment to ensure that spills or leaks cannot enter the storm drain system or stormwater; and, using filtering mechanisms at drop inlets to prevent contaminants from entering storm drains. Typical postconstruction management practices include street sweeping and cleaning stormwater drain inlet structures. The NOI includes site-specific information and the certification of compliance with the terms of the General Construction Permit.

State

Porter-Cologne Water Quality Control Act

The Porter-Cologne Water Quality Control Act, also known as the California Water Code (CWC), is California's statutory authority for the protection of water quality. Under this Act, the State must adopt water quality policies, plans, and objectives that protect the waters of the State. The Act sets forth the obligations of the SWRCB and RWQCBs pertaining to the adoption of Water Quality Control Plans and establishment of water quality objectives. Unlike the CWA, which regulates only surface water, the Porter-Cologne Act regulates both surface water and groundwater.

Regional Water Quality Control Board

The RWQCBs serve as the frontline for State and federal water pollution control efforts. It is composed of nine control boards, each including seven members. Regional boundaries are based on watersheds; and water quality requirements are based on the unique differences in climate, topography, geology, and hydrology for each watershed. Each RWQCB makes critical water quality decisions for its region, including setting standards, issuing waste discharge requirements, determining compliance with those requirements, and taking appropriate enforcement actions. The Project site is located in Region 7, the Colorado River Region.

Sustainable Groundwater Management Act

The Sustainable Groundwater Management Act (SGMA), passed in September 2014, is a comprehensive three-bill package that provides a framework for the sustainable management of groundwater supplies by local authorities. The SGMA requires the formation of local groundwater sustainability agencies (GSAs) to assess local water basin conditions and adopt locally based management plans. Local GSAs were required to be formed by June 30, 2017. The SGMA provides 20 years for GSAs to implement plans and achieve long-term groundwater sustainability and protect existing surface water and groundwater rights. The SGMA provides local GSAs the authority to (1) require registration of groundwater wells; (2) measure and manage extractions; (3) require reports and assess fees; and (4) request revisions of basin boundaries, including establishing new subbasins. Furthermore, under the SGMA, GSAs responsible for high- and medium-priority basins were required adopt groundwater sustainability plans within 5 to 7 years of 2015, depending on whether the basin is in critical overdraft. The California Department of Water Resources (DWR) has designated the Imperial Valley Basin, which the County overlies, as very low priority and not in critical overdraft (DWR 2021)

Regional and Local

Colorado River Regional Water Quality Control Board

The Colorado River Basin RWQCB has adopted the Water Quality Control Plan for the Colorado River Basin in accordance with criteria contained in the CWA, Porter-Cologne Act, and other pertinent State and federal rules and regulations. The intent of the Basin Plan is to provide definitive guidelines and give direction to the scope of Colorado River Basin RWQCB activities that will optimize the beneficial uses of the waters of the State within the Colorado River Basin by preserving and protecting the quality of these waters. The intended beneficial use of water determines the water quality objectives. For example, the quality requirements for irrigation water are different from those of drinking water. The Colorado River Basin RWQCB implements the Basin Plan by issuing and enforcing waste discharge requirements for appropriate persons and groups; these can include individuals, communities, or businesses whose waste discharges may affect water quality. These requirements can be either State Waste Discharge Requirements for discharge to land, or federally delegated NPDES permits for discharges to surface water. Discharges are required to meet water quality objectives and protect beneficial uses.

Water Quality Control Plan for the Colorado River Basin

The Water Quality Control Plan for the Colorado River Basin (or Basin Plan) prepared by the Colorado River RWQCB (Region 7) identifies beneficial uses of surface waters within the Colorado River Basin region, establishes quantitative and qualitative water quality objectives for protection of beneficial uses, and establishes policies to guide the implementation of these water quality objectives. Water bodies that have beneficial uses that may be affected by construction activity and post-construction activity include the Imperial Valley Drains (includes the Wistaria Drain and Greeson Wash), New River, and the Salton Sea.

Imperial Integrated Water Resources Management Plan

~~The Imperial Integrated Regional Water Management Plan (IRWMP) serves as the governing document for regional water planning to meet present and future water resource needs and demands by addressing such issues as additional water supply options, demand management and determination, and prioritization of uses and classes of service provided. In November 2012, the Imperial County Board of Supervisors approved the Imperial IRWMP, and the City of Imperial City Council and the IID Board of Directors approved it in December 2012. Approval by these three stakeholders meets the basic requirement of the DWR for an IRWMP. Through the IRWMP process, IID presented the regional stakeholders with options in the event long-term water supply augmentation is needed, such as water storage and banking, recycling of municipal wastewater, and desalination of brackish water.~~

County of Imperial Land Use Ordinance, Title 9

The County's Ordinance Code provides specific direction for the protection of water resources. Applicable ordinance requirements are contained in Division 10, Building, Sewer and Grading Regulations, and summarized below.

Chapter 10 – Grading Regulations. Section 91010.02 of the Ordinance Code outlines conditions required for issuance of a Grading Permit. These specific conditions include:

1. If the proposed grading, excavation, or earthwork construction is of irrigatable land, said grading will not cause said land to be unfit for agricultural use.
2. The depth of the grading, excavation, or earthwork construction will not preclude the use of drain tiles in irrigated lands.
3. The grading, excavation, or earthwork construction will not extend below the water table of the immediate area.
4. Where the transition between the grading plane and adjacent ground has a slope less than the ratio of 1.5 feet on the horizontal plane to 1 foot on the vertical plane, the plans and specifications will provide for adequate safety precautions.

Imperial Irrigation District

The IID is an irrigation district organized under the California Irrigation District Law, codified in Section 20500 et seq. of the CWC. Critical functions of IID include diversion and delivery of Colorado River water to the Imperial Valley; operation and maintenance of the drainage canals and facilities, including those in the Project area; and generation and distribution of electricity. Several policy documents govern IID operations and are summarized below:

- The Law of the River and historical Colorado River decisions, agreements, and contracts;
- The Quantification Settlement Agreement and Transfer Agreements;
- ~~The Definite Plan~~ Rules and Regulations governing the Distribution and Use of Water, now referred to as the Systems Conservation Plan, which defines the rigorous agricultural water conservation practices being implemented by growers and IID to meet the Quantification Settlement Agreement commitments;
- ~~The Equitable Distribution Plan, which defines how IID will prevent overruns and stay within the cap on the Colorado River water rights~~ The Equitable Distribution Plan manages the District's available water supply, distributing it equitably as determined by the IID Board of Directors; and,

During the development of the Imperial IRWMP, IID has adopted an Interim Water Supply Policy (IWSP) for Non-Agricultural Projects ~~from which water supplies can be contracted to serve new developments within IID's water service area~~ under which water supplies, up to 25,000 acre-feet annually, have been assessed for new non-agricultural development and may be contracted for conservation at the discretion of the IID Board. For applications processed under the IWSP, applicants shall be required to pay a processing fee and, after IID board approval of the corresponding agreement, will be required to pay a reservation fee(s) and annual water supply development fees.

Imperial County General Plan

The Water Element and the Conservation and Open Space Element of the General Plan contain goals, objectives, policies, and programs to ensure water resources are preserved and protected. Table 4.9-1 identifies the General Plan goals, objectives, policies, and programs for water quality and flood hazards that are relevant to the Project and summarizes the Project's consistency with the General Plan. While

this EIR analyzes the Project's consistency with the General Plan pursuant to CEQA Guidelines Section 15125(d), the Imperial County Board of Supervisors ultimately determines consistency with the General Plan.

Table 4.9-1 analyzes the consistency of the Project with specific policies contained in the Imperial County General Plan associated with hydrology and water quality.

Table 4.9-1: General Plan Consistency

General Plan Policies	Consistency With General Plan	Analysis
<i>Conservation and Open Space Element</i>		
Goal 1 – Environmental resources shall be conserved for future generations by minimizing environmental impacts in all land use decisions and educating the public on their value.	Consistent	The Project would implement pre- and postconstruction BMPs discussed in Appendix I to maintain water quality over the 50-year life of the Project.
Goal 6 – The County will conserve, protect, and enhance water resources in the County.	Consistent	The Project would protect water quality during construction through compliance with Imperial County design and detention requirements and the NPDES General Construction Permit, as well as preparation and implementation of a Project-specific SWPPP, which will incorporate the requirements referenced in the State Regulatory Framework, design features, and BMPs.
Objective 6.3 – Protect and improve water quality and quantity for all water bodies in Imperial County.	Consistent	The Project would protect water quality during construction through compliance with the NPDES General Construction Permit, SWPPP, and BMPs. The Project will be designed to include site-design, source-control, and treatment-control BMPs. The use of these BMPs would ensure stormwater pollution impacts would not be significant.
Program – Structural development normally shall be prohibited in the designated floodways. Only structures which comply with specific development standards should be permitted in the floodplain	Consistent	The Project does not contain a residential component, nor would it place housing or other structures within a 100-year flood hazard area.
<i>Water Element</i>		
Policy – Adoption and implementation of ordinances, policies, and guidelines which assure the safety of County ground and surface waters from toxic or hazardous materials and/or wastes.	Consistent	The Project would preserve ground- and surface water quality from hazardous materials and wastes during construction and operation activities. The Project would protect water quality during construction through compliance with the NPDES General Construction Permit; SWPPP, which will incorporate the requirements referenced in the State Regulatory Framework; and BMPs. The Project will be designed to include site-design, source-control, and treatment-control BMPs. The use of these BMPs

Table 4.9-1: General Plan Consistency

General Plan Policies	Consistency With General Plan	Analysis
		would result in a decreased potential for stormwater pollution. It is anticipated that Project decommissioning activities would be subject to similar or more stringent ground and surface water regulations than those currently required.
Program – The County of Imperial shall make every reasonable effort to limit or preclude the contamination or degradation of all groundwater and surface water resources in the County.	Consistent	The Project would preserve ground and surface water quality from hazardous materials and wastes during construction, operation, and decommissioning activities. The Proposed Project would protect water quality during construction through compliance with the NPDES General Construction Permit; SWPPP, which will incorporate the requirements referenced in the State Regulatory Framework; and BMPs. The Project will be designed to include site-design, source-control, and treatment-control BMPs. The use of these BMPs would ensure stormwater pollution impacts would not be significant. It is anticipated that Project decommissioning activities would be subject to similar or more stringent ground and surface water regulations than those currently required.
Program – All development proposals brought before the County of Imperial shall be reviewed for potential adverse effects on water quality and quantity and shall be required to implement appropriate mitigation measures for any significant impacts.	Consistent	See response above.

4.9.3 Thresholds of Significance

In order to assist in determining whether a project would have a significant effect on the environment, the County utilizes the State CEQA Guidelines Appendix G Guidelines. Appendix G states that a project may be deemed to have hydrology and water quality impacts if it would:

Threshold a) Violate any water quality standards or waste discharge requirements, or otherwise substantially degrade surface or ground water quality?

Threshold b) Substantially decrease groundwater supplies or interfere substantially with groundwater recharge such that the project may impede sustainable groundwater management of the basin?

Threshold c) Substantially alter the existing drainage pattern of the site or area, including through the alteration of the course of a stream or river or through the addition of impervious surfaces, in a manner which would:

i) result in substantial erosion or siltation on- or off-site;

ii) substantially increase the rate or amount of surface runoff in a manner which would result in flooding on- or off-site;

iii) create or contribute runoff water which would exceed the capacity of existing or planned stormwater drainage systems or provide substantial additional sources or polluted runoff; or

iv) impede or redirect flood flows?

Threshold d) In flood hazard, tsunami, or seiche zones, risk release of pollutants due to project inundation?

Threshold e) Conflict with or obstruct implementation of a water quality control plan or sustainable groundwater management plan?

Please refer to **Section 6.1: Effects Found Not to Be Significant** for an evaluation of those topics that were determined to be less than significant or have no impact and do not require further analysis in the EIR.

4.9.4 Methodology

Q3 prepared a Conceptual Hydrology Study and Conceptual Storm Water Quality Analysis for the Project in April 2022. The Conceptual Hydrology Study utilized the County's guidelines to evaluate a 100-year rainfall event on site. The Conceptual Storm Water Quality Analysis evaluated existing waters and impairments, the Colorado River Basin's Water Quality Control Plan, and the Project to evaluate if water quality impacts would occur. These reports are included in Appendix H and Appendix I of this Draft EIR, respectively.

4.9.5 Project Impact Analysis

Threshold a) Violate any water quality standards or waste discharge requirements, or otherwise substantially degrade surface or ground water quality?

Construction

Construction of the Proposed Project includes site preparation, foundation construction, construction of well pads, erection of major equipment and structures, installation of electrical systems, control systems, and startup/testing. In addition, the construction of transmission lines, utility pole pads, conductors, and associated structures will be required. Poor management of construction materials can lead to the possible exposure of potential contaminants to precipitation. When this occurs, these visible and/or nonvisible constituents become entrained in stormwater runoff. Left unintercepted or uncontrolled, the polluted runoff would otherwise freely sheet-flow from the Project to the IID Imperial Valley drains and could result in the accumulation of these pollutants in the receiving waters, which is considered a potentially significant impact. With the implementation of Mitigation Measure HWQ-1, impacts on surface water quality attributable to the Project would be reduced to a less than significant level.

During construction, the construction contractor of the Project would be required to implement various BMPs as part of MM HWQ-1 to comply with water quality standards and waste discharge requirements. Prior to the start of construction, the Applicant filed an NOI with the SWRCB to comply with the General NPDES Construction Permit and prepare a SWPPP. This plan would address pollutant source reduction and provide measures and controls necessary to mitigate potential pollutant sources during construction and operation to the maximum extent possible. With the implementation of Mitigation Measure HWQ-1, impacts on surface water quality as attributable to the Proposed Project would be reduced to a less than significant level through the inclusion of focused BMPs for the protection of surface water resources. Monitoring and contingency response measures would be included to verify compliance with water quality objectives for all surface waters crossed during construction. In addition, given that site decommissioning would result in similar activities as identified for construction, these impacts could also occur in the future during site-restoration activities.

These BMPs include but are not limited to erosion controls, sediment controls, tracking controls, non-stormwater management, materials and waste management, and good housekeeping practices. Erosion-control BMPs would be implemented to minimize soil-disturbing activities during the wet season and help prevent soil particles from detaching and being transported in stormwater runoff. Sediment-control BMPs would help intercept and filter out soil particles that have been detached and transported by the force of water. Sediment-control BMPs that could be included as part of the construction phase are silt fencing, check dams, gravel bag berms, and fiber rolls. Tracking-control BMPs would reduce tracking of sediments from construction vehicles. Materials and waste-management BMPs would be used for collecting, handling, storing, and disposing of wastes generated during construction of the Project to prevent the release of waste materials into stormwater discharges. A temporary barrier around stockpiles would be installed and a cover provided during the rainy season. Spill cleanup procedures and kits would be made readily available near hazardous materials and waste. A full list of construction-associated BMP practices is provided in Appendix I.

Operations

As runoff flows over developed surfaces, water can entrain a variety of potential pollutants, including but not limited to oil and grease, pesticides, trace metals, and nutrients. These pollutants can become suspended in runoff and carried to receiving waters. These effects are commonly referred to as non-point source water quality impacts.

Long-term operation of the HKP1 and HKL1 facilities pose a limited threat to surface water quality after the completion of construction. The Project would be subject to the County's grading regulations as specified in Section 91010.02 of the Ordinance Code. However, because the Project site is located in unincorporated Imperial County and not subject to a Municipal Separate Storm Sewer System (MS4) or NPDES General Industrial Permit, no regulatory mechanism exists to address postconstruction water quality concerns. Based on this consideration, the Proposed Project has the potential to result in both direct and indirect water quality impacts that could be significant. Implementation of Mitigation Measure HWQ-2 would require the Project to incorporate postconstruction BMPs into the Project's drainage plan. The Proposed Project will be designed to include site-design, source-control, and treatment-control BMPs as described below. The use of these BMPs would result in a decrease potential for stormwater pollution.

Site-Design BMPs. The Project will be designed to include site-design BMPs, which reduce runoff, prevent stormwater pollution associated with the Project, and conserve natural areas on-site. Table 4.9-2 lists the various site-design BMPs.

Table 4.9-2: Anticipated Project Site-Design Measures

Design Concept	Description
Stream setbacks and buffers	A perimeter berm will be incorporated to prevent off-site run-on and runoff from leaving the Project.
Soil quality improvement and maintenance	Where feasible, drainage swale with amended soil will be implemented along the north-south access road and the western boundary of the Project.
Rooftop and impervious area disconnection	Retention pond will collect all on-site stormwater runoff, including the 100-year 24-hour storm event, up to 5 inches, to meet the criteria from the EHS Department.
Vegetated swales	Where feasible, drainage swale with amended soil will be implemented along the north-south access road and the western boundary of the Project.
Rain barrels and cisterns	Retention pond will collect all on-site stormwater runoff up to 5 inches, including the 100-year, 24-hour storm event, to meet the criteria from the EHS Department.
Stream setbacks and buffers	A perimeter berm will be incorporated to prevent off-site run-on and runoff from leaving the Project.

As a regulated Project, the proposed Project will implement source control measures. These source control measures are listed in Table 4.9-3 below.

Table 4.9-3: Anticipated Source Control Measures

Source Control Measure	Project Implementation
Accidental spills or leaks	The Project will require the preparation and the implementation of a Hazardous Materials Business Plan (HMBP) in accordance with federal, State, or local requirements. Safety equipment will be provided for staff use if required during chemical containment and cleanup activities. All staff working with chemicals will be trained in proper handling and emergency response to chemical spills or accidental releases. Water hose connections will be provided near the chemical storage and feed areas, to flush spills and leaks, and absorbent materials will be stored on-site for spill cleanup.
Interior floor drains	All interior flood drains will be diverted to the brine pond.
Parking/storage areas and maintenance	All vehicles will be serviced off-site whenever possible. Any servicing performed on-site must be conducted in an area isolated from storm drain inlets or drainage ditch inlets. The area must be bermed and precluded from run-on. Any spillage must be fully contained and captured and disposed of per County of Imperial Hazardous Waste requirements.
Indoor and structural pest control	If any pesticides are required on-site, the need for pesticide use in the Project design will be reduced by:

Table 4.9-3: Anticipated Source Control Measures

Source Control Measure	Project Implementation
Landscape/outdoor pesticide use	<ul style="list-style-type: none"> • Keeping pests out of buildings using barriers, screens, and caulking • Physical pest elimination techniques, such as squashing, trapping, washing, or pruning out pests • Relying on natural enemies to eat pests • Proper use of pesticides as a last line of defense
Industrial processes	The Project will require the preparation and the implementation of a Hazardous Materials Business Plan (HMBP) in accordance with federal, State, or local requirements.
Outdoor storage of equipment or materials	Where feasible, outdoor storage will be covered and surrounded by a secondary containment area.
Vehicle and equipment cleaning	All vehicles will be serviced off-site whenever possible. Any servicing performed on-site must be conducted in an area isolated from storm drain inlets or drainage ditch inlets. The area must be bermed and precluded from run-on. Any spillage must be fully contained and captured and disposed of per County of Imperial Hazardous Waste requirements.
Vehicle and equipment repair and maintenance	
Fuel dispensing areas	
Loading docks	Material handling will be conducted in a manner as to prevent any stormwater pollution.
Fire sprinkler test water	Fire sprinkler water will be disposed of to the brine pond.
Drain or wash water from boiler drain lines, condensate drain lines, rooftop equipment, drainage sumps, and other sources	All wash water, waste-drilling mud, and drill cuttings will be stored in the lined containment basin. Upon completion of drilling activities, mud and associated drilling liquids will be allowed to evaporate. The solids will be tested for pH, oil and grease, and metals. The solids will be removed and disposed in a waste disposal facility authorized by the Regional Board to receive and dispose these materials.
Unauthorized non-stormwater discharges	Illegal dumping educational materials as well as spill response materials will be provided to employees.
Building and grounds maintenance	Materials will be disposed of in accordance with Imperial County Hazardous Material Management guidelines, and will be sent to appropriate disposal facilities. Under no circumstances shall any waste or hazardous materials be stored outside without secondary containment.

Due to the size of the Project, Postconstruction Standards from the Phase II Small MS4 Permit will be applied to the Project. The proposed Project will implement site-design BMPs, source-control measures, low-impact development (LID) BMPs, and hydromodification-management BMPs to meet the permit criteria. The Project owner will maintain all on-site site-design BMPs, source-control measures,

postconstruction BMPs, and retention basins during the lifetime of the Project. A full list of postconstruction BMPs is provided in Appendix I. With implementation of Mitigation Measures HWQ-1 and HWQ-2 impacts to water quality standards and waste discharge requirements would be less than significant.

4.9.6 Cumulative Impacts

Cumulative impacts are defined in CEQA as “two or more individual effects which, when considered together, are considerable or which compound or increase other environmental impacts” (CEQA Guidelines Section 15355). Stated in another way, “a cumulative impact consists of an impact which is created as a result of the combination of the Project evaluated in the EIR together with other projects causing relating impacts” (CEQA Guidelines Section 15130 [a][1]).

As mentioned above, the Proposed Project would not violate any water quality standards or degrade surface or groundwater quality and therefore would not cumulatively contribute to decreases in water quality. With the implementation of legally required SWRCB, RWQCB, and County policies, plans and ordinances governing land use activities that may degrade or contribute to the violation of water quality standards along with the mitigation measures, the Proposed Project, in combination with approved, proposed, and other reasonably foreseeable projects (Table 3.0-1, Chapter 3.0) in the Imperial watershed and Imperial Valley groundwater basin would not contribute to the cumulative effects of degradation of water quality. Impacts would be less than cumulatively considerable.

4.9.7 Mitigation Measures

Implementation of the following would reduce impacts to less than significant.

HWQ-1 Prepare SWPPP and Implement BMPs Prior to Construction and Site Restoration. The Project applicant or its contractor shall prepare a Storm Water Pollution Prevention Plan (SWPPP) specific to the Project and be responsible for securing coverage under the State Water Resources Control Board’s National Pollution Discharge Elimination System stormwater permit for general construction activity (Order 2009-0009-DWQ). The SWPPP shall identify specific actions and best management practices (BMPs) related to the prevention of stormwater pollution from Project-related construction sources by identifying a practical sequence for site restoration, BMP implementation, contingency measures, responsible parties, and agency contacts. The SWPPP shall reflect localized surface hydrological conditions and shall be reviewed and approved by the appropriate agency prior to commencement of work and shall be made conditions of the contract with the contractor selected to build and decommission the Project. The SWPPP shall incorporate control measures in the following categories:

- Soil stabilization and erosion control practices
- Sediment control practices
- Temporary and postconstruction on- and off-site runoff controls
- Special considerations and BMPs for water crossings and drainages
- Monitoring protocols for discharge(s) and receiving waters, with emphasis place on the following water quality objectives: dissolved oxygen, floating material, oil and grease, potential of hydrogen (pH), and turbidity

- Waste management, handling, and disposal control practices
- Corrective action and spill contingency measures
- Agency and responsible party contact information
- Training procedures that shall be used to ensure that workers are aware of permit requirements and proper installation methods for BMPs specified in the SWPPP

The SWPPP shall be prepared by a Qualified SWPPP Practitioner and/or Qualified SWPPP Developer, with BMPs selected to achieve maximum pollutant removal and representative of the best available technology that is economically achievable. Emphasis for BMPs shall be placed on controlling discharges of oxygen-depleting substances; floating material; oil and grease; acidic or caustic substances or compounds; and turbidity. BMPs for soil-stabilization, erosion-control, and sediment-control practices will also be required. Performance and effectiveness of these BMPs shall be determined either by visual means where applicable (i.e., observation of above-normal sediment release), or by actual water sampling in cases where verification of contaminant reduction or elimination, (inadvertent petroleum release) is required to determine adequacy of the measure.

HWQ-2 Incorporate Postconstruction Runoff BMPs into Project Drainage Plan. The Project Drainage Plan shall adhere to the County's Engineering Guidelines Manual, IID Draft Hydrology Manual or other recognized source with approval by the County Engineer to control and manage the on- and off-site discharge of stormwater to existing drainage systems. Infiltration basins will be integrated into the Drainage Plan to the maximum extent practical. The Drainage Plan shall provide both short and long-term drainage solutions to ensure the proper sequencing of drainage facilities and management of runoff generated from Project-related impervious surfaces as necessary.

4.9.8 Level of Significance After Mitigation

With the implementation of Mitigation Measure HWQ-1, impacts on surface water quality as attributable to the Project would be reduced to a less than significant level through the inclusion of focused BMPs for the protection of surface water resources. Monitoring and contingency response measures would be included to verify compliance with water quality objectives for all surface waters crossed during construction.

With the implementation of Mitigation Measure HWQ-2, potential water quality impacts resulting from postconstruction discharges during operation for the Project would be reduced to a less than significant level. Implementation of Mitigation Measure HWQ-2 would require the Project to incorporate postconstruction BMPs into the Project's drainage plan. The use of these BMPs would result in a decrease potential for stormwater pollution.

4.10 NOISE

This section provides information on ambient noise conditions in the vicinity of the Project and identifies potential impacts with noise as a result of the construction and operation of the Project. The Noise Assessment prepared by Ldn Consulting, Inc. in June 2022 is included in this Draft EIR as Appendix J.

The Project (Hell's Kitchen PowerCo 1 [HKP1] and Hell's Kitchen LithiumCo 1 [HKL1]) involves the development of a geothermal power plant that will produce up to 49.9 megawatts (MW) net of geothermal power. HKL1 involves development of mineral extraction and processing facilities capable of producing lithium hydroxide, silica, bulk sulfide, and polymetallic products for commercial sale. HKP1 and HKL1 (together referred to as the Project) will be constructed and operated by Hell's Kitchen PowerCo 1 LLC and Hell's Kitchen LithiumCo 1 LLC respectively, both subsidiaries of Controlled Thermal Resources (CTR) and will have shared facilities.

4.10.1 Noise Terminology

Noise Fundamentals

Noise is defined as unwanted or annoying sound that interferes with or disrupts normal activities. Exposure to high noise levels has been demonstrated to cause hearing loss. The individual human response to environmental noise is based on the sensitivity of that individual, the type of noise that occurs, and when the noise occurs.

Sound is measured on a logarithmic scale consisting of sound pressure levels; the unit of measurement is known as a decibel (dB). However, the sounds heard by humans typically consist not of a single frequency but of a broadband of frequencies having different sound pressure levels. To evaluate all the frequencies of the sound, an A-weighting is applied that reflects how the human ear responds to the different sound levels at different frequencies. The A-weighted sound level adequately describes the instantaneous noise, whereas the continuous equivalent sound level, measured as L_{eq} , represents a steady sound level containing the same total acoustical energy as the actual fluctuating sound level over a given time interval.

The U.S. Environmental Protection Agency (USEPA) has compiled data regarding the noise-generating characteristics of specific types of construction equipment. Noise levels generated by heavy construction equipment can range from 60 dBA to more than 100 dBA when measured at 50 feet. However, these noise levels diminish rapidly with distance from the construction site at a rate of approximately 6 dBA per doubling of distance. For example, a noise level of 75 dBA measured at 50 feet from the noise source to the receptor would be reduced to 69 dBA at 100 feet from the source to the receptor and reduced to 63 dBA at 200 feet from the source. The most effective noise reduction methods consist of controlling the noise at the source, blocking the noise transmission with barriers, or relocating the receiver. Any or all these methods may be required to reduce noise levels to an acceptable level.

4.10.2 Existing Environmental Setting

Regional Setting

The Project is in the County of Imperial (County), which is situated in the southeasternmost portion of the State of California. The County encompasses an approximately 4,597-square-mile area and is bordered by Riverside County to the north, Arizona on the east, Mexico to the south, and San Diego County to the west. Principal noise sources in Imperial County are transportation (aircraft, railway lines, and motor

vehicles), industrial (rail-switching yards, utilities, and manufacturing facilities), and agricultural operations. Existing industrial sources, including geothermal and manufacturing plants, are generally located away from concentrations of sensitive receptors in the County.

Land uses in the Imperial Valley around the Salton Sea and the Salton Sea Known Geothermal Resource Area (KGRA) reflect the development trends of the County with respect to existing agricultural uses and development of renewable energy projects. In recent years, a number of solar and geothermal energy projects have been proposed for development in the County. Approximately 12 percent (347,941 acres) of the land area in County of Imperial has been designated by the U.S. Geological Survey as a KGRA. The County of Imperial has several KGRAs.

Project Site

HKP1 and HKL1 are located approximately 3.6 miles west of the community of Niland, adjacent to Davis Road, south of Noffsinger Road, and north of Pound Road, near the eastern shore of the Salton Sea. A Project vicinity map and location map are shown in Figure 2.0-1 in Chapter 2.0: Project Description. Both facilities are located within CTR’s lease area from the Imperial Irrigation District (IID) and on lands owned by CTR. The gen-tie line will be located on the east of Davis Road and north of McDonald Road within IID’s transmission line right-of-way (ROW) and partially within the new ROW. The Project is located within Sections 11 and 12 of Township 11 South, Range 13 East, as shown on the Niland USGS 7.5’ quadrangles, San Bernardino Base Meridian.

Existing Noise Levels

The Project is surrounded by existing agricultural land uses, and the nearest urban area is the community of Niland located over 3 miles to the east. The Hudson Ranch Power Plant is located over 1 mile to the south. The nearest sensitive receiver is located 0.5 miles east along Pound Road.

In July 2011, noise levels were measured at the Sonny Bono National Wildlife Refuge, the southeast corner of the town of Niland, McDonald Road west of State Route 111, and on State Route 111 east of the Project site to obtain a baseline ambient noise level as referenced in the Hudson Ranch Power II and Simbol Calipatria II Final EIR Noise Study (Hudson Ranch Power II and Simbol Calipatria II Final EIR, 2012). According to the Final EIR, all noise level measurements were taken for a period of 15 minutes between Wednesday, July 6, for daytime and Thursday, July 7, for nighttime. The report calculated the day-night average sound level (Ldn) in dBA as shown in Table 4.10-1.

Table 4.10-1: Ambient Noise Levels

Ambient Noise Measurement	Ambient Noise Measurement Location	Time of Measurement	Noise Level (L _{dn} , dBA)
ANL-1	Sonny Bono NWR	04:08–04:23 21:03–21:18	48.5
ANL-2	State Route 111	04:47–05:02 19:03–19:18	68.1
ANL-3	Niland, CA	05:43–05:58 21:08–20:23	76.5
ANL-4	McDonald Road	05:14–05:29 19:30–19:46	58.2

Source: (Hudson Ranch Power II and Simbol Calipatria II Final EIR, 2012)	
---	--

4.10.3 Regulatory Setting

The Project would be constructed in the County of Imperial, within the state of California. The following subsections present a summary of noise-related regulatory requirements for the Project.

Federal

The adverse impact of noise was officially recognized by the federal government in the Noise Control Act of 1972, which serves three purposes:

- Promulgating noise emission standards for interstate commerce
- Assisting state and local abatement efforts
- Promoting noise education and research

The federal Office of Noise Abatement and Control (ONAC) was initially tasked with implementing the Noise Control Act. However, the ONAC has since been eliminated, leaving the development of federal noise policies and programs to other federal agencies and interagency committees. For example, the Occupational Safety and Health Administration (OSHA) agency prohibits exposure of workers to excessive sound levels. The USDOT assumed a significant role in noise control through its various operating agencies. The Federal Aviation Administration (FAA) regulates noise of aircraft and airports. Surface transportation system noise is regulated by a host of agencies, including the Federal Transit Administration (FTA). Transit noise is regulated by the federal Urban Mass Transit Administration, while freeways that are part of the interstate highway system are regulated by the Federal Highway Administration (FHWA). Finally, the federal government actively advocates that local jurisdictions use their land use regulatory authority to arrange new development in such a way that “noise sensitive” uses are either prohibited from being sited adjacent to a highway or, alternately, that the developments are planned and constructed in such a manner that potential noise impacts are minimized.

Although the Project is not under the jurisdiction of the FTA, the FTA is the only agency that has defined what constitutes a significant noise impact from implementing a project. Table 4.10-2 provides the thresholds utilized by the FTA for permanent noise level increase at the project level. As shown in the table below, the allowable cumulative noise level increase created from a project would range from 0 to 7 dBA based on the existing (ambient) noise levels in the Project vicinity. The justification for the sliding scale is that people already exposed to high levels of noise should be expected to tolerate only a small increase in the amount of noise in their community. In contrast, if the existing noise levels are quite low, it is reasonable to allow a greater change in the community noise for the equivalent difference in annoyance.

Table 4.10-2: FTA Project Effects on Cumulative Noise Exposure

Existing Noise Exposure (dBA Leq or Ldn)	Allowable Noise Impact Exposure dBA Leq or Ldn		
	Project Only	Combined	Noise Exposure Increase
45	51	52	+7
50	53	55	+5

Existing Noise Exposure (dBA Leq or Ldn)	Allowable Noise Impact Exposure dBA Leq or Ldn		
	Project Only	Combined	Noise Exposure Increase
55	55	58	+3
60	57	62	+2
65	60	66	+1
70	64	71	+1
75	65	75	0

Source: Federal Transit Administration, 2006.

State

California Department of Health Services Office of Noise Control

Established in 1973, the California Department of Health Services Office of Noise Control (ONC) was instrumental in developing regularity tools to control and abate noise for use by local agencies. One significant model is the “Land Use Compatibility for Community Noise Environments Matrix,” which allows the local jurisdiction to clearly delineate compatibility of sensitive uses with various incremental levels of noise.

California Noise Insulation Standards

Title 24, Chapter 1, Article 4 of the California Administrative Code (California Noise Insulation Standards) requires noise insulation in new hotels, motels, apartment houses, and dwellings (other than single-family detached housing) that provides an annual average noise level of no more than 45 dBA CNEL. When such structures are located within a 60-dBA CNEL (or greater) noise contour, an acoustical analysis is required to ensure that interior levels do not exceed the 45-dBA CNEL annual threshold. In addition, Title 21, Chapter 6, Article 1 of the California Administrative Code requires that all habitable rooms, hospitals, convalescent homes, and places of worship shall have an interior CNEL of 45 dB or less due to aircraft noise.

Government Code Section 65302

Government Code Section 65302 mandates that the legislative body of each county and city in California adopt a noise element as part of its comprehensive general plan. The local noise element must recognize the land use compatibility guidelines published by the State Department of Health Services. The guidelines rank noise land use compatibility in terms of normally acceptable, conditionally acceptable, normally unacceptable, and clearly unacceptable.

California Vehicle Code Section 27200-27207 – On-Road Vehicle Noise

California Vehicle Code Section 27200-27207 provides noise limits for vehicles operated in California. For vehicles over 10,000 pounds, noise is limited to 88 dB for vehicles manufactured before 1973, 86 dB for vehicles manufactured before 1975, 83 dB for vehicles manufactured before 1988, and 80 dB for vehicles manufactured after 1987. All measurements are based at 50 feet from the vehicle.

California Vehicle Code Section 38365-38380 – Off-Road Vehicle Noise

California Vehicle Code Section 38365-38380 provides noise limits for off-highway motor vehicles operated in California as follows: 92 dBA for vehicles manufactured before 1973, 88 dBA for vehicles manufactured before 1975, 86 dBA for vehicles manufactured before 1986, and 82 dBA for vehicles manufactured after December 31, 1985. All measurements are based at 50 feet from the vehicle.

Local

The Noise Element of the Imperial County General Plan provides the applicable noise standards for the Project. The Noise Element also contains plans and policies to protect the public from noise intrusion. Table 4.10-3 identifies applicable General Plan policies, goals, and objectives applicable to the Projects' consistency with the General Plan Noise Element.

Table 4.10-3: Consistency with County General Plan

Goals, Objectives, and Policies	Consistency with General Plan	Analysis
Noise Element		
Goal 1 – Provide an acceptable noise environment for existing and future residents in County of Imperial.	Consistent	The Project would provide an acceptable noise environment for future residents in the County. The nearest sensitive receiver is 0.5 miles away from the project site. Thus, the Project is consistent with this goal.
Objective 1.3 – Control noise at the source where feasible.	Consistent	The noise analysis performed for the Project determined that it would not result in excessive noise levels. County-specified noise control Measures would be implemented as needed. The Project is consistent with this objective.
Objective 1.4 – Coordinate with airport operators to ensure operations are in conformance with approved Airport Land Use Compatibility Plans.	Consistent	The Project is not located within the planning area of any Airport Land Use Compatibility Plans and is, thus, consistent with this objective. The nearest airport is Cliff Hatfield Memorial Airport which is over 8 miles southeast of the Project site.
Objective 2.2 – Provide acoustical analysis guidelines which minimize the burden on project proponents and project reviewers.	Consistent	The noise analysis performed for the Project follows all County guidelines and is therefore consistent with this objective.

Table 4.10-3: Consistency with County General Plan

Goals, Objectives, and Polices	Consistency with General Plan	Analysis
Objective 2.3 – Work with project proponents to utilize site planning, architectural design, construction, and noise barriers to reduce noise impacts as projects as proposed.	Consistent	The noise analysis performed for the Project determined that it would not result in excessive noise levels. Therefore, no noise attenuation barriers are required, the Project is consistent with this objective.
Policy 1 – Acoustical Analysis of Proposed Projects. The County shall require the analysis of proposed discretionary projects which may be impacted by excessive noise levels.	Consistent	A noise analysis for this project was performed by Ldn Consulting. The noise study found that the Project would not result in excessive noise levels. Therefore, the Project is consistent with this policy.
Policy 2 – Noise/Land Use compatibility. When acoustical analysis of a proposed project is required, the County shall identify and evaluate potential noise/land use conflicts that could result from the implementation of the Project.	Consistent	A noise analysis was performed for the Project which determined that the Project would not result in land use conflicts. Therefore, the Project is consistent with this policy.
Policy 4 – Interior Noise Environment. Where acoustical analysis of a proposed project is required, the County shall identify and evaluate projects to ensure compliance to the California (Title 24) interior noise standards and additional requirement of this Element. Prior to the issuance of a building permit, an acoustical analysis, or equivalent documentation, must be submitted that demonstrates compliance with the standard for all buildings to be in an area of exterior noise level greater than 60 dB CNEL. No formal analysis may be required if the standard can be achieved by the minimum noise reduction indicated in Table 10 of the General Plan Noise Element.	Consistent	The noise analysis performed for the Project follows all County guidelines and is therefore consistent with this policy.
Policy 5 – New Noise Generating Projects. The County shall identify and evaluate projects which have the potential to generate noise in excess of the Property Line Noise Limits. An acoustical analysis must be submitted which demonstrates the Project's compliance.	Consistent	The noise analysis performed by Ldn Consulting would be submitted to the County as part of this EIR and is therefore consistent with this policy.

Noise Impact Zone

A noise impact zone is an area that is likely to be exposed to significant noise. The County of Imperial defines a Noise Impact Zone as an area that may be exposed to noise greater than 60 dB CNEL or 75 dB Leq. The purpose of the noise impact zone is to define areas and properties where an acoustical analysis of a proposed project is required to demonstrate project compliance with land use compatibility

requirements and other applicable environmental noise standards. The County of Imperial Noise Element defines any property meeting one of the following criteria as being in a noise impact zone:

- Within the noise impact zone distances to classified roadways, as indicated in Table 4.10-4;
- Within 1,000 feet of the boundary of any railroad switching yard;
- Within the existing or projected 60-dB CNEL contour of any airport, as shown in the County of Imperial Airport Land Use Compatibility Plan (ALUCP) or an approved airport master plan which supersedes the ALUCP. Note: Land use compatibility analysis, which may include an acoustical analysis, is required for projects proposed within the “airport vicinity” of each airport, as defined on the Compatibility Maps shown in the ALUCP. This may encompass a much larger area than the 60-dB CNEL contour; and,
- Within one-quarter mile (1,320 feet) of existing farmland that is in an agricultural zone.

Table 4.10-4: Roadway Noise Impact Zones

Roadway Classification	Distance From Centerline (feet)
Interstate Highway	1,500
State Highway or Prime Arterial	1,100
Major Arterial	750
Secondary Arterial	450
Minor Collector	150

Source: General Plan County of Imperial

Construction Noise Standards

Based on the County of Imperial’s Noise Element of the General Plan, construction noise from a single piece of equipment or a combination of equipment, shall not exceed 75 dB L_{eq} , when averaged over an eight (8) hour period, and measured at the nearest sensitive receptor. This standard assumes a construction period, relative to an individual sensitive receptor of days or weeks. In cases of extended length construction times, the standard may be tightened so as not to exceed 75 dB L_{eq} when averaged over a one (1) hour period.

Construction equipment operation shall be limited to the hours of 7 a.m. to 7 p.m., Monday through Friday, and 9 a.m. to 5 p.m. Saturday. No commercial construction operations are permitted on Sunday or holidays. In cases of a person constructing or modifying a residence for himself/herself, and if the work is not being performed as a business, construction equipment operations may be performed on Sundays and holidays between the hours of 9 a.m. and 5 p.m. Such non-commercial construction activities may be further restricted where disturbing, excessive, or offensive noise causes discomfort or annoyance to reasonable persons of normal sensitivity residing in an area.

Noise Ordinance

The standards prescribed in the County Noise Element also establish that operation of construction equipment shall be limited to the hours of 7 a.m. to 7 p.m., Monday through Friday, and 9 a.m. to 5 p.m.

Saturday, unless the County Planning and Development Services Director authorizes otherwise. No commercial construction operations are permitted on Sunday or holidays.

Property Line Standards

The property line noise limits listed in Table 4.10-5 apply to noise generation from one property to an adjacent property. The standards imply the existence of a sensitive receptor on the adjacent, or receiving, property. In the absence of a sensitive receptor, an exception or variance to the standards may be appropriate. These standards do not apply to construction noise. These standards are intended to be enforced through the County's code enforcement program on the basis of complaints received from persons impacted by excessive noise. It must be acknowledged that a noise nuisance may occur even though an objective measurement with a sound level meter is not available. In such cases, the County may act to restrict disturbing, excessive, or offensive noise that causes discomfort or annoyance to reasonable persons of normal sensitivity residing in an area.

Table 4.10-5: Property Line Noise Limits

Zone	Time	Applicable Limit One-Hour Average Sound Level (DB)
Residential Zones	7:00 a.m. to 10:00 p.m.	50
	10:00 p.m. to 7:00 a.m.	45
Multi-Residential Zones	7:00 a.m. to 10:00 p.m.	55
	10:00 p.m. to 7:00 a.m.	50
Commercial Zones	7:00 a.m. to 10:00 p.m.	60
	10:00 p.m. to 7:00 a.m.	55
Light Industrial/Industrial Park Zones	Anytime	70
General Industrial Zones	Anytime	75

Source: General Plan County of Imperial

Note: When the noise-generating property and the receiving property have different uses, the more restrictive standard shall apply. When the ambient noise level is equal to or exceeds the property line noise standard, the increase of the existing or proposed noise shall not exceed 3 dB L_{eq} .

New Noise-Generating Projects

The County shall identify and evaluate projects that have the potential to generate noise in excess of the property line noise limits specified in Table 4.10-5. An acoustical analysis must be submitted that demonstrates the projects' compliance with the property line noise limits and/or required mitigation measures to reduce noise to acceptable levels. Mitigation may include a greater property line setback than required by the Land Use Ordinance, use of solid building walls without openings, noise-attenuation walls and/or landscaped earth berms, alternative construction materials or design, alternative traffic patterns, or other noise-reduction techniques.

Agricultural Noise/Right to Farm Ordinance

In recognition of the role of agriculture in the County, the Board of Supervisors has adopted a Right to Farm Ordinance (No. 1031). This ordinance requires a disclosure to owners and purchasers of property that is near agricultural lands or operations or included in an area zoned for agricultural purposes. The

disclosure advises persons that discomfort and inconvenience from machinery and aircraft noise resulting from conforming and accepted agricultural operations are a normal and necessary aspect of living in the agricultural areas of the County.

If any residential or other noise-sensitive land use is proposed within one-quarter mile (1,320 feet) of existing farmland that is in an agricultural zone, such proposed project shall be required to prepare an acoustical analysis to evaluate potential noise impacts from farm operations on the proposed project. This may include an analysis of impact of operating farm machinery or trucks hauling farm products on public roads.

County of Imperial Land Use Ordinance Drilling Standards Applicable to Geothermal Projects

The County of Imperial Land Use Ordinance includes general drilling standards specific to geothermal projects (Division 17). This ordinance requires the implementation of County-specified noise control measures, including:

1. The drilling operator shall limit drilling noise to a sound level equivalent to CNEL 60 dBA as measured at the nearest human receptor location outside the parcel boundary. This level may be exceeded by 10 percent if the noise is intermittent and during daylight hours (Land Use Ordinance 91702.01[B]).
2. Diesel equipment used for drilling within 300 feet of any residence shall have hospital-type mufflers. Well-venting and testing at these wells shall be accompanied by the use of an effective muffling device or silencer (Land Use Ordinance 91702.01[D]).
3. Heavy truck traffic, well site preparation, pipe stacking, and hydroblasting (used for descaling operations) shall be limited to the hours between 7:00 a.m. and 7:00 p.m. for any wells within 300 feet of any residence. Exceptions may be made where soundproofing is provided or during summer hours to minimize effects of heat with notice to the planning director and approval thereof (Land Use Ordinance 91702.01[I and M]).
4. Impulse noises such as sudden steam venting shall be controlled by discharge through a muffler or other sound-attenuating system, as appropriate (Land Use Ordinance 91702.01[O]).
5. Drilling may be on a 24-hour basis provided the standards above are met (Land Use Ordinance 91702.01[S]).

4.10.4 **Thresholds of Significance**

In order to assist in determining whether a project would have a significant effect on the environment, the County utilizes the State CEQA Guidelines Appendix G Guidelines. Appendix G states that a project may be deemed to have a noise impact if it would:

Threshold a) Result in generation of a substantial temporary or permanent increase in ambient noise levels in the vicinity of the project in excess of standards established in the local general plan or noise ordinance, or applicable standards of other agencies?

Threshold b) Result in generation of excessive groundborne vibration or groundborne noise levels?

Threshold c) For a project located within the vicinity of a private airstrip or an airport land use plan or, where such a plan has not been adopted, within two miles of a public airport or public us airport, expose people residing or working in the project area to excessive noise levels?

Please refer to **Section 6.1: Effects Found Not to Be Significant** for an evaluation of those topics that were determined to be less than significant or have no impact and do not require further analysis in the EIR.

4.10.5 Project Impact Analysis

Threshold a) Result in generation of a substantial temporary or permanent increase in ambient noise levels in the vicinity of the project in excess of standards established in the local general plan or noise ordinance, or applicable standards of other agencies?

The proposed Project involves the development of a geothermal power plant that will produce up to 49.9 megawatts (MW) net of geothermal power. HKL1 involves development of mineral extraction and processing facilities capable of producing lithium hydroxide, silica, polymetallic product, and possibly boron product for commercial sale. HKP1 and HKL1 (together referred to as the Project) will be constructed and operated by Hell's Kitchen PowerCo 1 LLC and Hell's Kitchen LithiumCo 1 LLC respectively, both subsidiaries of Controlled Thermal Resources (CTR) and will have shared facilities.

Onsite Noise Impacts

Construction Noise Impacts

Noise levels resulting from proposed construction activities were obtained from CTR's equipment lists and process descriptions, reports prepared by the FTA and the FHWA, satellite imagery from the site, and field data from files.

On-site noise-generating activities associated with the Hell's Kitchen Geothermal Project would include short-term construction noise, mechanical equipment noise related to geothermal drilling, installation and testing of flash power plant equipment, and associated vehicles. Well-testing and construction of the proposed power plant and interconnection line would involve the short-term use of heavy equipment. Estimations made based on the proposed equipment list result in composite noise from well pad grading of 85 dBA Leq (h) at 50 feet and 83 dBA Leq (h) for drill rig assembly, well drilling, and testing. It is expected that well drilling average noise would be 85 dBA at 50 feet.

Major noise sources during construction of the Project would include the diesel engines on the construction equipment, operation of the drilling rig, and noise associated with the movement of pipes and casing. Construction of the power plant is anticipated to last a total of 10 months and construction of the lithium plant is anticipated to last a total of 23 months. Construction noise is usually made up of intermittent noise peaks and continuous lower levels of noise from equipment cycling through use. Noise levels associated with individual pieces of equipment can generally range between 70 and 90 dBA (FTA, 2018). Based on the proposed construction equipment list and industry-wide noise reference levels, the estimated maximum composite construction noise level for the Project is 93 dBA at a distance of 50 feet

from the building, mechanical, and electrical work sites (EMA, 2012a) (FHA, 2006). Additionally, noise from trucks, commuter vehicles, and other on-road equipment, which would mainly be along streets and access roads, would produce peak levels of approximately 88 dBA at 50 feet from the source (FTA, 2018).

During a typical day, equipment would not be operated continuously at peak levels. While the average on-site noise levels could exceed the 75 dBA Leq construction noise standard established by the County for General Industrial Zones, noise would attenuate to levels below the threshold with increasing distance until it reaches the nearest sensitive receptors. To abate noise pollution, the Applicant would install mufflers on engine-driven equipment during both construction and development operations. Additionally, the Applicant would implement an exhaust emissions control program during Project construction that would include but not limited to engine maintenance, as well as procedures to minimize emissions that would assist in reducing noise. Generally, exhaust emission control programs include the minimization of unnecessary vehicle and equipment idling time either by shutting equipment off when not in use or reducing idling time. Therefore, it is anticipated that construction noise would be reduced from the estimated peak levels.

Most of the Project construction would be located within the northern half of the Project site approximately 0.75 miles or more away from the nearest residential noise receptor along Pound Road. However, portions of the site construction would be as close as 0.5 miles. Therefore, to be conservative, construction noise levels were calculated at 0.5 miles from the nearest noise-sensitive residential land use. As shown in Table 4.10-6, construction noise levels would attenuate from 93 dBA at 50 feet from the source to 58 dBA at the closest residential receptor due to geometric spreading of sound energy. Therefore, all calculated noise levels would fall within the normally acceptable range of the guidance set forth in the County of Imperial General Plan Noise Element.

Table 4.10-6: Construction Noise Levels

Sensitive Receptor	Source Level at 50 Feet (dBA)	Approximate Distance to Project Site Property Line	Noise Reduction Due to Distance (dBA)	Resultant Noise Level at Sensitive Receptor (dBA)
Residence	93	0.5 miles east	-35	58
County of Imperial Threshold				75
IMPACT?				NO

The Hell's Kitchen geothermal well drilling and some power plant construction activities would take more time than those established by the County's construction noise standards. Drilling operations would occur 24 hours a day, 7 days a week. However, the Imperial County Land Use Ordinance (Division 17) includes general drilling standards specific to geothermal projects. This ordinance allows for drilling on a 24-hour basis, provided the County-specified noise control measures (Land Use Ordinance 91702.01, Sections B, D, M, O, and S) are implemented. The Project proponent will be required to implement these measures to comply with the local applicable standards.

The Hell's Kitchen power plant construction schedule is based on a 10-hour/day, 6-days/week basis. This implies that the Project may exceed the County Noise Element's construction limits for construction on

Saturdays, when the allowed construction time is limited to 8 hours. Therefore, the Project will be required to comply with all applicable noise control measures contained in the County General Plan Noise Element and Noise Abatement and Control Ordinance. In addition, the Project will be required to comply with the standards of Division 17 (Geothermal) of the County's Land Use Ordinance, which include specific noise control measures associated with geothermal well drilling.

Based on the County of Imperial's Noise Element of the General Plan, construction noise from a single piece of equipment or a combination of equipment, shall not exceed 75 dB Leq, when averaged over an eight-hour period, and measured at the nearest sensitive receptor. This standard assumes a construction period, relative to an individual sensitive receptor of days or weeks. In cases of extended length construction times, the standard may be tightened so as not to exceed 75 dB Leq when averaged over a one -hour period. Since the nearest receptors are located over a half mile from the construction, the 75 dBA in a one-hour period is not anticipated to be exceeded, as can be seen in Table 4.10-6 above. Therefore, the Project may request to work outside the normal construction hours.

Construction Conclusions

As can be seen in Table 4.10-6, at 0.5 miles from the residential property, the point source noise attenuation from construction activities is reduced 35 dBA to a level of approximately 58 dBA. This would result in an anticipated worst-case eight-hour average combined noise level well below 75 dBA at the property line. As such, the noise levels will comply with the County of Imperial's 75 dBA standard at all Project property lines, and no impacts are anticipated.

Table 4.10-7: Construction Equipment Noise Characteristics

Equipment	Acoustical Use Factor ^a (Percent)	Maximum Sound Level at 50 Feet (dBA Lmax ^b)
Off-highway trucks (flatbed truck)	40	74.3
Rollers	20	80.0
Crawler tractor (dozer)	40	81.7
Excavators	40	80.7
Graders	40	85.0
Water trucks (dump truck)	40	76.5
Rubber-tire loaders (front-end loader)	40	79.1
Scrapers	40	83.6
Cranes	16	80.6
Generator sets	50	80.6
Forklifts	40	83.4
Tractor/Loader/Backhoe	40	84.0
Aerial lifts (man lift)	20	74.7
Welders	40	74.0
Air compressors	40	77.7
Pavers	50	77.2
Paving equipment	50	77.2

^aAcoustical use factor is the percentage of time each piece of equipment is operational during a typical workday.
^bLmax is the maximum sound level during a measurement period or a noise event.

Table 4.10-7 shows the type of mechanical equipment that will be used during construction of the Project and their associated noise levels.

Onsite Operation Noise Impacts

Potential Operational Noise Impacts

This section examines the potential stationary noise source impacts associated with the operation of the Project. Primary noise sources at the geothermal power plant would include turbine operations, cooling towers, and associated Project vehicles. Typically, the loudest components at geothermal power plant operations are the cooling tower(s) and the non-condensable gas (NCG) equipment. Operational noise levels for the geothermal plant and operating wells were obtained from the Hudson Ranch Power II and Simbol Calipatria II Noise Study (Hudson Ranch Power II and Simbol Calipatria II Final EIR, 2012). The Final EIR gathered noise level measurements from the Hudson Ranch I geothermal power plant. Operational noise measured during operation at the Hudson Ranch I geothermal power plant at a distance of 50 feet from the cooling tower resulted in a noise level of 77 dBA. Noise levels measured during operation at the Hudson Ranch I geothermal power plant at a distance of 50 feet from the NCG equipment resulted in a noise level of 78 dBA. Based on noise levels referenced during the operation of production wells 13-2 and 13-3 at the HR-1 Project, the average maximum operational noise level from production wells would be approximately 58 dBA at 50 feet.

Assuming similar noise levels for the HKP1 operations, the combined noise level for the simultaneous operation of the cooling towers and the NCG facility would be approximately 81 dBA at 50 feet. The nearest project property line is located as close as 0.5-miles from the sensitive residential receptor to the east. However, facilities at this distance include well pads and ponds that do not generate significant noise. The majority of the HKP1 operations that generate significant noise include the cooling towers located a minimum of 0.75 miles or more from the nearest residence to the southeast. This would result in a combined noise level at the closest receptor of approximately 43 dBA, which would be below the County Property Line Noise Standards. Additionally, HKP1 will be required to comply with the County Land Use Ordinance 91702.01(B), which limits drilling noise to a sound level equivalent to CNEL 60 dBA as measured at the nearest human receptor location outside the parcel boundary. This level may be exceeded by 10 percent if the noise is intermittent and during daylight hours.

Table 4.10-8 provides an estimate of the projected noise levels from HKP1 operations at the nearest sensitive receptor. As presented in the table, operating sound levels are estimated to be 43 dBA at these closest sensitive receptors.

Table 4.10-8 Operational Noise Levels

Sensitive Receptor	Source Level at 50 Feet (dBA)	Approximate Distance to Project Site Property Line	Noise Reduction Due to Distance (dBA)	Resultant Noise Level at Sensitive Receptor (dBA)
Residence	81	0.75 miles southeast	-38	43
County of Imperial Threshold				45
IMPACT?				NO

Implementation of the Project would not result in a substantial increase in ambient noise levels at off-site noise-sensitive receptors or exceed the County of Imperial Property Line Noise Standards (70 dBA anytime for Light Industrial/Industrial Park Zones) and the applicable Noise/Land Use Compatibility criteria. Based on reported noise levels from similar operations, it is anticipated that noise levels would not exceed the County property line noise limits at the closest sensitive receptors. Therefore, operational noise impacts would be less than significant.

Off-Site Roadway Noise Impacts

To determine if direct or cumulative off-site noise level increases associated with the development of the Project would create noise impacts, the traffic volumes for the existing conditions were compared with the traffic volume increase of existing plus the Project. According to the Project VMP Analysis (DKS Associates, 2021), the Project is expected to generate 432 daily trips.

The Project will be accessed from Davis Road via new ingress/egress driveways. Project traffic will access the site from Highway 111 via McDonald Road and Davis Road. The existing average daily traffic (ADT) volumes on SR 111 is several thousand ADT. Typically, a project needs to double (or add 100 percent) the traffic volumes to have a direct impact of 3 dBA CNEL or be a major contributor to the cumulative traffic

volumes. The project will add less than a 12 percent increase to SR 111 volumes. The Project will be accessed from Davis Road via new ingress/egress driveways. Project traffic will access the site from Highway 111 via McDonald Road and Davis Road. The Project has the potential to impact noise levels along these roadways; however, no sensitive uses exist along these roadway segments. Therefore, no direct or cumulative impacts are anticipated.

4.10.6 Cumulative Impacts

Cumulative impacts are defined in CEQA as “two or more individual effects which, when considered together, are considerable or which compound or increase other environmental impacts” (CEQA Guidelines Section 15355). Stated in another way, “a cumulative impact consists of an impact which is created as a result of the combination of the Project evaluated in the EIR together with other projects causing relating impacts” (CEQA Guidelines Section 15130 [a])[1]).

Due to the localized nature of noise and since the nearest sensitive receptor to the Project site is a single-family residence located .5 miles to the east of the Project site, cumulative noise impacts would be limited to offsite roadway noise impacts. The cumulative roadway noise impacts have been analyzed in the Section 4.11 of this EIR.

Cumulative Projects Operational Traffic Conditions

To determine if direct or cumulative off-site noise level increases associated with the development of the Project would create noise impacts, the traffic volumes for the existing condition were compared with the traffic volume increase of existing plus the Project. According to the Project VMP Analysis (DKS Associates, 2021), the Project is expected to generate 432 daily trips.

The Project will be accessed from Davis Road via new ingress/egress driveways. Project traffic will access the site from Highway 111 via McDonald Road and Davis Road. The existing average daily traffic (ADT) volumes on SR 111 is several thousand ADT. Typically, a project needs to double the traffic volumes to have a direct impact of 3 dBA CNEL or be a major contributor to the cumulative traffic volumes. The Project will add less than a 12 percent increase to SR 111 volumes. The Project has the potential to impact noise levels along these roadways; however, no sensitive uses exist along these roadway segments. Therefore, no direct or cumulative impacts are anticipated.

4.10.7 Mitigation Measures

Given that all Project impacts regarding noise are less than significant, no mitigation measures are required.

4.10.8 Level of Significance After Mitigation

No mitigation measures are required; impacts related to noise would remain less than significant.

4.11 TRANSPORTATION

This section discusses the potential transportation and traffic impacts that would occur in association with implementation of the proposed Hell's Kitchen PowerCo 1 and LithiumCo 1 Project. This analysis includes a discussion of the effects of Project construction and operational traffic on Highway 111, Davis Road, and McDonald Road. Information contained in this section is summarized from the *Vehicle Miles Travelled (VMT) Analysis* prepared by DKS Associates (December 3, 2021), included in Appendix K of this EIR.

4.11.1 Existing Environmental Setting

Regional Setting

The following roadway classifications are derived from the County of Imperial General Plan Circulation and Scenic Highways Element (County 2008):

Expressway

The main function of this classification is to provide regional and intracounty travel services. Features include high design standards with six travel lanes; wide, landscaped medians; highly restricted access; provisions for public transit lands, including but not limited to bus lanes, train lanes, or other mass transit type means; and no parking. Minimum right-of-way (ROW) is 210 feet and consists of three travel lanes per direction, a 56-foot median, and shoulders along both sides of the travel way. The ROW width is exclusive of necessary adjacent easements, such as for those for the Imperial Irrigation District (IID) facilities, because these vary. The minimum intersection spacing is 1 mile (ROWs may be greater if the road segment also serves as a corridor for public utilities).

Prime Arterial

The main function of this classification is to provide regional, subregional, and intracounty travel services. Features include high design standards with four to six travel lanes; raised and landscaped medians; highly restricted access, which in most cases will be a 1-mile minimum; provisions for public transit lanes, including but not limited to bus lanes, train lanes, or other mass transit type means; and no parking. The absolute minimum ROW without public transit lanes is 136 feet. ROW dimensions are specified in the standards for specific road segments.

Minor Arterial

These roadways provide intracounty and subregional service. Access and parking may be allowed but will be closely restricted to ensure proper function of this roadway. Typical standards include the provision for four and six travel lanes with raised, landscaped medians for added safety and efficiency, as well as protected left turn lanes at selected locations. Some roadways may also contain provisions for public transit lanes or other mass transit type means. Minimum ROW is 102 feet for four lanes and 126 feet for six lanes.

Major Collector (Collector)

These roadways are designed to provide intracounty travel as a link between the long-haul facilities and the collector/local facilities. This type of roadway frequently provides direct access to abutting properties, although that is not its primary purpose. Typical design features include provision for four travel lanes

without a raised median; some roadways may also contain provisions for public transit lanes or other mass transit type means. Minimum ROW is 84 feet. Parking is generally not permitted.

Minor Local Collector (Local Collector)

These roadways \ connect local streets with adjacent Collectors or the arterial street system. Design standards include provision for two travel lanes and parking, except in specific locations where parking is removed to provide a turn lane at intersections. Local Collector streets frequently provide direct access to abutting properties, although that should be avoided where feasible. Minimum ROW is 70 feet.

Residential Street

This street type includes residential cul-de-sac and loop streets and is designed to provide direct access to abutting properties and to give access from neighborhoods to the Local Street and Collector Street system. This classification should be discontinuous in alignment to discourage through trips. Typical design standards include provision for two travel lanes, parking on both sides, and direct driveway access. Minimum ROW is 60 feet.

Existing Street Network

Proposed Access Roads

State Route 111 (SR 111 or Highway 111) is classified as a State Highway/Expressway in the Imperial County General Plan Circulation Element. Highway 111 is a north–south highway connecting the three largest cities in Imperial County (Calexico, El Centro, and Brawley) and runs from Interstate 10 in Riverside County to the U.S.-Mexico border. Outside the towns of Calipatria and Niland, Highway 111 is constructed as a two-lane, undivided, north–south roadway, providing one lane of travel per direction; and the posted speed limit is 65 mph.

McDonald Road is an east–west route through Imperial County. Currently, McDonald Road is a paved two-lane roadway west of English Road, an unpaved two-lane roadway from English Road east to Highway 111, and a two-lane paved roadway east of Highway 111.

Davis Road is a north–south route through Imperial County. Davis Road starts at the western terminus of West Schrimpf Road and proceeds north toward and ultimately terminates at Highway 111. Davis Road is currently an unpaved two-lane roadway within the Project vicinity. Following construction, Davis Road is proposed to be paved from Noffsinger Road to McDonald Road.

Other Roads in Project Vicinity

Roads near the Proposed Project that are not proposed to be used for construction access or during operations include the following:

Noffsinger Road is an east–west route through Imperial County.

Alcott Road is an east–west route through Imperial County.

Pound Road is an east–west route through Imperial County. Hazard Road is currently an unpaved two-lane roadway within the Project vicinity.

Hazard Road is an east–west route through Imperial County. Hazard Road is currently an unpaved two-lane roadway within the Project vicinity.

Traffic Study Areas

The following is a list and brief description of the roadways that would be utilized for access to the Project site during construction and subsequent operational activities.

Intersections

1. Highway 111 and McDonald Road
2. McDonald Road and Davis Road

Segments

1. **Highway 111:** North and south of McDonald Road
2. **McDonald Road:** Highway 111 to Davis Road
3. **Davis Road:** McDonald Road to Project site

Project Site Access

The Project will be accessed from Davis Road via new ingress/egress driveways. Project traffic will access the site from Highway 111 via McDonald Road and Davis Road.

Project Site

The Project would be located within Imperial County (County), California, approximately 3.6 miles west from the town of Niland, which is a census-designated place. The Project would be adjacent to Davis Road and south of Noffsinger Road. The HKP1 and HKL1 shared facilities would be on three parcels (Assessor Parcel Numbers 020-010-012, 020-010-013, and 020-070-060). The gen-tie and power lines would span 13 additional parcels. The Project is in a rural area of the County, with the closest residence approximately 1 mile east of the Proposed Project site on Pound Road. Davis Road is an unpaved road that typically does not experience through traffic.

4.11.2 Regulatory Setting

State

Vehicle Miles Traveled

In accordance with Senate Bill (SB) 743 and the resulting changes to the CEQA Guidelines, local agencies may no longer use measures of vehicle delay, such as level of service (LOS), to quantify transportation impacts on the environment. LOS has been replaced by vehicle miles traveled (VMT), which is a systemic metric and a useful indicator of overall land use and transportation efficiency. The most efficient system is one that minimizes VMT by encouraging shorter vehicle trip lengths; more walking and biking; or increased carpooling and transit. VMT has been codified in the CEQA Guidelines as the most appropriate measure for measuring transportation impacts under CEQA (CEQA Section 15064.3). This change went into effect Statewide on July 1, 2020. Imperial County has not yet adopted any VMT thresholds or standards for environmental analysis of development project.

California Department of Transportation

The California Department of Transportation (Caltrans) manages more than 50,000 miles of the State's highway and freeway lanes; provides intercity rail services; permits more than 400 public-use airports and special-use hospital heliports; and works with local agencies. Specifically, Caltrans is responsible for the design, construction, maintenance, and operation of the California State Highway system. As it relates to the Proposed Project and potential construction access routes, Caltrans is responsible for maintaining and managing Highway 111.

Regional

2016–2040 Regional Transportation Plan/Sustainable Communities Strategy

On April 7, 2016, the SCAG adopted the 2016–2040 RTP/SCS (SCAG 2016). The RTP/SCS is a long-range visioning plan that balances future mobility and housing needs with economic, environmental, and public health goals. It receives input from local governments, county transportation commissions, tribal governments, nonprofit organizations, businesses, and local stakeholders within Imperial, Los Angeles, Orange, Riverside, San Bernardino, and Ventura Counties. The RTP/SCS demonstrates how the region will reduce emissions from transportation sources to comply with SB 375 and meet the National Ambient Air Quality Standards set forth by the Clean Air Act.

The updated RTP/SCS contains thousands of individual transportation projects that aim to improve the region's mobility and air quality and revitalize the economy. Following the adoption of the RTP/SCS, the county transportation commissions have identified new project priorities and have experienced technical changes that are time sensitive. Additionally, the new amendments for the plan have outlined minor modifications to project scopes, costs, and/or funding and updates to completion years. The amendments to the RTP/SCS do not change any other policies, programs, or projects in the plan.

Local

County of Imperial Circulation and Scenic Highways Element

The Circulation and Scenic Highways Element identifies the location and extent of transportation routes and facilities. It is intended to meet the transportation needs of local residents and businesses and serve as a source for regional coordination. The inclusion of Scenic Highways provides a means of protecting and enhancing scenic resources within highway corridors in Imperial County. The purpose of the Circulation and Scenic Highways Element is to provide a comprehensive document which contains the latest knowledge about the transportation needs of the County and the various modes available to meet these needs. Additionally, the purpose of this Element is to provide a means of protecting and enhancing scenic resources within both rural and urban scenic highway corridors.

Imperial County has not yet adopted any VMT thresholds or standards for environmental analysis of development project. The County does not have published significance criteria for circulation. However, the County General Plan does state that the LOS goal for intersections and roadway segments is to operate at LOS "C" or better (County 2008). Coordination across jurisdictional standards for road classification and design standards was identified as a crucial component to the 2008 update of the Circulation and Scenic Highways Element. Table ~~4.10-4~~ 4.11-1 analyzes the consistency of the Project with specific policies contained in the Imperial County General Plan associated with transportation and traffic.

Table 4.11-1: General Plan Consistency

General Plan Policies	Consistency with General Plan	Analysis
Circulation and Scenic Highways Element		
<i>Safe, Convenient, and Efficient Transportation System</i>		
Goal 1 – The County will provide and require an integrated transportation system for the safe and efficient movement of people and goods within and through the County of Imperial with minimum disruption to the environment.	Consistent	A VMT analysis was prepared for the Project by DKS Associates. The analysis estimated the Project’s daily VMT per employee using data from the California Statewide Travel Demand Model. Based on the VMT analysis, the Proposed Project represents a less than significant transportation impact and will result in minimal disruption to the environment. Therefore, the Project is consistent with this objective.
Objective 1.1 – Maintain and improve the existing road and highway network, while providing for future expansion and improvement based on travel demand and the development of alternative travel modes.	Consistent	To improve the existing road and highway network, the Applicant will upgrade Davis Road with aggregate base during construction of the HKP1 Project and construct a bridge across the R Drain to connect the northern and southern portions of the site. County road ingress/egress points will be constructed in conformance with Imperial County Public Works Department and Fire Department requirements. Road access will be restricted during construction and appropriate traffic controls will be used during construction. Davis Road will be paved from McDonald Road to Noffsinger Road at the completion of HKL1 construction. Therefore, the Project is consistent with this objective.
Objective 1.2 – Require a traffic analysis for any new development which may have a significant impact on County roads. A traffic analysis may not be necessary in every situation, such as when the size or location of the project will not have a significant impact upon and generate only a small amount of traffic. Also, certain types of projects, due to the trip generation characteristics, may add virtually no traffic during peak periods. These types of projects may be exempt from the traffic analysis requirements. Whether a particular project qualifies for any exemption will be determined by the Department of Public Works Road Commissioner.	Consistent	A VMT analysis was prepared for the Project by DKS Associates. The analysis concluded that the Proposed Project represents a less than significant transportation impact based on VMT, and no further VMT analysis is required. Because the Proposed Project would not have a significant effect on County roads, a traffic analysis is not required. Therefore, the Project is consistent with this objective.

County of Imperial Bicycle Master Plan Update: Final Plan

In 2012, the County adopted an updated Bicycle Master Plan to serve as the guiding document for the development of an integrated network of bicycle facilities and supporting programs designed to link the unincorporated areas and attractive land uses throughout the County. This document is an update to the previously adopted Countywide Bicycle Master Plan and was prepared to accomplish the following goals:

1. To promote bicycling as a viable travel choice for users of all abilities in the County
2. To provide a safe and comprehensive regional connected bikeway network
3. To enhance environmental quality, public health, recreation, and mobility benefits for the County through increased bicycling

The County of Imperial's General Plan, Circulation and Scenic Highways Element, and Conservation and Open Space Element provide a solid planning basis for the Bicycle Master Plan. Even though Imperial County has a limited number of bicycle facilities and no comprehensive bicycle system, interest in cycling is growing; and numerous cyclists bike on a regular basis for both recreation and commuting to work and school.

4.11.3 Thresholds of Significance

In order to assist in determining whether a project would have a significant effect on the environment, the County utilizes the State CEQA Guidelines Appendix G Guidelines. Appendix G states that a project may be deemed to have an impact on transportation if it would:

- | | |
|---------------------|--|
| Threshold a) | Conflict with a program, plan, ordinance or policy addressing the circulation system, including transit, roadways, bicycle and pedestrian facilities? |
| Threshold b) | Conflict or be inconsistent with CEQA Guidelines section 15064.3, subdivision (b)? |
| Threshold c) | Substantially increase hazards due to a geometric design feature (e.g., sharp curves or dangerous intersections) or incompatible uses (e.g., farm equipment)? |
| Threshold d) | Result in inadequate emergency access? |

Please refer to **Section 6.1: Effects Found Not to Be Significant** for an evaluation of those topics that were determined to be less than significant or have no impact and do not require further analysis in the EIR.

4.11.4 Methodology

Proposed Project

Construction

As discussed in **Chapter 32.0: Project Description**, the HKP1 Project will require approximately 54,000 truck trips over the course of the Project construction. The HKL1 Project is estimated to have an average of 25 trucks per day to and from the construction site, except during site grading, when about 250 trucks will travel to and from the Project construction site daily. Up to 500 workers will travel to the site per day at the peak of construction. Below is a typical list of construction equipment anticipated to be required for the Project:

- Off-highway trucks
- Rollers
- Crawler tractors
- Excavators
- Graders
- Water trucks
- Compactors
- Rubber-tire loaders
- Scrapers
- Cranes
- Generator sets
- Concrete pump
- Plate compactors
- Rough-terrain forklifts
- Skid-steer loaders
- Tractors/Loaders/Backhoes
- Aerial lifts
- Welders
- Air compressors
- Pavers
- Paving equipment

Operation

The HKP1 facility will require up to 22 full-time, on-site employees during operation. Operational staff will include operators, managers, supervisors, maintenance technicians, and lab technicians. On a typical day, the operators will assume a two-shift, 24-hour workday, and all other personnel will assume a standard 8-hour workday. Approximately 22 worker trips, 3 vendor trips, and 1 haul-truck trip will take place during daily operations.

The HKL1 facility is expected to require 90 full-time, on-site employees during operation. Facility operations will continue 24 hours per day, 7-days per week. It is projected that up to 44 employees will be on-site at any given time, with 28 day-staff employees and two rotating shifts of 16 additional employees overlapping the day staff and covering nights, weekends, and holidays. Approximately 48 trucks per day will travel in and out of the Project site during normal operations. Daily truck traffic includes up to 40 trucks for product shipping. All trucks used for product shipping will be electric. Truck traffic will also include approximately eight truck deliveries of reagent chemicals, cooling tower treatment chemicals, consumptive media, product-packaging materials, and fuel. Outgoing general waste generated on the site will be removed by truck as needed and is expected to require less than one truck per day.

Parking and Site Access

Parking will be available in the administration and control building area. The Project will be accessed from Davis Road via new ingress/egress driveways. Davis Road will be upgraded with aggregate base during construction of the HKP1 Project. Project traffic will access the site from Highway 111 via McDonald Road and Davis Road. A bridge will be constructed across the R Drain to connect the northern and southern portions of the Project site. County road ingress/egress points will be constructed in conformance with Imperial County Public Works Department and Fire Department requirements. Road access will be restricted during construction, and appropriate traffic controls will be in place during construction of the

Project. Davis Road will be paved from McDonald Road to Noffsinger Road at the completion of HKL1 Project construction. All structures within the IID ROW, including the bridge over the R Drain, will require IID ROW and approval.

Project Trip Generation Forecast

Construction Trip Generation

The HKP1 Project will require approximately 54,000 truck trips over the course of the project construction. The HKL1 Project is estimated to have an average of 25 trucks per day to and from the construction site, except during site grading when approximately 250 trucks will travel to and from the Project construction site daily. Up to 500 workers will travel to the site per day at the peak of construction.

Day-to-Day Operations Trip Generation

Trip generation for the day-to-day operations portion of the Project was also obtained from the Project description, as stated above. The Institute of Transportation Engineers (ITE) *Trip Generation Manual*, 11th Edition (Manual) was utilized to estimate daily project trip generation. While the Manual has many categories of land use, it does not include data for a geothermal plant land use category specifically or for power plants in general. The most analogous ITE land use category is under the general land use group of "Industrial." The most appropriate specific land use in the manual is "Utility" (Code 170), representing land uses pertaining to energy production and similar uses. The Trip Generation Manual includes formulas and rates for trip generation based on metrics including project building square footage and number of employees. Often, building square footage is the appropriate metric to use, however in this case, it is not possible given that the Proposed Project is over 600,000 square feet of building, while the maximum building square footage allowed in ITE Code 170 is less than 50,000 square feet. Therefore, employment is the only metric for estimating trip generation. As shown on Table 4.11-2, a total of 432 estimated daily trips would occur during Project operations.

Table 4.11-2: Day-to-Day Operations Trip Generation

Project/Use	Estimated Employees	ITE Code ^a	Daily Trip Rate ^a	Estimated Daily Trips
Power Plant	22	170 (Utility)	3.85 per employee	85
Extraction	90	170 (Utility)	3.85 per employee	347
Total	112			432

Note:

^a *Trip Generation Manual*, 11th Edition, Institute of Transportation Engineers

Vehicle Miles Traveled

Significance Threshold

Because the County has not yet adopted its own threshold for VMT, it is relying on the guidance provided in the Technical Advisory published by the Governor’s Office of Planning and Research (OPR) in December 2018 (the "OPR Guidance") for purposes of evaluating the potential VMT impacts of development projects. The OPR Guidance for VMT states that depending on the type of project, different thresholds of significance are applicable. The "Recommended Numeric Thresholds for Residential, Office, and Retail

Project” section of the OPR Guidance includes a section on “Other Project Types,” which applies to the Project:

Of land use projects, residential, office, and retail projects tend to have the greatest influence on VMT. For that reason, OPR recommends the quantified thresholds described [in the Residential, Office, and Retail Project section] for purposes of analysis and mitigation. Lead agencies, using more location-specific information, may develop their own more specific thresholds, which may include other land use types.

Guidance from OPR’s Technical Advisory is used to establish a significance threshold of a minimum 15-percent reduction or more from the regional average VMT per employee for this Project evaluation. That is, if the Project’s VMT per employee is more than 15 percent below the regional average, no significant transportation impact would result. It should be noted that the Technical Advisory has no guidelines for truck trips.

VMT Methodology

The VMT assessment was conducted using California Statewide Travel Demand Model (CSTDM) data provided by Caltrans. The following is a summary of steps involved in calculating the trip length and region wide VMT:

1. Determine the appropriate Traffic Analysis Zone (TAZ) for the Project’s location
2. Determine the estimated VMT per employee for the Project’s TAZ
3. Determine the average estimated VMT per employee for Imperial County as a whole (i.e., the Region)
4. Compare the estimated VMT per employee for the Project’s TAZ to the County as a whole and determine if the Project TAZ’s result is more than 15% below the County average.

4.11.5 Project Impact Analysis

Threshold a) Conflict with a program, plan, ordinance or policy addressing the circulation system, including transit, roadways, bicycle and pedestrian facilities?

Threshold b) Conflict or be inconsistent with CEQA Guidelines section 15064.3, subdivision (b)?

As stated in the methodology above, the Project’s daily VMT per employee has been estimated using data from the CSTDM. On its website, Caltrans has provided a link to VMT per Capita and VMT per Employee estimates by TAZ based on both the existing (2010) and 2040 versions of the model. **Table 4.11-3** shows the VMT per Employee, by TAZ.

Table 4.11-3: VMT per Employee by TAZ (Imperial County)

TAZ ^a	VMT	HBW ^b VMT	HBW TRIP Length	Employees	VMT per Employee	% of County Average
5600	48,026	19,184	13.53	2,305	20.84	82.5%
5601	103,324	35,017	9.24	3,438	30.05	119.0%
5602	58,731	18,633	7.69	1,740	33.75	133.7%
5603	76,193	22,281	5.86	2,329	32.72	129.6%

TAZ ^a	VMT	HBW ^b VMT	HBW TRIP Length	Employees	VMT per Employee	% of County Average
5604	52,467	21,345	12.18	2,144	24.47	96.9%
5605	93,969	38,537	8.73	4,165	22.56	89.4%
5606	169,048	62,861	7.30	5,772	29.29	116.0%
5607	130,294	47,401	6.17	4,869	26.76	106.0%
5608	82,801	33,034	7.11	3,517	23.54	93.2%
5609	53,983	20,240	6.04	2,178	24.79	98.2%
5610	84,984	34,285	6.23	3,472	24.48	96.9%
5611	28,830	11,097	5.80	1,437	20.06	79.5%
5612	94,598	33,225	4.87	4,511	20.97	83.1%
5613	24,725	9,427	5.24	1,347	18.36	72.7%
5614	62,291	16,545	16.27	1,288	48.36	191.5%
5615	15,591	7,219	14.16	814	19.15	75.9%
5616	115,892	50,620	9.35	5,073	22.84	90.5%
5699	55,663	23,371	6.25	3,106	17.92	71.0%
6836	99	103	17.21	21	4.72	18.7%
COUNTY	1,351,510	504427	169.22	53526	25.25	100%
THRESHOLD (85% of Countywide Average)					21.46	85%

Notes:

^a The Proposed Project is in TAZ 5600 (bolded)

^b HBW = Home Based Work

The table shows that the Project’s traffic analysis zone (TAZ 5600) has an estimated VMT per employee of 20.84, which is approximately 82.5% of the Countywide average of 25.25 and falls below the 85% threshold of 21.46. Therefore, based on the VMT analysis presented above, the Proposed Project represents a less than significant transportation impact and no further VMT analysis is required.

4.11.6 Cumulative Impacts

Cumulative impacts are defined in CEQA as “two or more individual effects which, when considered together, are considerable or which compound or increase other environmental impacts” (CEQA Guidelines Section 15355). Stated in another way, “a cumulative impact consists of an impact which is created as a result of the combination of the project evaluated in the EIR together with other projects causing relating impacts” (CEQA Guidelines Section 15130 [a][1]).

The construction and operation of the Proposed Project would not result in direct impacts on intersections, roadway segments, or freeway segments. Therefore, less than significant impacts have been identified. Implementation of the Project in combination with other proposed, approved, and reasonably foreseeable projects in the region would not result in cumulative impacts to any street segments or intersections. Additionally, related projects would similarly undergo CEQA review, and determinations regarding the significance of impacts of the related projects on transportation would be made on a case-by-case basis. If necessary, the applicants of the related projects would be required to implement appropriate mitigation measures. Therefore, implementation of related projects and other anticipated

growth in Imperial County would not combine with the Proposed Project to result in cumulatively considerable impacts on transportation.

4.11.7 Mitigation Measures

Based on the results discussed above, the Proposed Project land use does not require any VMT based mitigation.

4.12 TRIBAL CULTURAL RESOURCES

This section evaluates the Proposed Project's potential impacts on tribal cultural resources (TCRs). TCRs are defined as sites, features, places, cultural landscapes, sacred places, and objects with cultural value to a California Native American tribe that are either included or determined to be eligible for inclusion in the California Register of Historical Resources (CRHR) or included in a local register of historical resources, or a resource determined by the lead agency, in its discretion and supported by substantial evidence, to be significant. A cultural landscape that meets these criteria is a tribal cultural resource to the extent that the landscape is geographically defined in terms of the size and scope of the landscape. Historical resources, unique archaeological resources, or non-unique archaeological resources may also be tribal cultural resources if they meet these criteria.

Applicable State and local policies related to TCRs are discussed and potential impacts to TCRs are based on coordination and consultation with California Native American tribes that are traditionally and culturally affiliated with the Project site. The consultation process was conducted pursuant to PRC Section 21080.3. Additionally, information used in preparing this section was derived from the consultation summaries and communication between the County and tribes. A record of the consultation is contained in Appendix L of this EIR.

4.12.1 Existing Environmental Setting

In accordance with Section 15063(a) of the CEQA Guidelines, the County prepared a Notice of Preparation (dated December 11, 2020) that identified the topics to be analyzed in the EIR. In compliance with Assembly Bill (AB) 52 (2014), the County provided formal notification of the Proposed Project on March 21, 2022, via United States Postal Service (USPS) certified mail to each representative of two Native American groups and individuals who may have knowledge of cultural resources in the Project area. The letters can be seen in Appendix L: AB 52 Tribal Consultation. Letters were sent to the Quechan Indian Tribe and the Torres-Martinez Indian Tribe. Both Tribes had until April 25, 2022, to respond. Consultation with the Tribes was concluded on October 5, 2022.

4.12.2 Regulatory Setting

State

Assembly Bill 52

AB 52, in effect as of July 1, 2015, introduces tribal cultural resources as a class of cultural resources and additional considerations relating to Native American consultation into CEQA. As a general concept, a tribal cultural resource is similar to the federally defined Traditional Cultural Properties; however, it incorporates consideration of local and State significance and required mitigation under CEQA. A tribal cultural resource may be considered significant if it is included in a local or State register of historical resources; is determined by the lead agency to be significant pursuant to criteria set forth in California Public Resource Code (PRC) Section 5024.1; is a geographically defined cultural landscape that meets one or more of these criteria; or is a historical resource described in PRC Section 21084.1, a unique archaeological resource described in PRC Section 21083.2, or a nonunique archaeological resource if it conforms with the above criteria.

Native American Historic Resource Protection Act

State law addresses the disposition of Native American burials in archaeological sites and protects such remains from disturbance, vandalism, or inadvertent destruction; establishes procedures to be implemented if Native American skeletal remains are discovered during construction of a project; and establishes the Native American Heritage Commission (NAHC) to resolve disputes regarding the disposition of such remains. In addition, the Native American Historic Resource Protection Act (PRC Section 5097 et seq.) makes it a misdemeanor punishable by up to one year in jail to deface or destroy a Native American historic or cultural site that is listed or may be eligible for listing in the CRHR.

Native American Graves Protection and Repatriation Act

The Native American Graves Protection and Repatriation Act (NAGPRA; 25 U.S.C., Chapter 32), enacted in 2001, requires all State agencies and museums that receive State funding and have possession or control over collections of human remains or cultural items, as defined, to complete an inventory and summary of these remains and items on or before January 1, 2003, with certain exceptions. The NAGPRA also provides a process for the identification and repatriation of these items to the appropriate tribes.

California Health and Safety Code Section 7050.5

California law protects Native American burials, skeletal remains, and associated grave goods, regardless of their antiquity, and provides for the sensitive treatment and disposition of those remains. California Health and Safety Code (HSC) Section 7050.5 requires that if human remains are discovered in any place other than a dedicated cemetery, no further disturbance or excavation of the site or nearby area reasonably suspected to contain human remains can occur until the County Coroner has examined the remains (Section 7050.5b). If the coroner determines or has reason to believe that the remains are those of a Native American, the coroner must contact the NAHC within 24 hours (Section 7050.5c). The NAHC will notify the most likely descendant (MLD); with the permission of the landowner, the MLD may inspect the site of discovery. The inspection must be completed within 24 hours' notification of the MLD by the NAHC. The MLD may recommend means of treating or disposing of, with appropriate dignity, the human remains and items associated with Native Americans.

Local

Imperial County General Plan

The Conservation and Open Space Element of the General Plan includes goals, objectives, and policies for the protection of tribal cultural resources and scientific sites that emphasize identification, documentation, and protection of tribal cultural resources. Table 4.12-1 provides a consistency analysis of the applicable Imperial County General Plan policies relevant to cultural resources as they relate to the Project. While this EIR analyzes the Project's consistency with the General Plan pursuant to State CEQA Guidelines Section 15125(d), the Imperial County Board of Supervisors ultimately determines consistency with the General Plan.

Table 4.12-1: General Plan Consistency

General Plan Policies	Consistency with General Plan	Analysis
Conservation and Open Space Element		
<i>Preservation of Cultural Resources</i>		
Objective 3.3 – Engage all local Native American Tribes in the protection of tribal cultural resources, including prehistoric trails and burial sites.	Consistent	AB 52 letters were sent to the Fort Yuma–Quechan (Quechan) Indian Tribe and the Torres-Martinez Indian Tribe. Both tribes had until April 25, 2022, to respond. Both tribes responded, and the Quechan Indian Tribe requested to consult with the County. The County met with the tribe on two separate occasions and provided requested updates from the tribe to the cultural resources report. The Project is consistent with this objective.

4.12.3 Thresholds of Significance

To assist in determining whether a project would have a significant effect on the environment, the County utilizes the State CEQA Guidelines Appendix G Guidelines. Appendix G states that a project may be deemed to have an impact on tribal cultural resources if it would:

- Threshold a)** **Cause a substantial adverse change in the significance of a tribal cultural resource, defined in Public Resources Code Section 21074 as either a site, feature, place, cultural landscape that is geographically defined in terms of the size and scope of the landscape, sacred place or object with cultural value to a California Native American tribe, and that is:**
- (i) **Listed or eligible for listing in the California Register of Historical Resources, or in a local register of historical resources as define in Public Resources Code Section 5020.1(k), or**
 - (ii) **A resource determined by the lead agency, in its discretion and supported by substantial evidence, to be significant pursuant to criteria set forth in subdivision (c) of Public Resources Code Section 5024.1. In applying the criteria set forth is subdivision (c) of Public Resource Code Section 5024.1, the lead agency shall consider the significance of the resource to a California Native American Tribe?**

4.12.4 Methodology

PRC Sections 21080.3.1 and 21080.3.2 require public agencies to consult with California Native American tribes identified by the NAHC to identify potential significant impacts to TCRs, as further defined in PRC Section 21074 as part of CEQA. In accordance with PRC Section 21080.3.1(d), the County formally notified the California Native American tribes associated with the Project area to address potential impacts associated with California Native American resources.

As previously mentioned in Section 4.3: Cultural Resources, the South Coastal Information Center records search performed for the Project resulted in 19 cultural studies indicating the entire Project area has been previously surveyed. Two resources were noted based on the survey and record searches that could be of relevance to the Project area (HK-I-1, a historic-era isolated bottle base) and TES-HK-001H (remnants of a historic-era house). Based on the background research and results of the survey, Tierra Environmental Services archaeologists determined that TES-HK-001H would be unlikely to provide cultural value to any California Native American tribes and does not require further archaeological testing or evaluation.

4.12.5 Project Impact Analysis

- Threshold a) Cause a substantial adverse change in the significance of a tribal cultural resource, defined in Public Resources Code Section 21074 as either a site, feature, place, cultural landscape that is geographically defined in terms of the size and scope of the landscape, sacred place or object with cultural value to a California Native American tribe, and that is:**
- (i) Listed or eligible for listing in the California Register of Historical Resources, or in a local register of historical resources as define in Public Resources Code Section 5020.1(k), or**
 - (ii) A resource determined by the lead agency, in its discretion and supported by substantial evidence, to be significant pursuant to criteria set forth in subdivision (c) of Public Resources Code Section 5024.1. In applying the criteria set forth is subdivision (c) of Public Resource Code Section 5024.1, the lead agency shall consider the significance of the resource to a California Native American Tribe?**

As previously mentioned, based on the background research and results of the survey, Tierra Environmental Services archaeologists determined that the newly discovered site, TES-HK-001H, is unlikely to provide cultural value to any California Native American tribes. No other sites listed or eligible for listing in a historical register were identified within or adjacent to the Project site.

Additionally, AB 52 letters were sent to the Quechan Indian Tribe and the Torres-Martinez Indian Tribe. Both Tribes had until April 25, 2022, to respond. Pursuant to PRC 21080.3.1(d), each tribal government or representative was given 30 days upon receipt of the AB 52 notification letter to provide a request for consultation on the Project. Both tribes responded to the initial notification letter, with one tribe, the Quechan Indian Tribe, requesting consultation on April 5, 2022. The County met with the Quechan Indian Tribe on May 20, 2022, where the tribe requested additional information, including the cultural resources report, which was sent to the tribe. A subsequent AB 52 consultation with the Quechan Indian Tribe was scheduled for and conducted on August 19, 2022. The tribe requested changes to the cultural resources report, these changes were made, and the updated cultural report was sent to the tribe. As lead agency, the County of Imperial has fulfilled its obligations under AB 52 to engage in tribal consultation with all other tribal governments.

Based on the results of the Cultural Resources Survey and in consultation with the tribes, the County has determined there are no known tribal cultural resources within the Project site. However, the potential remains for the Project's ground-disturbing activity to impact undiscovered resources. These resources could include but not be limited to lithic materials, faunal, pottery, ceramics, building materials, or

glassware. Impacts would be considered less than significant with implementation of the mitigation measures outlined in Section 4.4.

4.12.6 Cumulative Impacts

Cumulative impacts are defined in CEQA as “two or more individual effects which, when considered together, are considerable or which compound or increase other environmental impacts” (CEQA Guidelines Section 15355). Stated in another way, “a cumulative impact consists of an impact which is created as a result of the combination of the project evaluated in the EIR together with other projects causing relating impacts” (CEQA Guidelines Section 15130 [a][1]).

According to CEQA, the importance of TCRs is the value of the resource to California Native American tribes culturally affiliated with the Project area. Therefore, the issue that must be explored in a cumulative analysis is the cumulative loss of TCRs. For TCRs that are avoided or preserved through dedication within open space, no impacts would occur. However, if avoidance or dedication of open space to preserve TCRs is infeasible, those impacts must be considered in combination with TCRs that would be impacted for other projects included in the cumulative project list.

The Project site does not contain any TCRs listed in the CRHR or known to a California Native American tribe; therefore, the Project’s cumulative impacts to TCRs would be less than significant. Additionally, individual projects would be evaluated on a project-by-project basis to determine the extent of potential impacts to TCRs and historical/archeological resources. Further, each project would be required to comply with AB 52 for the purposes of identifying potential TCRs. With adherence to State laws as well as implementation of Project-specific mitigation as needed, cumulative impacts to TCRs would be less than significant.

4.12.7 Mitigation Measures

Refer to Section 4.4 Cultural Resources for a complete discussion.

- CUL-1** The Applicant shall retain the services of a Qualified Archaeologist meeting the Secretary of the Interior Standards or County standards, whichever is greater, and require that all initial ground-disturbing work be monitored by archaeological specialist (monitor) proficient in artifact and feature identification in monitoring contexts. The Consultant (Qualified Archaeologist and/or monitor) shall be present at the Project construction phase kickoff meeting.

- CUL-2** Prior to commencing construction activities and thus prior to any ground disturbance in the Proposed Project site, the Consultant shall conduct initial Worker Environmental Awareness Program (WEAP) training to all construction personnel, including supervisors, present at the outset of the Project construction work phase, for which the Lead Contractor and all subcontractors shall make their personnel available. A tribal monitor shall be provided an opportunity to attend the preconstruction briefing, if requested. This WEAP training will educate construction personnel on how to work with the monitor(s) to identify and minimize impacts to archaeological resources and maintain environmental compliance. This WEAP training will educate the monitor(s) of construction procedures to avoid construction-related injury or harm. This training may be

performed periodically, such as for new personnel coming on to the Project as needed.

CUL-3

The Contractor shall provide the Consultant with a schedule of initial potential ground-disturbing activities. A minimum of 48 hours will be provided to the Consultant of commencement of any initial ground-disturbing activities, such as vegetation grubbing or clearing, grading, trenching, or mass excavation.

A monitor shall be present on-site at the commencement of ground-disturbing activities related to the Project. The monitor, in consultation with the Qualified Archaeologist, shall observe initial ground-disturbing activities and, as they proceed, adjust the number of monitors as needed to provide adequate observation and oversight. All monitors will have stop-work authority to allow for recordation and evaluation of finds during construction. The monitor will maintain a daily record of observations to serve as an ongoing reference resource and to provide a resource for final reporting upon completion of the Project.

The Consultant and the Lead Contractor and subcontractors shall maintain a line of communication regarding schedule and activity such that the monitor is aware of all ground-disturbing activities in advance to provide appropriate oversight.

CUL-4

In the event of the discovery of previously unidentified archaeological materials, the Contractor shall immediately cease all work activities within an area of no less than 100 feet of the discovery. After cessation of excavation, the Contractor shall immediately contact the County. Except in the case of cultural items that fall within the scope of the Native American Grave Protection and Repatriation Act (NAGPRA), the California Health and Safety Code 7050.5, CEQA Section 15064.5, or California Public Resources Code Section 5097.98, the discovery of any cultural resource within the Project area shall not be grounds for a Project-wide "stop work" notice or otherwise interfere with the Project's continuation except as set forth in this paragraph. Additionally, all consulting Native American tribal groups that requested notification of any unanticipated discovery of archaeological resources on the Project shall be notified appropriately. If a discovery results in the identification of cultural items that fall within the scope of NAGPRA, the Contractor shall immediately cease all work activities within an area of no less than 100 feet (30 meters) of the discovery. In the event of an unanticipated discovery of archaeological materials during construction, the Applicant-retained Qualified Professional Archaeologist shall be contacted to evaluate the significance of the materials prior to resuming any construction-related activities in the vicinity of the find. If the Qualified Archaeologist determines that the discovery constitutes a significant resource under CEQA and it cannot be avoided, the Applicant shall implement an archaeological data recovery program.

CUL-5

At the completion of all ground-disturbing activities, the Consultant shall prepare an Archaeological Resources Monitoring Report summarizing all monitoring efforts and observations, as performed, and any and all prehistoric or historic archaeological finds as well as providing follow-up reports of any finds to the SCCIC, as required.

In the event unanticipated, buried prehistoric archaeological resources (lithic material, faunal, pottery, etc.) or historical archaeological resources (ceramics, building materials, glassware, etc.) are unearthed during construction or any ground disturbing activities within the Project area, additional resource treatments would become necessary. Once a potential resource has been identified, all work within 100 feet must be halted until the find can be assessed by a qualified archaeologist.

4.12.8 Level of Significance After Mitigation

Impacts related to tribal cultural resources would be less than significant with implantation of Mitigation Measures CUL-1 through CUL-5 identified above.

4.13 UTILITIES AND SERVICE SYSTEMS

This section includes an evaluation of potential impacts for identified utilities and service systems that could result from implementation of the Project. Utilities and service systems include water supply and treatment, wastewater treatment facilities, stormwater drainage facilities, electricity, natural gas, telecommunication facilities, and solid waste disposal. The impact analysis provides an evaluation of potential impacts to utilities and service systems based on criteria derived from the California Environmental Quality Act (CEQA) Guidelines in conjunction with actions proposed in Section 2, Project Description. Information in this section is based on information obtained from the WSA for the Project (Chambers Group 2023) included in Appendix M of this EIR.

4.13.1 Existing Environmental Setting

Regional Setting

Water and Sewer Service

Groundwater underlying the Imperial Valley is generally of poor quality and unsuitable for domestic or irrigation purposes; thus, the main source of water for wholesalers is the Colorado River (IWF 2012).

In the unincorporated areas of the County, water and sewer services are generally limited to parcels within or immediately adjacent to established communities or incorporated cities. Each city and unincorporated community has its own water treatment facilities for treating and distributing water to the users of each jurisdiction. Ten communities within Imperial County receive water for domestic purposes from the Imperial Irrigation District (IID): Calexico, Holtville, El Centro, Imperial, Brawley, Westmorland, Calipatria, Niland, Seeley, and Heber (County 1997b).

Five other water districts supply water to other areas in Imperial County outside the IID boundaries. These additional water districts are the Palo Verde Irrigation District, the Palo Verde County Water District, the Bard Water District, the Winterhaven Water District, and the Coachella Valley Water District. ~~The East Mesa Unit and the West Mesa Unit are located within the IID boundaries; however, the East Mesa Unit relies on four groundwater wells that are approximately 600 feet deep, and the West Mesa Unit has water delivered from the Elder Lateral Canal.~~ The communities of Ocotillo, Nomirage, and Yuha Estates rely on groundwater from the Ocotillo-Coyote Wells groundwater basin (County 1997b).

Outside established communities where urban services cannot be extended or an individual water well cannot be provided, water is available through a canal system for uses other than drinking and through commercial drinking water companies. Sewage is treated by individual septic tank systems. Larger developments may require State-approved sewer or water treatment systems or may have to connect to special districts (County 2013).

Colorado River Water Rights

~~The 2003 Quantification Settlement Agreement and Related Agreements (QSA) serve as the laws, regulations, and agreements granting California the most senior water rights along the Colorado River and specifying~~ specifies that IID has access to 3.1 million acre-feet (maf) of Colorado River water per year. Imperial Dam, located north of Yuma, Arizona, serves as a diversion structure for water deliveries

throughout southeastern California, Arizona, and Mexico. Water is transported to the IID water service area through the All-American Canal (AAC) for use throughout the Imperial Valley.

Stormwater

The federal Clean Water Act provides the California Regional Water Quality Control Boards (RWQCBs) with the authority and framework for regulating stormwater discharges under the (National Pollutant Discharge Elimination System) NPDES Permitting Program. Cities and local jurisdictions that operate municipal stormwater systems must obtain NPDES permit coverage for discharges of municipal stormwater to waters of the United States. The State and RWQCBs implement multiple stormwater permitting programs to regulate stormwater entering local municipal systems, including Municipal Separate Storm Sewer System (MS4) Permits (SWRCB 2020).

Phase 1 MS4 permits regulate stormwater permits for medium (serving between 100,000 and 250,000 people) and large (serving 250,000 people or more) municipalities. The Statewide Phase II MS4 permit regulates small municipalities (population of less than 100,000 people). On April 30, 2003, the California State Water Resources Control Board (SWRCB) issued a General Permit for the Discharge of Storm Water from Small MS4s (WQ Order No. 2003-0005-DWQ) to provide permit coverage for smaller municipalities (population less than 100,000). The Cities of Imperial and El Centro, Calexico, and Brawley and the County of Imperial are enrolled under the State Water Board General Order for Phase II MS4s (RWQCB 2021).

Electricity and Natural Gas

Electricity is available for most areas of the County through IID, Southern California Edison, or San Diego Gas and Electric Company (SDG&E) (County 2013). IID provides electricity to more than 150,000 customers in Imperial County, as well as to parts of Riverside and San Diego Counties. The service area covers approximately 6,471 square miles. IID's generating facilities and sources of power are varied and dispersed across the County. Renewable sources of energy generation include solar, hydroelectric, geothermal, and wind. More diverse sources include biomass and biowaste (IID 2021).

IID's transmission system consists primarily of 161-kilovolt (kV) and 92-kV transmission lines and lower-voltage distribution lines. IID also has two 230-kV transmission lines that allow for import/export of electrical power to its system in the County. SDG&E and IID operate a 500-kV transmission line that traverses the southern part of Imperial County and interconnects with the transmission system in Arizona. This 500-kV transmission line is the primary import line for electrical power to be wheeled into SDG&E's system to supply power to San Diego County and the City of San Diego. This line also provides import/export capacity to IID's service area (EDAW 2006).

Natural gas service within the County is provided by SoCalGas, with transmission lines following mainly along Highway 111, Interstate 8, Dogwood Road, and Barbara Worth Road. Transmission lines stretch from the Chocolate Mountains in the northern portion of the County to the Mexico border in the southern portion. High-pressure distribution lines branch off the transmission lines in all directions. The majority of these high-pressure distribution lines are concentrated around the City of El Centro (SoCalGas 2022).

In 2019, Imperial County consumed a total of approximately 1,486.2 GWh of electricity and approximately 41.9 million therms of natural gas (CEC 2022a; 2022b). IID, specifically, consumed approximately 3,678.63 GWh over the course of 2019 (CEC 2022c).

Solid Waste

The County has eight permitted landfills: Calexico, Holtville, Hot Spa, Imperial, Niland, Ocotillo, Palo Verde, and Salton City (County 2022). In 2019, Imperial County disposed of approximately 135,092 tons of solid waste (CalRecycle 2019). The locations of those landfills are listed in Table 4.13-1 below.

Table 4.13-1: Imperial County Waste Disposal Sites

Name of Landfill	Address
Calexico	133 West Highway 98, Calexico, CA 92231 East of Hammers Road on Highway 98 Approximately 3 miles west of Calexico
Holtville	Whitlock Road north of Norrish Road
Hot Spa	10466 Spa Road, Niland, CA 92257 Spa Road west of Frink Road
Imperial	1705 West Worthington Road, Imperial, CA 92251 3 miles west of Forrester Road on Worthington Road
Niland	8450 Cuff Road, Niland, CA 92257 Cuff Road north of Beal Road
Ocotillo	1802 Shell Canyon Road, Ocotillo, CA 92259 Shell Canyon Road north of Ocotillo
Palo Verde	589 Stallard Road, Palo Verde, CA 92266 Stallard Road approximately 3 miles south of Palo Verde
Salton City	935 West Highway 86, Salton City, CA 92275 South of State Route 22 and west of Highway 86

Source: <https://www.icphd.org/environmental-health/solid-waste/solid-waste-facilities/>

4.13.2 Regulatory Setting

Federal

Federal Energy Regulatory Commission

The Federal Energy Regulatory Commission (FERC) is an independent agency that regulates the interstate transmission of electricity, natural gas, and oil. The Energy Policy Act of 2005 gave FERC additional responsibilities in this capacity. The Federal Communications Commission (FCC) regulates interstate and international communications by radio, television, wire, satellite, and cable in all 50 states.

Resource Conservation and Recovery Act

The Resource Conservation and Recovery Act (RCRA) was enacted in 1976 and is the principal federal law in the United States governing the disposal of solid waste and hazardous waste. The U.S. Environmental Protection Agency (USEPA) oversees waste management regulation pursuant to Title 40 of the Code of Federal Regulations. Under RCRA, however, states are authorized to carry out many of the functions of the federal law through their own hazardous waste programs and laws if they are at least as stringent (or more so) than the federal regulations. Thus, the California Department of Resources Recycling and Recovery (CalRecycle) manages the State of California's solid waste and hazardous materials programs pursuant to USEPA approval.

State

Senate Bill 610

Senate Bill (SB) 610 is an act that amended Section 21151.9 of the Public Resources Code (PRC) and sections 10631, 10656, 10910, 10911, 10912, and 10915 of the Water Code. SB 221 amended Section 11010 of the Business and Professions Code, and amended Section 65867.5 of the Government Code. SB 221 also added Sections 66455.3 and 66473.7 to the Government Code. SB 610 was signed by Governor Gray Davis and filed with the Secretary of State on October 9, 2001, becoming effective January 1, 2002. SB 610 requires a lead agency to determine that a project (as defined in Water Code section 10912) subject to CEQA), identify any public water system that may supply water for the project and to request the applicants to prepare a specified Water Supply Assessment (WSA).

Water Code section 10911(c) requires that the lead agency “determine, based on the entire record, whether projected water supplies will be sufficient to satisfy the demands of the project, in addition to existing and planned future uses.” Specifically, Water Code section 10910(c)(3) states:

If the projected water demand associated with the proposed project was not accounted for in the most recently adopted urban water management plan, or the public water system has no urban water management plan, the water supply assessment for the project shall include a discussion with regard to whether the total projected water supplies, determined to be available by the city or county for the project during normal, single dry, and multiple dry water years during a 20 year projection, will meet the projected water demand associated with the proposed project, in addition to the public water system’s existing and planned future uses, including agricultural and manufacturing uses.

With the introduction of SB 610, any project under CEQA shall provide a WSA if the project meets the definition of Water Code section 10912:

For the purposes of this part, the following terms have the following meanings:

(a) “Project” means any of the following:

- (1) A proposed residential development of more than 500 dwelling units
- (2) A proposed shopping center or business establishment employing more than 1,000 persons or having more than 500,000 square feet of floor space
- (3) A proposed commercial office building employing more than 1,000 persons or having more than 250,000 square feet of floor space
- (4) A proposed hotel or motel, or both, having more than 500 rooms
- (5) A proposed industrial, manufacturing, or processing plant, or industrial park planned to house more than 1,000 persons, occupying more than 40 acres of land, or having more than 650,000 square feet of floor area
- (6) A mixed-use project that includes one or more of the projects specified in this subdivision

- (7) A project that would demand an amount of water equivalent to, or greater than, the amount of water required by a 500-dwelling unit project
- (b) If a public water system has fewer than 5,000 service connections, then “project” means any proposed residential, business, commercial, hotel or motel, or industrial development that would account for an increase of 10 percent or more in the number of the public water system’s existing service connections, or a mixed-use project that would demand an amount of water equivalent to or greater than the amount of water required by residential development that would represent an increase of 10 percent or more in the number of the public water system’s existing service connections.

After review of Water Code section 10912a and section 10912 (a)(5)(B), it was determined that the Project is deemed a project under Water Code section 10912 because it is considered an industrial water use project that is considered a processing plant in accordance with Water Code section 10912a (5).

Porter-Cologne Water Quality Act

The California Legislature enacted the Porter-Cologne Water Quality Control Act in 1969 to preserve, enhance, and restore the quality of the State’s water resources. The SWRCB and nine RWQCBs were established by the act as the primary state agencies charged with controlling water quality in California. The Porter-Cologne Water Quality Control Act establishes water quality policy, enforces surface water and groundwater quality standards, and regulates point and nonpoint source pollutants. The act also authorizes the SWRCB to establish water quality principles and guidelines for long-range resource planning, including groundwater and surface water management programs and the control and use of recycled water.

State Water Resources Control Board

The SWRCB has dual authority to allocate and protect water. This twofold responsibility enables the SWRCB to provide comprehensive protection for California’s waters. Nine RWQCBs dispersed throughout California carry out the duties of the SWRCB. The RWQCBs develop and enforce water quality objectives and implementation plans that will best protect the beneficial uses of the State’s waters. The Project is within the jurisdiction of the Colorado River Basin (CRB) RWQCB, Region 7. The CRB RWQCB regulates the discharge of waste to surface waters (rivers, streams, lakes, wetlands, and the Pacific Ocean), storm drains, the ground surface, and groundwater.

Water Quality Control Plan for the Colorado River Basin

The Water Quality Control Plan for the Colorado River Basin (Basin Plan) prepared by the CRB RWQCB identifies beneficial uses of surface waters within the CRB region; establishes quantitative and qualitative water quality objectives for protection of beneficial uses; and establishes policies to guide the implementation of these water quality objectives. Water bodies that have beneficial uses that may be affected by construction activity and post-construction activity include the Imperial Valley Drains (includes the Wistaria Drain and Greeson Wash), New River, and the Salton Sea.

Assembly Bill 885

Assembly Bill (AB) 885 was signed into law in September 2000. AB 855 requires the SWRCB to develop statewide regulations for the permitting and operation of on-site wastewater treatment systems, better

known as septic systems. These regulations are developed through consultation with the Department of Health Services, California Conference of Directors of Environmental Health, California Coastal Commission, counties, cities, and other interested parties. Individual disposal systems that use subsurface disposal are all included under AB 885.

National Pollution Discharge Elimination System General Industrial and Construction Permits

The NPDES General Industrial Permit requirements apply to the discharge of stormwater associated with industrial sites. The permit requires implementation of management measures that will achieve the performance standard of the best available technology economically achievable and best conventional pollutant control technology. Under the statute, operators of new facilities must implement industrial BMPs in the projects' SWPPP and perform monitoring of stormwater discharges and unauthorized non-stormwater discharges.

Construction activities are regulated under the NPDES General Permit for Discharges of Storm Water Runoff Associated with Construction Activity (General Construction Permit) which covers stormwater runoff requirements for projects where the total amount of ground disturbance during construction exceeds 1 acre. Coverage under a General Construction Permit requires the preparation of a Stormwater Pollution Prevention Plan (SWPPP) and submittal of a Notice of Intent (NOI) to comply with the General Construction Permit. The SWPPP includes a description of best management practices (BMPs) to minimize the discharge of pollutants from the sites during construction. Typical BMPs include temporary soil stabilization measures (e.g., mulching and seeding); storing materials and equipment to ensure that spills or leaks cannot enter the storm drain system or stormwater; and using filtering mechanisms at drop inlets to prevent contaminants from entering storm drains. Typical postconstruction management practices include street sweeping and cleaning stormwater drain inlet structures. The NOI includes site-specific information and the certification of compliance with the terms of the General Construction Permit.

California Public Utilities Commission

The California Public Utilities Commission (CPUC) regulates privately owned electric, natural gas, telecommunications, water, railroad, rail transit, and passenger transportation companies, in addition to authorizing video franchises. CPUC is responsible for regulating electric utility rates, electric power procurement and generation, some electric infrastructure, ratepayer-funded energy efficiency programs, and other areas. The CPUC evaluates the necessity for additional power generation by the regulated utilities in California in both the long- and short-term, accomplished using public input, data provided by the utilities, the California Energy Commission, the California Independent System Operator, and following the regulations of the Commission, the Public Utilities Code, and FERC. CPUC has primary ratemaking jurisdiction over the funding of distribution-related expenditures generally for power lines of 66 kV or less. While CPUC does not have ratemaking responsibility for transmission lines, it does have a substantial role in permitting transmission and substation facilities. CPUC regulates natural gas rates and natural gas services, including in-state transportation over the utilities' transmission and distribution pipeline systems; storage; procurement; metering; and billing. Additionally, CPUC regulates telecommunications and broadband operations and infrastructure in the state. As such, CPUC is responsible for licensing, registration, and the processing of tariffs on local exchange carriers, competitive local carriers, and nondominant interexchange carriers. It is also responsible for registration of wireless service providers and franchising of video service providers, among other duties.

California Integrated Waste Management Act

The California Integrated Waste Management Act of 1989 (AB 939), signed into law by Governor George Deukmejian on September 29, 1989, was intended to reduce dependence on landfills for the disposal of solid waste and to ensure an effective and coordinated system for the safe management of all solid waste generated within California. AB 939 required each California city and county to divert 25 percent of its waste stream by 1995 and 50 percent by 2000 (PRC, Section 41780). It also required local governments to prepare and implement plans to improve waste resource management by integrating management principles that place importance on first reducing solid waste through source reduction, reuse, recycling, and composting before disposal at environmentally safe landfills or via transformation (e.g., regulated incineration of solid waste materials). These plans must also be updated every five years. Waste disposal is managed through the implementation of the Source Reduction and Recycling Element (SRRE). The SRRE was approved by CalRecycle (formerly the California Integrated Waste Management Board) on November 17, 1993, and adopted in December 1993. Under the SRRE, counties are required to demonstrate how they intend to achieve the mandated diversion goals through the implementation of various programs.

The County of Imperial agreed to implement the following programs to meet the required diversion goals:

1. Agriculture Plastic
2. Commercial Source and Recycling
3. Compost Operation
4. Construction and Demolition
5. Procurement Policy
6. School Recycling
7. Christmas Tree Diversion
8. County Waste Reduction Policy

CalRecycle

This State agency performs a variety of regulatory functions pursuant to California Code of Regulations (CCR) Title 27 and other rules. Among other things, CalRecycle sets minimum standards for the handling and disposal of solid waste designed to protect public health and safety, as well as the environment. It is also the lead agency for implementing the State of California's municipal solid waste program, deemed adequate by USEPA for compliance with RCRA.

Construction and Demolition Waste Materials Diversion Requirements (SB 1374)

Construction and Demolition Waste Materials Diversion Requirements, passed in 2002, added Section 42912 to the California PRC. SB 1374 requires that jurisdictions include a summary of the progress made in diverting construction and demolition waste in their annual AB 939 report. The legislation also required that CalRecycle adopt a model ordinance for diverting 50 to 75 percent of all construction and demolition waste from landfills.

Local

Southern California Association of Governments

The Southern California Association of Governments (SCAG) is a council of governments representing Imperial, Los Angeles, Orange, Riverside, San Bernardino, and Ventura Counties. SCAG is the federally

recognized metropolitan planning organization (MPO) for this region, which encompasses more than 38,000 square miles. SCAG is a regional planning agency and a forum for addressing regional issues concerning transportation, the economy, community development, and the environment. SCAG is also the regional clearinghouse for projects requiring environmental documentation under federal and State law. In this role, SCAG reviews proposed development and infrastructure projects to analyze their impacts on regional planning programs. As the MPO for Southern California, SCAG cooperates with the Southern California Air Quality Management District, the California Department of Transportation, and other agencies in preparing regional planning documents. SCAG has developed regional plans to achieve specific regional objectives, including the Regional Transportation Plan and Sustainable Communities Strategies component pursuant to State law.

Imperial Integrated Water Resources Management Plan

~~The Imperial IRWMP serves as the governing document for regional water planning to meet present and future water resource needs and demands by addressing such issues as additional water supply options, demand management, and determination and prioritization of uses and classes of service provided. In November 2012, the Imperial County Board of Supervisors approved the Imperial IRWMP, and the City of Imperial City Council and the IID Board of Directors approved it in December 2012. Approval by these three stakeholders meets the basic requirement of California Department of Water Resources for an IRWMP. Through the IRWMP process, IID presented options to the region's stakeholders, such as water storage and banking, recycling of municipal wastewater, and desalination of brackish water, in the event long-term water supply augmentation is needed.~~

Imperial Irrigation District

The IID is an irrigation district organized under the California Irrigation District Law, codified in Section 20500 et seq. of the California Water Code. Critical functions of IID include diversion and delivery of Colorado River water to the Imperial Valley, operation and maintenance of the drainage canals and facilities, including those in the Project area, and generation and distribution of electricity. Several policy documents govern IID operations and are summarized below:

- The Law of the River and historical Colorado River decisions, agreements, and contracts
- The Quantification Settlement Agreement and Transfer Agreements
- ~~The Definite Plan,~~ Rules and Regulations governing the Distribution and Use of Water, now referred to as the Systems Conservation Plan, which defines the rigorous agricultural water conservation practices being implemented by growers and IID to meet the Quantification Settlement Agreement commitments
- ~~The Equitable Distribution Plan, which defines how IID will prevent overruns and stay within the cap on the Colorado River water rights.~~ The Equitable Distribution Plan manages the District's available water supply, distributing it equitably as determined by the IID Board of Directors
- ~~Existing IID standards and guidelines for evaluation of new development and defining IID's role as a responsible agency and wholesaler of water~~

IID has adopted an Interim Water Supply Policy (IWSP) for Non-Agricultural Projects during the development of the Imperial IWRMP, ~~from which water supplies can be contracted to serve new~~

developments within IID's water service area under which water supplies, up to 25,000 acre-feet annually, have been assessed for new non-agricultural development and may be contracted for conservation at the discretion of the IID Board. For applications processed under the IWSP, applicants shall be required to pay a processing fee and, after IID board approval of the corresponding agreement, will be required to pay a reservation fee(s) and annual water supply development fees.

Imperial County Public Health Department, Division of Environmental Health

The Imperial County Public Health Department, Division of Environmental Health is responsible for issuance of sanitation permits for private onsite sewage disposal systems in the County. Coordination of site design for proposed projects must occur with the Public Health Department to obtain final permits.

Imperial County Land Use Ordinance, Division 10 Building, Grading, and Sewage Regulations

Chapter 13, Sanitation Permits, of the Imperial County Land Use Ordinance, Division 10 Building, Grading, and Sewage Regulations, regulates the construction, relocation, and alteration of sewage disposal systems in the unincorporated areas of Imperial County. Standards for such systems described in this chapter must be met for a permit to be issued by the County Public Health Department.

Countywide Integrated Waste Management Plan for Imperial County

All California counties are required to prepare and submit to CalRecycle a Countywide Integrated Waste Management Plan (CIWMP). The CIWMP is to include all SRREs, all Household Hazardous Waste Elements, a Countywide Siting Element, all Non-Disposal Facility Elements, all applicable regional SRREs, Household Hazardous Waste Elements, and an applicable Regional Siting Element (if regional agencies have been formed).

CalRecycle summarizes waste management problems specific to each county and provides an overview of actions that would be taken to achieve the SRRE implementation schedule (PRC Section 41780). Imperial County's CIWMP was approved by CalRecycle (formerly CIWMB) in May of 2000. The Executive Director of the CIWMB approved by Resolution 2008-91 the Five-Year Review Report of the Countywide Integrated Waste Management Plan for the County of Imperial on June 17, 2008.

Imperial County General Plan

The Land Use Element and the Conservation and Open Space Element of the General Plan contain goals, objectives, policies, and programs to ensure water resources in the County are preserved and coordination occurs among local agencies. The Imperial County General Plan does not contain any goals, objectives, policies, or programs pertaining to solid waste that are applicable to the Project. Table 4.13-2 provides a consistency analysis of the applicable Imperial County General Plan goals and objectives as they relate to the Project. While this EIR analyzes the Project's consistency with the General Plan pursuant to CEQA Guidelines Section 15125(d), the Imperial County Board of Supervisors ultimately determines consistency with the General Plan.

Table 4.13-2: General Plan Consistency

General Plan Policies	Consistency with General Plan	Analysis
Land Use Element		
<i>Public Facilities</i>		
Goal 8 – Coordinate local land use planning activities among all local jurisdictions and state and federal agencies.	Consistent	The Project is being planned and designed in coordination with the County of Imperial as well as State and federal agencies as appropriate. Examples include but are not limited to the IID Water, IID Energy, Imperial County Planning and Development Services Department, Imperial County Public Works Department, California Department of Fish and Wildlife, and Imperial County Air Pollution Control District. Therefore, the Project is consistent with this goal.
Conservation and Open Space Element		
<i>Preservation of Water Resources</i>		
Objective 6.3 – Protect and improve water quality and quantity for all water bodies in Imperial County.	Consistent	The Project will require 240 acre-feet of water per year (AFY) for construction, representing approximately 0.65% of the annual unallocated water supply. The Project requires 6,500 AFY for operations, which represents 28.2% of the unallocated supply. Thus, the Project's estimated water demand would not affect IID's ability to provide water to other users in IID's water service area. The Project would protect water quality during construction through compliance with the NPDES General Construction Permit, SWPPP, and BMPs. The Project will be designed to include site design, source control, and treatment control BMPs. The use of source control, site design, and treatment BMPs would result in a decreased potential for stormwater pollution.
Objective 6.10 – Encourage water conservation and efficient water use among municipal and industrial water users, as well as reclamation and reuse of wastewater.	Consistent	As previously mentioned, the Project's water use represents 28.2% of the unallocated supply set aside in the IWSP for nonagricultural projects and approximately 28.2% of forecasted future nonagricultural water demands planned in the Imperial IRWMP through 2055. Wastewater in the form of spent process fluid will be reused on site through injection back into the injection wells to replenish the geothermal resource.

4.13.3 Thresholds of Significance

In order to assist in determining whether a project would have a significant effect on the environment, the County utilizes the State CEQA Guidelines Appendix G Guidelines. Appendix G states that a project may be deemed to have impacts to utilities and services systems if it would:

- Threshold a) Require or result in the relocation or construction of new or expanded water, wastewater treatment or stormwater drainage, electric power, natural gas, or telecommunications facilities, the construction of which could cause significant environmental effects?**

- Threshold b)** Have sufficient water supplies available to serve the project from existing and reasonably foreseeable future development during normal, dry and multiple dry years?
- Threshold c)** Result in a determination by the wastewater treatment provider which serves or may serve the project that it has adequate capacity to serve the project's projected demand in addition to the provider's existing commitments?
- Threshold d)** Generate solid waste in excess of State or local standards, or in excess of the capacity of local infrastructure, or otherwise impair the attainment of solid waste reduction goals?
- Threshold e)** Comply with federal, state, and local management and reduction statutes and regulations related to solid waste?

Please refer to **Section 6.1: Effects Found Not to Be Significant** for an evaluation of those topics that were determined to be less than significant or have no impact and do not require further analysis in the EIR.

4.13.4 Methodology

Chambers Group was prepared a WSA for the Project in April 2023 (Appendix J). The WSA evaluates water availability during a normal year, single-dry, and multiple-dry water years for the required 20-year period, plus an additional 30 years for a total of a 50-year water demand for the Project. The WSA also evaluates reasonably foreseeable planned future water demands to be served by the IID. Evaluations of potential wastewater, stormwater, electricity and natural gas usage, telecommunications, and solid waste impacts are based on information provided by the Applicant, as well as information from publicly available federal, State, and local government sources.

Regional Water Demand

The 2012 Imperial IRWMP addresses water supplies (Colorado River and groundwater), demand, baseline and forecasted through 2050, and IID water budget. The IRWMP also addresses projects, programs and policies, and funding alternatives. The IRMWP lists and details a set of capital projects that IID might pursue, including the amount of water that might result (AFY) and cost (dollars per acre-foot [\$/AF]) if necessary. These also highlight potential capital improvement projects that could be implemented in the future.

Imperial Valley's historic nonagricultural water demand for 2015 and forecasted nonagricultural water demand for 2020 to 2055 are provided in Table 4.13-3 in five-year increments. Total water demand for nonagricultural uses is projected to be 198.4 kilo acre feet (kaf) in the year 2055. This is a forecasted increase in the use of nonagricultural water from 107.4 kaf for the period of 2015 to 2055. These values were modified from the Imperial IRWMP to reflect updated conditions from the IID Provisional Water Balance for calendar year 2015. Due to the recession in 2009 and other factors, nonagricultural growth projections have lessened since the 2012 Imperial IRWMP. Projections in Table 4.13-3 have been adjusted (reduced by 3 percent) to reflect IID 2015 delivery data.

Table 4.13-3: Nonagricultural Water Demand in IID Water Service Area, 2015-2055 (kaf per Year)

	2015	2020	2025	2030	2035	2040	2045	2050	2055
Municipal	30.0	30.9	36.8	39.8	41.5	46.3	51.7	57.8	61.9
Industrial	26.4	26.0	39.8	46.5	53.2	59.9	66.6	73.3	80.0
Other	5.5	6.5	5.5	5.5	5.5	5.5	5.5	5.5	5.5
Feedlots/Dairies	17.8	19.0	20.0	20.0	20.0	20.0	20.0	20.0	20.0
Envr. Resources	8.3	9.2	12.0	12.0	12.0	12.0	12.0	12.0	12.0
Recreation	7.4	9.5	10.0	10.0	10.0	10.0	10.0	10.0	10.0
Service Pipes	12.0	12.0	12.0	12.0	12.0	12.0	12.0	12.0	12.0
Total Nonagri.	107.4	113.1	136.1	145.8	154.2	165.7	177.8	190.6	201.4

Notes: 2015 and 2020 nonagricultural water demands are from IID 2015 Provisional Water Balance rerun 01/25/2021. 2020-2055 demands are modified from 2012 Imperial IRWMP Chapter 5, Table 5-22 p 5-50 based on IID 2015 Provisional Water Balance. Industrial Demand includes geothermal, but not solar, energy production.

In addition to agricultural and nonagricultural water demands, system operational demands must be included to account for operational discharge; main and lateral canal seepage; and AAC seepage, river evaporation, and phreatophyte evapotranspiration from Imperial Dam to IID's measurement site at AAC Mesa Lateral 5. These system operation demands are shown in Table 4.13-4. IID measures system operational uses and at AAC Station 2900 just upstream of Mesa Lateral 5 Heading.

Table 4.13-4: IID System Operations Consumptive Use within IID Water Service Area and from AAC at Mesa Lateral 5 to Imperial Dam, 2019

System Operational Use	Kilo Acre Feet (kaf)
Delivery System Evaporation	24.4
Canal Seepage	90.8
Canal Spill	13.1
Lateral Spill	121.5
Seepage Interception	-39.0
Unaccounted Canal Water	-40.0
Total System Operational Use, In-Valley	167.8
Imperial Dam to AAC @ Mesa Lat 5	9.2
LCWSP	-10
Total System Operational Use in 2020	167.0

Total system operational use for 2020 was 167.0 kaf, including 10 kaf of Lower Colorado Water Supply Project (LCWSP) input, 39.0 kaf of seepage interception input, and 40.0 kaf of unaccounted canal water input.

Table 4.13-5 shows historic 2015 nonagricultural water demand compared to delivery and forecasts the IID's demand and delivery to nonagricultural land uses through 2055. This data reflects the IID's ability to meet nonagricultural water demands through 2055.

Table 4.13-5: IID Historic and Forecasted Consumptive Use for Nonagricultural Land Uses

	2015	2020	2025	2030	2035	2040	2045	2050	2055
Nonagri. Demand	107.4	123.5	133.3	142.8	151.2	162.7	174.8	187.6	198.4
Nonagri. Delivery	110.1	115.2	133.1	142.9	151.4	163.2	175.4	188.4	199.3

Notes:

2015 Provisional Water Balance rerun 01/25/21.

Nonagricultural Delivery CI 15.0%, Ag Delivery CI 3.0%, QSA SS mitigation CI 15%.

As shown above, IID forecasted nonagricultural demand has the potential to exceed delivery volumes during several time intervals through the projected lifespan for the Project.

Project Site

The Project site is primarily undeveloped, with four geothermal exploratory well pads and six separate geothermal exploratory wells built within the Project site. Power is provided by existing overhead power lines; however, no other utilities exist onsite.

The Project site is located in the Imperial Valley Planning Area of the Colorado River Basin. The Colorado River Basin Region is divided into seven major planning areas on the basis of different economic and hydrologic characteristics. The Imperial Valley Planning Area is characterized as a closed basin; and, therefore, all runoff generated within the watershed discharges into the Salton Sea.

Imperial Valley relies on the Colorado River for its water, which IID transports, untreated, to delivery gates for agricultural, municipal, industrial (including geothermal and solar energy), environmental (managed marsh), recreational (lakes), and other nonagricultural uses. IID supplies the cities, communities, institutions, and Golden State Water Company (which includes all or portions of Calipatria, Niland, and some adjacent Imperial County territory) with untreated water that they treat to meet State and federal drinking water guidelines before distribution to their customers.

The Project site is located within IID's Imperial Unit and district boundary and as such is eligible to receive water service (IWF 2012). The Project is also located within the IID's energy service area (IID 2021). The Project operations would generate up to 49.9 MW with lithium mining operations consuming an average of 35 MW with a peak of 40 MW of electricity consumed, 240 AFY of water for construction, and 6,500 AFY of water for operations, as disclosed by the Project Applicant. Mining operations would only be completed during operation of the geothermal power unit.

4.13.5 Project Impact Analysis

Threshold a) Require or result in the relocation or construction of new or expanded water, wastewater treatment or stormwater drainage, electric power, natural gas, or telecommunications facilities, the construction of which could cause significant environmental effects?

The Project site was previously permitted for four geothermal exploratory well pads and six separate geothermal exploratory wells constructed onsite through Geothermal CUP #16-0001, which were

constructed but no other utilities were constructed. The Project will therefore require connections for water, wastewater, natural gas, and telecommunications, and electric power to the Project site.

Water

The Project's potable water requirements include washbasin water, eyewash equipment water, water for showers and toilets in the crews' quarters, and sink water in the sample laboratory. The HKP1 and HKL1 potable water treatment plant was designed to accommodate sufficient use and reliability for both the HKP1 and HKL1 and the Project facilities, anticipating a future mineral extraction plant. This system will be operated under one permit by the Project, and the applicant would purchase water for the Project from IID.

The Project would share the freshwater storage containment pond between both HKP1 and HKL1. Water will be obtained from the "Q" and "R" laterals adjacent to the Project site. Water will be transferred to a water storage pond, with a capacity of approximately 18 AF, located adjacent to the Q Drain. A 100,000-gallon aboveground water tank will be constructed to serve as the primary water supply for the joint fire suppression system for the HKP1 and HKL1 sites. This 100,000-gallon tank will be a one-time fill from the IID unless a fire occurs on site.

Installation of water and fire infrastructure would be limited to onsite connections, and no offsite connections would need to be installed or upgraded. A more detailed discussion of water requirements can be found in Threshold b) below.

Wastewater

Sanitary waste generated by the Project would be collected in the septic tank to digest the sewer effluent. The septic system would be designed in accordance with County guidelines and would obtain approval prior to construction and installation of the tank. Wastewater in the form of processed spent fluid would be returned to the HKP1 facility via a brine return pipeline and would be injected directly into the injection wells to replenish the geothermal resource in conformance with the CalGEM guidelines.

Stormwater

The Project would share a stormwater retention basin for both facilities. The stormwater runoff will be contained in the pond and will be managed allowing the water to evaporate or percolate into the soil.

Electricity and Natural Gas

Electrical power required for the mining facilities of the Project would be provided by HKP1 with a 3 MW diesel generator with black start capabilities and an 800kW emergency generator would be installed on site, and a new power line will be constructed to the Project site from the current IID/HR1 substation located near the northeast corner of the McDonald Road and Davis Road. Electrically driven equipment, including a power distribution unit, will be installed onsite to deliver geothermal brine, steam/steam condensate, and non-condensable gas to the HKL1 facility. The power transmission line would connect to an onsite substation via a gen-tie line from the Project to the IID/HR1 substation. Project operations would consume approximately 35 MW with a peak consumption of 40 MW from the 49.9 MW capacity of HKP1.

Natural gas is not expected to be required or delivered to the Project site.

Telecommunications

Telecommunication services on site would likely be provided by AT&T for phone and by Beamspeed for internet, the same as the nearby HR1 site. All utility infrastructure required for the Project would be built entirely within previously disturbed areas, particularly within the HR1 plant site, and would require expansion currently existing utilities.

New facilities would be constructed for the purpose of water, wastewater treatment, stormwater drainage, electric power, natural gas, and telecommunications. Expansion of these facilities would utilize existing infrastructure no limited to existing irrigation canals and power/telephone lines which would minimize damage to existing facilities. Therefore, no significant environmental effects are expected to result. Impacts would be less than significant.

Threshold b) Have sufficient water supplies available to serve the project from existing and reasonably foreseeable future development during normal, dry and multiple dry years?

The Project's WSA evaluates the required 20-year water demands per SB 610, plus an additional 30 years, for a 50-year water demand of the Project. The WSA evaluates reasonably foreseeable planned future water demands to be served by the IID to determine whether or not the IID water supply will be adequate to serve the Project in conjunction with other projects in the area. The IID's IWSP for Non-Agricultural Projects dedicates 25,000 AFY of IID's annual water supply to serve new projects. As of January 2022, 23,020 AFY remain available for new projects, ensuring reasonably sufficient supplies for new nonagricultural water users.

Additionally, the Project site has already been permitted in the past for a Geothermal exploratory wells and pads as part of CUP #16-0001. The applicant would install a reverse osmosis water system as part of the Project to meet potable water needs. The Project will require increased water service only for dust mitigation during construction, as well as processing, landscaping, fire suppression, and dust mitigation during operations. Dust mitigation as part of operations would make use of non-water dust management practices. Project water uses are summarized in Table 4.13-6.

Table 4.13-6: Project Water Uses (AFY)

Water Use	Expected Years	Water Required (AFY)
Construction	2	240
Total for Water Construction		480
HKP1 Operations	46	200
HKL1 Operations		6,300
Total Operational Water Usage		299,000

Approximately 240 AFY of water would be needed for fugitive dust control during Project site grading and construction activities, which are anticipated to last up to 2 years (Table 4.13-6). Approximately 6,500 AFY would be required for Project operations, lasting up to 46 years. The Project's total water demand is approximately 6,500 AFY, resulting in 299,960 AF total over the 50-year lifespan of the Project (Table 4.13 -7).

Table 4.13-7: Project Water Summary

Water Use	Expected Years	Total AFY
Construction	2	480
Operations	46	299,000
Decommissioning	2	480
Total	50	299,960

Table 4.13-8 shows the Project's water use amortized, calculated to define the Project's proportion of unallocated water supply set aside in the IWSP for nonagricultural projects and the Project's proportion of forecasted future nonagricultural water demands planned in the Imperial IRWMP through 2055.

Table 4.13-8: Amortized Project Water Summary

Project Water Use— Life of Project	Years	Total Years Combined (AF) ^a	IWSP (AFY)	% of IWSP per Year ^b
240 AFY	2	480	23,020	2.1
6,500 AFY	46	299,000	23,020	28.20

^a(6,718.3 AFY x 46 Years)
^b(6,718.3 AFY/23,800 AFY x 100)

Project construction represents 2.1 percent of the unallocated supply set aside in the IWSP for nonagricultural projects in the Imperial IRWMP through 2055. Project operations represent 28.2 percent of the unallocated supply set aside in the IWSP for nonagricultural projects in the Imperial IRWMP through 2055. The amount of water available and the stability of the IID water supply along with on-farm and system efficiency conservation and other measures being undertaken by IID and its customers ensure that the Project's water needs will be met for the next 50 years.

When drought conditions exist within the IID water service area, as has been the case for the past decade or so, the water supply available to meet agricultural and nonagricultural water demands remains the same as normal year water supply because IID continues to rely on its entitlement for Colorado River water. Due to the priority of water rights and other agreements, drought affecting Colorado River water supplies causes shortages for Arizona, Nevada, and Mexico, but not California or IID. Therefore, the likelihood that IID will not receive its annual 3.1 million AF apportionment under the QSA obligations of Colorado River water is low due to the high priority of the IID entitlement relative to other Colorado River contractors (see Appendix J for further details on the IID's water rights). If such reductions were to come into effect within the life of the 30-year Project, a significant impact would occur. If such reductions do occur, Mitigation Measure (MM) UTIL-1 would be implemented, requiring the Applicant to work with IID to ensure any reduction in water availability during the life of the Project can be managed. Therefore, with implementation of MM UTIL-1, impacts would remain less than significant.

Threshold d) Generate solid waste in excess of State or local standards, or in excess of the capacity of local infrastructure, or otherwise impair the attainment of solid waste reduction goals?

All nonhazardous and hazardous wastes generated during Project construction and operation would be handled and disposed of in accordance with applicable laws, ordinances, regulations, and standards. Nonhazardous solid waste would be disposed of using a locally licensed waste hauling service, Allied Waste.

For further discussion on hazardous wastes, refer to Section 4.8: Hazards and Hazardous Materials. The mineral extraction process would not generate any waste but result in biproducts which will be sold. The geothermal plant and its mineral processing would generate waste oil, aerosol cans, filters, etc. during plant overhaul and would generate general waste and solid scale. It is anticipated that no more than 25 tons per year of nonhazardous waste would be generated. Wastes that exceed CCR toxicity standards would be required to be trucked out of state to Arizona. If Arizona toxicity standards were to be exceeded, hazardous wastes would be sent to Idaho or Nevada. A summary of the different waste types is provided below.

Nonhazardous Solid Waste

Nonhazardous solid waste from construction activities may include lumber, excess concrete, metal, glass, scrap, and empty nonhazardous containers. Management of these wastes will be the responsibility of the construction contractors and would involve management practices such as recycling when required, proper storage of waste and debris to prevent wind dispersion, and weekly pickup and disposal to Class III landfills.

The total amount of nonhazardous solid waste to be generated by Project construction activities has been estimated to be up to about 1,794.5 tons (2.5 pounds per square foot), which is similar to that generated for normal commercial construction (USEPA 2007). Although the number of tons per cubic yard for construction waste varies by material, CalRecycle estimates that there are 2,400 pounds in 1 cubic yard of construction debris (asphalt or concrete, loose) (CalRecycle 2022a). Therefore, because 1,794.5 tons is equivalent to 3.6 million pounds, 3.6 million pounds is roughly equivalent to 1,495.4 cubic yards ($3.6 \text{ million} / 2,400 = 1,458$).

The total amount of nonhazardous solid waste to be generated by Project operational activities has been estimated to be up to 1,000 pounds per day (8.93 pounds per employee per day), or 365,058.4 pounds per year. Therefore, 365,058.4 pounds is equivalent to 152.1 cubic yards ($365,058.4 / 2,400 = 152.1$). Nonhazardous waste generated during operations is expected to be nominal because it would result from limited office waste and general refuse from employees.

Hazardous Wastes Meeting California Disposal Standards

Hazardous solid wastes may be generated over the course of construction as a result of empty hazardous material containers, spill cleanup wastes, and welding. Hazardous materials that are expected to be used during construction include paints, oil and lubricants, solvents, and welding materials. Used oil would be recycled, and oil or heavy metal contaminated materials (e.g., filters) requiring disposal would be transported to an off-site waste disposal facility that is authorized to accept such wastes. Scale from pipe and equipment cleaning operations would be disposed in a similar manner. Any hazardous wastes generated during Project construction and operations would be collected in hazardous waste accumulation containers near the point of generation and moved daily to the contractor's 90-day hazardous waste storage area or operational hazardous material storage area located on the Project site.

The accumulated waste would be subsequently delivered to an authorized Class I or Class II landfill authorized to accept the waste for proper disposal.

Construction-related hazardous materials that are expected to be used include:

- | | |
|--|--|
| <ul style="list-style-type: none"> ▪ Adhesives ▪ Diesel fuel ▪ Hydraulic fluids ▪ Lubricants | <ul style="list-style-type: none"> ▪ Oil ▪ Paint material ▪ Solvents ▪ Unleaded gasoline |
|--|--|

Operations-related hazardous materials that are expected to be used include:

- | | |
|---|--|
| <ul style="list-style-type: none"> ▪ Calcium oxide ▪ Diesel fuel ▪ Hydraulic fluid ▪ Hydrochloric acid (32% by weight) ▪ Manganese | <ul style="list-style-type: none"> ▪ Sodium hydroxide ▪ Sodium sulfide ▪ Transformer oil ▪ Unleaded gasoline |
|---|--|

The HKP1 facility may include transformer oil for transformer operation, lube oil for the turbine generator operation, diesel for generator fueling, and HCl (32% by weight). The transformer oil will be contained within the transformers; the lube oil will be stored on a skid. Diesel will be stored in a diesel storage tank with a capacity of approximately 3,000 gallons. Two polymer or fiber-reinforced plastic HCl tanks, with capacities of approximately 20,000 and 75,000 gallons, will store the HCl for the acid modification process. The HCl tanks will be fitted with scrubbers. All chemicals will be stored outdoors on impervious surfaces in aboveground storage tanks with secondary containment. The secondary containment areas for the bulk storage tanks will not have drains. Any chemical spill occurring in these areas will be removed with portable equipment and reused or disposed properly. Other chemicals will be stored and used in their delivery containers. The operator would sell manganese, and would be stored in indestructible containers for shipping.

The Project would generate no more than approximately 10 tons of hazardous wastes per year. The solid wastes would be hauled to either the Allied Imperial Landfill, Niland Solid Waste Site, or the Salton City Landfill located in the County, which have an approximate combined remaining capacity of 13,859,609 cy, as shown in Table 4.13-9. The Allied Imperial Landfill has approximately 12,384,000 cy of remaining capacity and is expected to remain in operation through 2040 (CalRecycle 2022b). Niland Solid Waste Site has approximately 211,439 cy of remaining capacity and is estimated to remain in operation through 2046 (CalRecycle 2022c). The Salton City Landfill has a remaining capacity of 1,264,170 cy as of 2018 and is expected to have sufficient capacity for the foreseeable future (CalRecycle 2022d). The Project represents approximately 0.3 percent of the remaining capacity of the three landfills, which would be considered nominal; therefore, the County has ample landfill capacity to receive the solid waste generated by the Project.

Table 4.13-9: County of Imperial Landfills Near the Project Site

Name of Landfill	Location	Permitted Capacity	Remaining Capacity	Class	Approximate Distance from Project Site
Niland Solid Waste Site	8450 Cuff Road Niland CA	318,673 cy	211,439 cy	III	4.5 miles northeast
Allied Imperial Landfill	104 East Robinson Road Imperial, CA	19,514,700 cy	12,384,000 cy	III	23 miles south

Salton Sea Solid Waste Facility	935 West Highway 86 Salton City, CA	65,100,000 cy	1,264,170 cy	III	32 miles northwest
---------------------------------	--	---------------	--------------	-----	--------------------

Sources: CalRecycle 2022b, CalRecycle 2022c, and CalRecycle 2022d

Hazardous Wastes Exceeding California Standards

As previously mentioned, it is estimated that 90 percent of filter cakes would fall below California thresholds for soluble threshold limit concentration (STLC) and total threshold limit concentration (TTLC). The remaining 10 percent, or approximately 4,178 cy, would exceed these standards and would be trucked to the Copper Mountain Landfill located at 34853 County 12th Street in Wellton, Arizona, approximately 96 miles southeast of the Project site. This landfill has a design capacity for 2.5 million megagrams. Although the remaining landfill capacity is not available, the amount of solid waste sent to this facility would be minimal. If the filter cakes were to exceed Arizona's toxicity standards which is not expected to occur, the Applicant will arrange for hazardous materials to be trucked to Idaho or Nevada.

As mentioned in Chapter 2: Project Description, approximately every three years the Project facilities will be shut down for about three weeks to complete a facility cleaning. This process would remove mineral scale from Project plant piping. The scale removed during this process has the potential to exceed STLC and TTLC standards for Arizona, in which case solid waste would be required to be trucked to Nevada. However, this is an extremely rare occurrence, and in the past 10 years only two truckloads have needed to be transported to Nevada. The implementation of the Proposed Project would not increase the amount of solid waste needing to go out of state.

Therefore, solid waste facilities have adequate permitted capacity for solid waste materials generated by the Project. Impacts would be less than significant.

Threshold e) Comply with federal, state, and local management and reduction statutes and regulations related to solid waste?

As discussed above, solid waste would be generated during construction and operation. Some construction waste would be recycled prior to the remainder of the waste being disposed of at the local landfill. The Proposed Project would be operated in a manner that would be consistent with all source reduction and recycling goals set forth by the City to achieve compliance with the applicable regulatory plans consistent with the City's obligations under AB 939, including the CIWMP for Imperial County, by appropriately distributing solid waste materials and recycling materials when feasible.

Disposal of solid/hazardous wastes generated during Project construction and operations would be in compliance with local federal, State, and County regulations and disposed of at authorized facilities. Therefore, a less than significant impact would occur.

4.13.6 Cumulative Impacts

Cumulative impacts are defined in CEQA as "two or more individual effects which, when considered together, are considerable or which compound or increase other environmental impacts" (CEQA Guidelines Section 15355). Stated in another way, "a cumulative impact consists of an impact which is created as a result of the combination of the project evaluated in the EIR together with other projects causing relating impacts" (CEQA Guidelines Section 15130 [a][1]).

The cumulative setting and geographic scope for water service is the IID water service area, which includes 10 cities and approximately 500,000 acres of agricultural, municipal, and industrial use (IID 2008). The cumulative setting for electrical service is also IID's service area, which encompasses almost all of Imperial County. Only a small portion of the northeast corner of the County receives service from Southern California Edison. For conservative purposes, this solid waste service area is assumed in this analysis to encompass the entire County of Imperial. As previously described above in Section 14.3.1: Existing Environmental Setting, the County has permitted eight landfills and contracts with private collection companies for solid waste pickup.

Other proposed, approved, and reasonably foreseeable projects in the region are identified in Table 3.0-1 in Chapter 3.0, Environmental Setting. All of these projects are located within the cumulative setting for water, electricity, and solid waste. Water for Project construction and operations represents 28 percent of the unallocated supply set aside in the IWSP for nonagricultural projects and approximately 28 percent of forecasted future nonagricultural water demands planned in the Imperial IRWMP through 2055. The amount of water available and the stability of the IID water supply, along with on-farm and system efficiency conservation and other measures being undertaken by IID and its customers, ensure that the Project's water needs will be met for the next 50 years. The electricity required for the mining facilities of the Project would be provided by the geothermal facilities, and would not operate independently.

Waste resulting from Project construction and operations is anticipated marginal when compared to the of the combined remaining capacity of the Allied Imperial Landfill, Niland Solid Waste, and Salton Sea Solid Waste Facility. Remaining capacity would be available for cumulative projects in the area.

Implementation of the Project, in combination with other proposed, approved, and reasonably foreseeable projects in the County of Imperial, would result in cumulative demand for water, electricity, and solid waste service and landfill capacity. However, similar to the Project, new development projects would be subject to County review to ensure that the existing public utility facilities would be adequate to meet the demands of each project; and individual projects would be subject to federal, State, and local requirements regarding infrastructure improvements needed to meet respective future demands. Implementation of related projects and other anticipated growth in Imperial County would not combine with the Proposed Project to result in cumulatively considerable impacts on utility and service systems.

4.13.7 Mitigation Measures

To minimize potential impacts to future water resources for the Project, the following mitigation measure shall be implemented:

UTIL-1: If the IID does not receive its annual 3.1 maf water apportionment according to the QSA obligations of Colorado River water during the Project's 30-year lifespan, the Applicant shall work with IID to ensure any reduction in water availability can be managed by the Project.

4.13.8 Level of Significance After Mitigation

With the implementation of Mitigation Measure UTIL-1, the Project would ensure potential impacts related to utilities, specifically water availability, would remain less than significant.

CHAPTER 5.0 – ALTERNATIVES ANALYSIS

5.1 INTRODUCTION AND OVERVIEW

CEQA requires that an EIR describe a range of reasonable alternatives to the Proposed Project, or to the location of the Proposed Project, which could feasibly avoid or lessen any significant environmental impacts while substantially attaining the basic objectives of the project. An EIR should also evaluate the comparative merits of the alternatives. This chapter describes potential alternatives to the Proposed Project that were considered, identifies alternatives that were eliminated from further consideration and reasons for dismissal, and analyzes available alternatives in comparison to the potential environmental impacts associated with the Proposed Project.

Key provisions of the CEQA Guidelines (§15126.6) pertaining to the alternatives analysis are summarized below:

- The discussion of alternatives shall focus on alternatives to the Proposed Project or its location that are capable of avoiding or substantially lessening any significant effects of the Proposed Project, even if these alternatives would impede to some degree the attainment of the Proposed Project objectives or would be more costly.
- The No Project Alternative shall be evaluated along with its impact. The No Project analysis shall discuss the existing conditions at the time the Notice of Preparation is published. Additionally, the analysis shall discuss what would be reasonably expected to occur in the foreseeable future if the Proposed Project were not approved, based on current plans and consistent with available infrastructure and community services.
- The range of alternatives required in an EIR is governed by a “rule of reason”; therefore, the EIR must evaluate only those alternatives necessary to permit a reasoned choice. Alternatives shall be limited to ones that would avoid or substantially lessen any of the significant effects of the Proposed Project.
- For alternative locations, only locations that would avoid or substantially lessen any of the significant effects of the Proposed Project need to be considered for inclusion in the EIR.
- An EIR need not consider an alternative whose effects cannot be reasonably ascertained and whose implementation is remote and speculative.

The range of feasible alternatives is selected and discussed in a manner to foster meaningful public participation and informed decision-making. Among the factors that may be taken into account when addressing the feasibility of alternatives are environmental impacts, site suitability, economic viability, availability of infrastructure, general plan contingency, regulatory limitation, jurisdictional boundaries, and whether the proponent could reasonably acquire, control, or otherwise have access to the alternative site. An EIR need not consider an alternative whose effects cannot be reasonably identified, whose implementation is remote or speculative, and that would not achieve the basic Project Objectives.

5.2 PROJECT OBJECTIVES

The HKP1 objectives include the following:

- To produce 49.9MW (net) of geothermal green energy from within CTR's geothermal lease area.
- To provide power to the Imperial Irrigation District and other potential off takers.
- To minimize and mitigate potential impacts to sensitive environmental resources while producing renewable energy and creating jobs.

The HKL1 objectives include the following:

- To provide a sustainable domestic source of lithium, a designated critical material identified by the U.S. Department of Energy.
- To extract and produce lithium hydroxide, silica, bulk sulfide, and polymetallic products for commercial sale from the geothermal brine within the Hell's Kitchen lease area
- To minimize the distance between the geothermal power plant and lithium extraction plant for production efficiency and to reduce the extent of pipeline required to convey brine and steam to and from the geothermal power facility to the mineral extraction plant, therefore minimizing the overall industrial footprint of the combined power and mineral operations
- To minimize and mitigate potential impacts to sensitive environmental resources within the Project area.

5.3 ALTERNATIVES CONSIDERED BUT REJECTED

Several alternatives could be considered for the Project which address the Project size or development of a similar project elsewhere in the Project area. A range of alternatives that are "reasonable" for analysis have been defined by the County and are discussed below in Section 5.4 Alternatives Analyzed. The following section describes alternatives or alternative concepts that were given consideration but rejected from further analysis in the EIR due to their infeasibility.

5.3.1 Reduced Project Size Alternative

The possibility of reducing the overall size of the Project was considered; however, this alternative was deemed infeasible. The Project has been designed using three different components crafted by three different companies, each having very specific parameters. Considering the components currently on market and available for sale to the Applicant, the current scale of the Project is the smallest system possible to execute Project objectives. The various vessels associated with the Project all have to match each other to ensure proper function of the facility and to uphold safety standards. Engineers have not been able to identify a feasible way to scale the Project down. As a result, the reduced Project alternative was considered but rejected from further review.

5.3.2 Other Project Location Alternative

The potential for relocating the Project to another site in the area was considered but deemed infeasible. Locations further from the Project site would require a longer pipeline system between facilities. Longer pipelines between the facilities would increase the industrial footprint, thus generating more impact and requiring additional facilities. would increase the travel time of post clarifier brine and depleted brine, increasing the cooling time of the brine during transfer. The chemistry required for mineral extraction is temperature-dependent; thus, increased cooling of the brine would not allow for the Project to operate

as required. As a result, the other Project location alternative was considered but rejected from further review.

5.4 ALTERNATIVES ANALYZED

In accordance with CEQA Guidelines Section 15126.6(d), each alternative is evaluated in sufficient detail to determine whether the overall environmental impacts would be less, similar, or greater than the corresponding impacts of the Project. Furthermore, each alternative is evaluated to determine whether the Project objectives would be substantially attained by the alternative.

5.4.1 No Project Alternative

Section 15126.6(e) of the CEQA Guidelines requires analysis of a No Project alternative that (1) discusses existing site conditions at the time the NOP is prepared or the Draft EIR is commenced and (2) analyzes what is reasonably expected to occur in the foreseeable future based on current plans if the Project were not approved. Potential effects for the No Project Alternative were compared to the environmental topics that were analyzed as a part of this Draft EIR.

The No Project Alternative would mean that the Project would not be constructed. No additional lithium, manganese, zinc, and other strategic minerals from geothermal brine would be processed for commercial sale and no additional supplemental supply of lithium for domestic use would be available. Under the No Project Alternative, the Project site would remain in its existing condition, which would mean a majority of the site would remain vacant.

Air Quality

Under the No Project Alternative, construction of the Project would not occur and the Project site would remain as it currently exists, mostly vacant. Moreover, long-term operational emissions would also be eliminated. Although the Proposed Project's air quality impacts would be less than significant, the potential impacts to air quality would be reduced under the No Project Alternative.

Biological Resources

The No Project Alternative would result in no change in conditions within the Project boundaries. While impacts under the Proposed Project would be less than significant with mitigation, as no construction is proposed, the No Project Alternative would avoid the need for pre-construction Burrowing Owl surveys. Like the Proposed Project, the No Project Alternative would not affect riparian habitat or other sensitive natural community, wetlands, wildlife corridors, or native wildlife nursery sites; conflict with local policies or ordinance protecting biological resources; or conflict with the provisions of a Habitat Conservation Plan. Although the Proposed Project's biological resource impacts would be less than significant with mitigation, impacts to biological resources under the No Project Alternative would be considered reduced compared to the Project.

Cultural

Under the No Project Alternative, no excavation and trenching would occur. Therefore, potential impacts to undiscovered human remains would have no potential to occur. Although the Proposed Project's cultural resources impacts would be less than significant, the potential impacts to cultural resources would be reduced under the No Project Alternative.

Energy

Under the No Project Alternative, the need for fuel and electricity for Project construction would not increase, as no construction would occur. The use of electricity, water, or natural gas during operations would not increase. As with the Proposed Project, impacts to energy would be less than significant; however, impacts would be reduced under the No Project Alternative.

Geology and Soils

Under the No Project Alternative, no new structures would be built, avoiding exposure to potential seismic hazards. Likewise, no impacts associated with seismic ground shaking, expansive soils, or paleontological resources would occur under the No Project Alternative. Although the Proposed Project's geology and soils impacts would be less than significant with mitigation, impacts to geology and soils under the No Project Alternative would be considered reduced compared to the Project.

Greenhouse Gas

Under the No Project Alternative, construction of the Project would not occur; and the Project site would remain as it currently exists, mostly vacant. Operational greenhouse gas impacts would not occur under the No Project Alternative. The Proposed Project's greenhouse gas impacts would be less than significant; however, the potential impacts to greenhouse gases would be reduced under the No Project Alternative.

Hazards and Hazardous Materials

The No Project Alternative would not involve the transport, use, and disposal of hazardous materials, as no construction or operation would occur. Although the Proposed Project's impacts related to hazards and hazardous materials would be less than significant, impacts associated with accidental release during hazardous materials transport, use, and disposal would be reduced under the No Project Alternative.

Hydrology and Water Quality

Under this Alternative, the Project site would remain in its current condition, and no grading or development would occur. Existing stormwater flows across the Project site would continue to occur, and the existing hydrologic and drainage patterns would remain unchanged. Changes to hydrology and water quality during construction of the Project would not occur, and no water would be required for construction or operation. While the Proposed Project would result in less than significant impacts, impacts under the No Project Alternative would be reduced when compared to those of the Proposed Project.

Noise

No short-term construction-related noise impacts would occur under the No Project Alternative, as no mineral extraction plant would be built. Noise impacts associated with the Proposed Project would be less than significant; however, under the No Project Alternative, impacts would be reduced when compared to the Project.

Transportation

No construction traffic would be generated in association with the No Project Alternative because no mineral extraction plant would be constructed. Additionally, fewer truck trips would occur under the No Project Alternative, resulting in less impacts and no need to mitigate the potential safety impact at the intersection of Highway 111 and McDonald Road. Although with mitigation, Project impacts to transportation would be less than significant, impacts under the No Project Alternative would be reduced when compared to the Project.

Tribal Cultural Resources

Under the No Project Alternative, the Project site would remain in its existing condition. Maintaining the site in its existing condition would not affect any Tribal Cultural Resources in the vicinity of the site. Additionally, no new ground-disturbing activities would occur; therefore, the potential to disturb or unearth human remains would be reduced when compared to the Proposed Project. Although the Proposed Project's Tribal Cultural Resource impacts would be less than significant, the potential impacts to Tribal Cultural Resources would be reduced under the No Project Alternative.

Utilities and Service Systems

Under the No Project Alternative, no new structures would be built, avoiding the need for new and expanded utility connections. Likewise, no impacts associated with water, electricity, stormwater, and solid waste would occur under the No Project Alternative. Neither the No Project Alternative nor the Project would result in unmitigable impacts to water, wastewater, natural gas, telecommunications, or solid waste. However, impacts to utility and service systems would be reduced under the No Project Alternative.

Conclusion and Relationship to Project Objectives

The No Project Alternative would not change existing conditions at the Project site. The No Project Alternative would result in mostly reduced environmental effects compared to the Proposed Project's less than significant impacts. However, under the No Project Alternative, impacts to transportation would be considered greater and potentially significant without the mitigation to install a northbound left-turn pocket lane to improve the current safety hazards at this intersection.

The No Project Alternative would not develop the site to fully utilize the existing geothermal operations. Additionally, the No Project Alternative would not help the County provide a supplemental domestic source of lithium, a designated critical material identified by the U.S. Department of Energy. Furthermore, by not producing lithium under the No Project Alternative, the need for lithium production to meet certain technical processing needs would remain and may result in future mining projects other than and potentially with greater impacts than the Proposed Project. While the No Project Alternative would also minimize and mitigate any potential impacts to sensitive environmental issues, the No Project Alternative would not meet any other Project objectives. The Project's objectives and the ability for the No Project Alternative to meet those objectives are summarized in Table 5.0-1.

Table 5.0-1: Comparison of Alternatives – Project Objectives

Project Objectives	Ability of Alternatives to Meet Project Objectives
	No Project
To produce 49.9MW (net) of geothermal green energy from within CTR's geothermal lease area.	Unable to meet Project objective.
To provide power to the Imperial Irrigation District and other potential off takers.	Unable to meet Project objective.
To minimize and mitigate potential impacts to sensitive environmental resources while producing renewable energy and creating jobs	Unable to meet Project objective.
To provide a sustainable domestic source of lithium, a designated critical material identified by the U.S. Department of Energy.	Unable to meet Project objective.
To extract and produce lithium hydroxide, silica, bulk sulfide, and polymetallic products for commercial sale from the geothermal brine within the Hell's Kitchen lease area.	Unable to meet Project objective.
To minimize the distance between the geothermal power plant and lithium extraction plant for production efficiency and to reduce the extent of pipeline required to convey brine and steam to and from the geothermal power facility to the mineral extraction plant, therefore minimizing the overall industrial footprint of the combined power and mineral operations.	Unable to meet Project objective.
To minimize and mitigate potential impacts to sensitive environmental resources within the Project area.	Unable to meet Project objective.

5.5 ENVIRONMENTALLY SUPERIOR ALTERNATIVE

As previously discussed, only one alternative was considered feasible and analyzed in this analysis. A comparison of the Project's impacts and the No Project Alternative impacts is shown in Table 5.0-2. The No Project Alternative would be considered the environmentally superior alternative, as it would avoid or reduce all of the potential impacts associated with construction and operation of the Project. The No Project Alternative would not meet most of the Project objectives including that it would not provide a sustainable domestic source of lithium, a designated critical material identified by the U.S. Department of Energy, (2) produce 49.9MW (net) of geothermal green energy from within CTR's geothermal lease area.; or (3) minimize the distance between the geothermal power plant and lithium extraction plant for production efficiency and to reduce the extent of pipeline required to convey brine and steam to and from the geothermal power facility to the mineral extraction plant, therefore minimizing the overall industrial footprint of the combined power and mineral operations. Furthermore, the No Project Alternative may result in future projects other than and potentially with greater impacts than the Proposed Project.

CEQA Guidelines requires that, if the No Project Alternative is determined to be the environmentally superior alternative, an environmentally superior alternative must also be identified among the remaining alternatives. However, reducing the Project size and relocating the Project to another site in the area were deemed to be infeasible alternatives. Thus, the only environmentally superior alternative identified is the No Project Alternative.

Table 5.0-2: Comparison of Environmental Issues

Environmental Issue Area	Project	No Project Alternative
Air Quality	Less than Significant	Reduced (Less than Significant)
Biological Resources	Less than Significant with Mitigation	Reduced (Less than Significant)
Cultural Resources	Less than Significant	Reduced (Less than Significant)
Energy	Less than Significant	Reduced (Less than Significant)
Geology and Soils	Less than Significant with Mitigation	Reduced (Less than Significant)
Greenhouse Gas	Less than Significant	Reduced (Less than Significant)
Hazards and Hazardous Materials	Less than Significant	Reduced (Less than Significant)
Hydrology and Water Quality	Less than Significant	Reduced (Less than Significant)
Noise	Less than Significant	Reduced (Less than Significant)
Transportation	Less than Significant with Mitigation	Reduced (Less than Significant)
Tribal Cultural Resources	Less than Significant	Reduced (Less than Significant)
Utilities and Service Systems	Less than Significant with Mitigation	Reduced (Less than Significant)

CHAPTER 6.0 – OTHER CEQA CONSIDERATIONS

This chapter presents the evaluation of other types of environmental impacts required by CEQA that are not covered within the other chapters of this Draft EIR. The other CEQA considerations include effects not found to be significant, irreversible environmental changes, growth-inducing impacts, and significant and unavoidable adverse impacts.

6.1 EFFECTS NOT FOUND TO BE SIGNIFICANT

This section includes information from the Initial Study that was prepared by Chambers Group in March 2022, which can be found in Appendix A: Initial Study (County 2022). In addition to the environmental impact thresholds analyzed in detail in this EIR, the County has determined through the preparation of an Initial Study that the development and operation of the Project would not result in potentially significant impacts to the environmental impact topics discussed below. Section 15128 of the CEQA Guidelines requires a brief description of any possible significant effects that were determined not to be significant and were not analyzed in detail within the environmental analysis. Therefore, this section has been included in this Draft EIR as required by CEQA.

The discussion below presents the analysis of the effects related to aesthetics, agriculture and forestry resources, hazards and hazardous materials, hydrology and water quality, land use and planning, mineral resources, noise, population and housing, public services, recreation, transportation, utilities, and wildfire not found to be significant. Any thresholds or topics not addressed in this section are addressed in Section 4.0: Environmental Impact Analysis of this Draft EIR.

6.1.1 Aesthetics

Threshold b) Substantially damage scenic resources, including, but not limited to trees, rock outcroppings, and historic buildings within a state scenic highway?

The Project is not located within the viewshed of any officially designated State scenic highways. HWY 111, which is approximately 3 miles east of the Project site, is listed by Caltrans as eligible for State scenic highway designation. However, the eligible section of HWY 111 is from Bombay Beach to the Imperial County–Riverside County line, approximately 13 miles northwest of the Project site at the closest point (Caltrans 2018), and the Project site is not visible from the eligible scenic-designated highway segment. Further, the Project site is void of any trees, rock outcrops, or historic buildings and, therefore, no scenic resources would be damaged as a result of the Project. No impacts would occur to scenic resources along a State scenic highway, and no further analysis is required.

Threshold d) Create a new source of substantial light or glare which would adversely affect day or nighttime views in the area?

As part of the Project design, industrial grade lighting sources would be required for Project operations and safety purposes. Lighting would be covered and directed downward (down shielded) or towards the proposed facility to avoid backscatter. Nighttime illumination features for the Project would be controlled with sensors or switches operated such that lighting would only be activated when needed. During construction of the Project, nighttime lighting would be required during the period of temporary nighttime construction. Nighttime construction would be temporarily required during the drilling of the HKP1 geothermal wells as well as times of extreme daytime heat, in which it would be safer to work during

cooler nighttime hours. The Project will introduce new structures built with metallic materials including transmission poles and conductors that could produce glare. However, the steel and metal alloy pipelines and vessels within the HKP1 and HKL1 will be painted and will not be a major source of glare. The Project is in a rural area of the County, with the closest residence approximately 1 mile east of the Project site on Pound Road. Davis Road is an unpaved road that typically does not experience through traffic. Therefore, workers and individuals visiting the Project would be the majority viewers of the glare or new light. Impacts related to increased light and glare from construction and operation of the proposed Project would be less than significant, and no further analysis is required.

6.1.2 Agricultural and Forest Resources

Threshold a) Convert Prime Farmland, Unique Farmland, or Farmland of Statewide Importance (Farmland), as shown on the maps prepared pursuant to the Farmland Mapping and Monitoring Program of the California Resources Agency, to non-agricultural use?

According to the California Department of Conservation's Farmland Mapping and Monitoring Program, the Project site is designated as "Other Land" (DOC 2022a). No Prime Farmland, Unique Farmland, or Farmland of Statewide Importance is located within or in proximity to the Project site. The County General Plan designates the Project site as Agriculture land use; however, according to the General Plan Land Use Element, a non-agricultural land use may be permitted within General Plan-designated agricultural land if the use does not conflict with agricultural operations and will not result in the premature elimination of agricultural operations (County 1993). There is no existing agricultural land on the Project site, thus the Project would not conflict with or eliminate agricultural operations. No impacts would occur and no further analysis is required.

Threshold b) Conflict with existing zoning for agricultural use, or a Williamson Act Contract?

The Project site is zoned S-1, S-2, and M-2 and is located within the geothermal overlay zone (G) and pre-existing allowed/restricted overlay zone (PE). No land within the Project site is zoned for agricultural use. The Project site is not subject to the provisions of a Williamson Act contract (DOC 2020). No impacts would occur and no further analysis is required.

Threshold c) Conflict with existing zoning for, or cause rezoning of, forest land (as defined in Public Resources Code section 12220(g)), timberland (as defined by Public Resources Code section 4526), or timberland zoned Timberland Production (as defined by Government Code Section 51104(g))?

Threshold d) Result in the loss of forest land or conversion of forest land to non-forest use?

As previously mentioned, the Project site is zoned S-1-G, S-2-G, and M-2-G-PE. No land within the Project site is zoned forest land or timberland and there is no existing forest land on the Project site or in the immediate vicinity. The Project would not result in the loss of forest land or the conversion of forest land to non-forest use; no impacts would occur and no further analysis is required.

Threshold e) Involve other changes in the existing environment which, due to their location or nature, could result in conversion of Farmland, to non-agricultural use or conversion of forest land to non-forest use?

The Project site is zoned S-1-G, S-2-G, and M-2-G-PE and does not contain agricultural land or forest land. The Project would not result in the conversion of agricultural land or forest land. No impacts would occur and no further analysis is required.

6.1.3 Geology and Soils

Threshold a) iv) Landslides?

The Project site is flat and is not located within an identified landslide zone (DOC 2022b). According to the County General Plan, the closest area of landslide activity is on the border of San Diego and Imperial Counties approximately 30 miles west of the Project site (County 1993). The Project would not exacerbate the risk of loss, injury, or death involving landslides. No impacts would occur and no further analysis is required.

Threshold b) Result in substantial soil erosion or the loss of topsoil?

Project construction and operations have the potential to result in soil erosion and loss of topsoil mainly through grading. Approximately 400,000 cubic yards of soil will be brought on site to raise the elevation of the Project site. Existing soil will be covered with aggregate and other materials that will be compacted to achieve final stabilization. The imported materials will be stabilized and will not be subject to erosion. Underlying topsoil would be covered with the aggregate and would not be subject to erosion. Additionally, the Project would implement standard industry methods, such as BMPs, to prevent surface runoff and erosion where applicable. These BMPs would comply with the County Building & Grading Regulations and the SWPPP developed for the Project. Moreover, a Drainage and Grading Plan will be submitted to the County to ensure implementation of all required BMPs. Impacts related to soil erosion would be less than significant and no further analysis is required.

6.1.4 Hazards and Hazardous Materials

Threshold c) Emit hazardous emissions or handle hazardous or acutely hazardous materials, substances, or waste within one-quarter mile of an existing or proposed school?

Although the Project has the potential to emit hazardous emissions and/or handle hazardous substances, the Project site is not within 0.25 mile of an existing or proposed school. The closest school to the Project site is Grace Smith Elementary School, approximately 4 miles northeast in Niland. Additionally, the Emergency Response Plan (ERP) that would be prepared and implemented for the Project will limit human risk associated with exposure to hazardous materials, with special consideration of the schools in the area. Impacts would be less than significant, and no further analysis is required.

Threshold d) Be located on a site, which is included on a list of hazardous materials site complied pursuant to Government Code Section 65962.5 and, as a result, would it create a significant hazard to the public or the environment?

According to the Department of Toxic Substance Control's EnviroStor Database and the State Water Resources Control Board's GeoTracker Database, there are no recorded hazardous material sites within a mile of the Project site (DTSC 2022; SWRCB 2022). The site is currently and has been, vacant undeveloped land. Therefore there is no impact and no further analysis is required.

Threshold e) For a project located within an airport land use plan or, where such a plan has not been adopted, within two miles of a public airport or public use airport, would the project result in a safety hazard or excessive noise for people residing or working in the project area?

The Project site is not located within two miles of a public airport or public use airport or within the boundaries of an airport land use plan. The closest airport is Calipatria Municipal Airport approximately 7 miles southeast of the Project site. Therefore, the Project would not expose people working in the Project area to safety hazards or excessive noise. No impact would occur and no further analysis is required.

Threshold f) Impair implementation of or physically interfere with an adopted emergency response plan or emergency evacuation plan?

Temporary or single-lane closure of Davis Road may occur during the transport of oversized equipment or construction activities. Road closures would be coordinated with County Public Works, the County Sheriff, and Imperial County Fire Department prior to closure. The Project is not located within an emergency evacuation route. Davis Road is currently impassible beyond the Project, and the road is not used for emergency evacuation. The Project's construction and operational activities would be in compliance with the Imperial County Emergency Operations Plan (EOP) and Multi-Jurisdiction Hazard Mitigation Plan (MJHMP) and would not physically interfere with the execution of the policies and procedures in these plans (County 2016 and 2021). Therefore, the Project would not impair implementation of or physically interfere with an adopted emergency response plan or emergency evacuation plan. Impacts would be less than significant, and no further analysis is required.

6.1.5 Hydrology and Water Quality

Threshold b) Substantially decrease groundwater supplies or interfere substantially with groundwater recharge such that the project may impede sustainable groundwater management of the basin?

The Project will not use groundwater as a source of water supply for construction or operation. The Project would involve dewatering of shallow groundwater during excavation and foundation construction. The short-term and localized dewatering of the areas of excavation and building foundations during construction would not decrease groundwater supplies or interfere substantially with groundwater management. The Project would convert an area that is currently undeveloped to a developed land use and would create approximately 50 acres of impervious surfaces. The increase in impervious surface would result in a small reduction of groundwater recharge; however, the limited rainfall on the area would flow to an unlined retention basin where the groundwater would be allowed to infiltrate into the soil. The impact on groundwater supplies and recharge would therefore be less than significant, and no further analysis is required.

Threshold c) Substantially alter the existing drainage pattern of the site or area, including through the alteration of the course of a stream or river or through the addition of impervious surfaces, in a manner which would:

- (i) result in substantial erosion or siltation on- or off-site;**
- (ii) substantially increase the rate or amount of surface runoff in a manner which would result in flooding on- or offsite;**

- (iii) create or contribute runoff water which would exceed the capacity of existing or planned stormwater drainage systems or provide substantial additional sources of polluted runoff; or;**
- (iv) impede or redirect flood flows?**

No rivers or streams travel through the Project site or are directly adjacent to the Project site. The Alamo River is approximately 2 miles southwest of the Project site and drains to the Salton Sea. Although Project construction and operations would have the potential to result in soil erosion and runoff on and offsite due to grading and increased impervious surfaces, through implementation of a SWPPP and a Drainage and Grading Plan, the Project would implement standard industry BMPs and relevant Basin BMPs to control off-site discharges. Additionally, a stormwater retention basin would be developed on the site. In order to prevent substantial erosion resulting from high winds in the area, a Fugitive Dust Suppression Plan will be prepared and the Project site will be watered as necessary. The site will be permanently stabilized during operation through use of aggregate, gravel, concrete, or other stabilizing materials.

The Project site is not located within a Federal Emergency Management Agency (FEMA) Flood Hazard Zone (FEMA, 2022; FIRM Map Number 06025C0725C). Additionally, a berm/levee will run along the western boundary of the site to contain any stormwater runoff and prevent stormwater run on.

With implementation of BMPs and construction of a new retention basin, substantial erosion and runoff on and offsite is not expected. Less than significant impacts would occur and no further analysis is required.

Threshold d) In flood hazard, tsunami, or seiche zones, risk release of pollutants due to project inundation?

As mentioned above, the Project site is not within a FEMA Flood Hazard Zone. The Project site is one mile east of the Salton Sea, which is a potential source of seiche. According to the County General Plan's Seismic and Public Safety Element, a seiche at the Salton Sea could occur under the appropriate seismic conditions, but there have been a number of seismic events with no significant seiches occurring to date (County 1993); therefore, a seiche is not expected to impact the Project site and cause discharge of pollutants. Further, all dams within the County are approximately 65 miles east of the Project site, and the Project site is approximately 100 miles from the coast of the Pacific Ocean. Thus, there is no risk of dam inundation or tsunami within the Project site. The impact from a seiche would be less than significant, and no further analysis is required.

Threshold e) Conflict with or obstruct implementation of a water quality control plan or sustainable groundwater management plan?

As discussed above, implementation of a SWPPP and a Drainage and Grading Plan would ensure the Project would implement standard industry BMPs and relevant Basin BMPs to control off-site discharges. Additionally, a stormwater retention basin would be developed on the site. The Project will not allow any offsite discharges that could violate water quality standards or waste discharge requirements, or otherwise substantially degrade surface or ground water quality. Additionally, all water required for the Project would be purchased from the IID, and IID operates no water wells or groundwater recharge areas (IID 2018). Impacts would be considered less than significant and no further analysis is required.

6.1.6 Land Use and Planning

Threshold a) Physically divide an established community?

The Project is located in a rural area approximately 3.6 miles west of Niland, CA, which is the closest nearby community. The gen-tie line required by the Project would utilize existing transmission ROW, and traverse the existing area but would not physically divide the area for approximately 2.3 miles southeast. There are no residences in close proximity to the Project site; thus, the Project would not physically divide an established community and no impacts would occur and no further analysis is required.

Threshold b) Cause a significant environmental impact due to a conflict with any land use plan, policy, or regulation adopted for the purpose of avoiding or mitigating an environmental effect?

The power and lithium production facilities are located in an area that is zoned S-1-G (open space / geothermal overlay), S-2-G (open space/preservation/geothermal overlay) (S-1-G) and M-2-G-PE (medium industrial/geothermal overlay) and has an Agricultural land use. S-1-G, S-2-G, and M-2-G-PE allow geothermal exploration with a conditional use permit (CUP). Although S-2-G is for preservation only a well pad would be on the site along with a portion of the S-Berm/Extension Road which are allowed uses. The County Land Use Ordinance, Division 17, includes the Renewable Energy (RE) Overlay Zone, which authorizes the development and operation of renewable energy projects, with an approved conditional use permit (CUP). According to the General Plan Land Use Element, a non-agricultural land use may be permitted within General Plan-designated agricultural land if the use does not conflict with agricultural operations and will not result in the premature elimination of agricultural operations (County 1993). As analyzed in Section II, Agriculture and Forest Resources above, there is no existing agricultural land on the Project site and the land is not designated as Prime Farmland, Unique Farmland, or Farmland of Statewide Importance by the Department of Conservation. The mineral extraction is associated with the geothermal extraction and would be compatible with the geothermal overlay. Implementation of the Project would require the approval of a CUP by the County to allow for the construction and operation of the proposed geothermal and mineral extraction facility on land designated as agriculture. With obtaining a CUP, the Project would be consistent with the land use plan; therefore, impacts would be less than significant and no further analysis is required.

6.1.7 Mineral Resources

Threshold a) Result in the loss of availability of a known mineral resource that would be of value to the region and the residents of the state?

Threshold b) Result in the loss of availability of a locally-important mineral resource recovery site delineated on a local general plan, specific plan or other land use plan?

Although there are geothermal resources and minerals underlying the Project, there are no designated mineral resource zones or mineral resource recovery sites within the vicinity of the Project site (DOC 2022c). There are a number of mines along the Chocolate Mountain Range to the east, but the closest is approximately 5.3 miles from the Project site (DOC 2022d). Additionally, a part of this Project is a geothermal brine processing plant that would produce commercial-grade lithium hydroxide, silica, bulk sulfide, and polymetallic products, increasing the availability of these mineral resources. In utilizing the waste stream to produce these mineral resources, the Project actually represents a gain in the availability

of these resources. The Project would be in alignment with the County General Plan's Renewable Energy and Transmission Element, Objective 3.2, which states that the County should "encourage the continued development of the mineral extraction/production industry for job development using geothermal brines from the existing and future geothermal flash power plants" (County, 1993). No known mineral resources or mineral resource recovery sites would be lost as a result of the Project; thus, no impacts would occur and no further analysis is required.

6.1.8 Noise

Threshold b) Generation of excessive groundborne vibration or groundborne noise levels?

Groundborne vibration and groundborne noise could originate from earth movement during the construction phase of the Project and during pile-driving for foundation installation. There are no structures or sensitive receptors in proximity to the Project site with the nearest residence being half mile southeast of the Project site, and vibration attenuates rapidly with distance. Due to the distance between the Project and the nearest structure, the Project would not generate vibration that would be a nuisance or cause damage to any structures. The Project would be expected to comply with all applicable requirements for long-term operation, as well as with measures to reduce excessive groundborne vibration and noise to ensure that the Project would not expose persons or structures to excessive groundborne vibration. The impact from vibration would be less than significant, and no further analysis is required.

Threshold c) For a project located within the vicinity of a private airstrip or an airport land use plan or where such a plan has not been adopted, within two miles of a public airport or public use airport, would the project expose people residing or working in the project area to excessive noise levels?

The Project site is not located within two miles of a public airport or public use airport. The closest airport is Calipatria Municipal Airport, approximately 7 miles southeast of the Project site. Therefore, the Project would not expose people working in the Project area to excessive noise levels. No impact would occur, and no further analysis is required.

6.1.9 Population and Housing

Threshold a) Induce substantial unplanned population growth in an area, either directly (for example, by proposing new homes and business) or indirectly (for example, through extension of roads or other infrastructure)?

The Project involves construction and operation of a geothermal power plant and a geothermal brine processing plant and does not propose the development of any permanent housing on site. Temporary housing will be provided on site for the well drilling crew that will be working 24 hours a day for approximately 6 months; however, the temporary housing will be removed once the well-drilling phase is complete. The Project operation would require approximately 112 full-time employees who are expected to live in and commute from the local surrounding communities. Therefore, the Project is not anticipated to induce population growth directly or indirectly; thus, impacts would be less than significant, and no further analysis is required.

Threshold b) Displace substantial numbers of existing people or housing, necessitating the construction of replacement housing elsewhere?

The Project development site is approximately 65 acres and is not zoned for housing. There are no residences within the Project site or and the closest residence is a single residence more than half mile away; thus, no existing people or housing would be displaced as a result of the Project. No impacts would occur, and no further analysis is required.

6.1.10 Public Services

Threshold a) Would the project result in substantial adverse physical impacts associated with the provision of new or physically altered governmental facilities, need for new or physically altered governmental facilities, the construction of which could cause significant environmental impacts, in order to maintain acceptable service ratios, response times or other performance objectives for any of the public services:

i) Fire Protection?

Fire protection and emergency medical services in the Project area are provided by the Imperial County Fire Department (ICFD). The closest station to the Project site is the Niland Station, approximately 4 miles east, or an approximately 9-minute drive (Google, 2022). During construction, the Project site will be cleared of all vegetation and cleared areas will be maintained throughout construction. Fire extinguishers will also be available around the construction site. In case of emergency response during operations, Project access from Davis Road would have turnaround areas to allow clearance for fire trucks per fire department standards. In addition, a 100,000-gallon water storage tank will be located on site for fire-water storage. The fire protection system will consist of a fire main and surface distribution equipment such as yard hydrants and hose houses, monitors around the perimeter of the cooling tower, automatic sprinklers for the turbine generator and auxiliary equipment, and a complete detection and alarm system. The firewater supply and pumping system will provide an adequate quantity of fire-fighting water.

All fire suppression systems will be designed in accordance with federal, State, and local fire codes; OSHA regulations; and other jurisdictional codes, requirements, and standard practices. The ICFD will be consulted to review and approve any and all proposed fire equipment, apparatus, and related fire prevention plans. Acceptable service ratios and response times for fire protection will be maintained following Project implementation through consultation with the ICFD and the County. Impacts would be less than significant, and no further analysis is required.

ii) Police Protection?

Police protection services in the area are provided by the Imperial County Sheriff's Department. The closest police station to the Project site is the Imperial County Sheriff's office in Niland, approximately 4 miles east, or an approximately 10-minute drive (Google 2022). The increase in construction related traffic is not anticipated to significantly increase demand on law enforcement services due to the rural nature of the Project vicinity. Additionally, the Project site would have a security fence around the Project site and include obscured fencing around processing areas. In addition, approximately 112 full-time employees will be on site 24 hours a day, 7 days a week during operations of the Project, thereby minimizing the need for police surveillance.

The workforce for the Project would come from surrounding areas, and the Project workforce would not create a new demand for police protection. Impacts would be less than significant, and no further analysis is required.

- iii) **Schools?**
- iv) **Parks?**
- v) **Other Public Facilities?**

It is estimated that there will be up to 500 workers traveling to the Project site during peak construction and approximately 112 full-time employees during operations. It is expected that most of these workers/employees will commute to the Project site from surrounding communities. Therefore, substantial increases in population that will adversely affect local schools, parks, or other public facilities are not anticipated. No impacts would occur, and no further analysis is required.

6.1.11 Recreation

Threshold a) Would the project increase the use of the existing neighborhood and regional parks or other recreational facilities such that substantial physical deterioration of the facility would occur or be accelerated?

Threshold b) Does the project include recreational facilities or require the construction or expansion of recreational facilities which might have an adverse effect on the environment?

There are no parks or other developed federal, State, or County recreational facilities in the Project area or immediate vicinity. Further, the Project involves the construction of a geothermal power plant and brine processing plant and would not construct any recreational facilities. It is estimated that there will be up to 500 workers at the Project site during peak construction and approximately 112 full-time employees during operations. These construction workers and employees are expected to come from existing populations that live in and commute from the surrounding local communities. Therefore, the Project would not cause an increase in population that would result in physical deterioration of existing recreational facilities. No impacts would occur, and no further analysis is required.

6.1.12 Transportation

Threshold c) Substantially increases hazards due to a geometric design feature (e.g., sharp curves or dangerous intersections) or incompatible uses (e.g., farm equipment)?

Threshold d) Result in inadequate emergency access?

The Project would not increase hazards due to a design feature nor impact emergency access. For emergency response, the Project access road on Davis Road would have turnaround areas to allow clearance for fire trucks per fire department standards: approximately 70 feet by 70 feet, and 20-foot-wide. The County Department of Public Works, the County Sheriff, and ICFD will be consulted as necessary to ensure that any potential impacts to the public or emergency services traveling on Davis Road during Project construction or operations would be minimized. Impacts would be less than significant, and no further analysis is required.

6.1.13 Utilities

Threshold c) Result in a determination by the wastewater treatment provider which serves or may serve the project that it has adequate capacity to serve the project's projected demand in addition to the provider's existing commitments?

Wastewater, including non-process wash water and sanitary waste, will be generated during facility operations. Sanitary drains will collect all sanitary waste and non-process wash water and discharge to an appropriately sized and County-approved septic system. The septic system will be engineered and operated to meet County Environmental Health requirements. The project would not affect wastewater treatment capacity. A less than significant impact would occur, and no further analysis is required.

6.1.14 Wildfire

Threshold a) Substantially impair an adopted emergency response plan or emergency evacuation plan?

As mentioned in Section IX Hazards and Hazardous Materials above, CALFIRE's Fire Hazard Severity Zone Viewer identifies no very high, high, or moderate fire hazard severity zones in the local or state responsibility areas within 30 miles of the Project site (CALFIRE 2022). Additionally, as mentioned in Section XV Public Services, all fire suppression systems will be designed in accordance with federal, state, and local fire codes; occupational health and safety regulations; and other jurisdictional codes, requirements, and standard practices. The ICFD will also be consulted to review and approve any and all proposed fire equipment, apparatus, and related fire prevention plans. Compliance with local emergency response and evacuation plans, including the EOP and MJHMP, will be maintained through consultation with the ICFD and the County. Impacts would be less than significant and no further analysis is required.

Threshold b) Due to slope, prevailing winds, and other factors, exacerbate wildfire risks, and thereby expose project occupants to pollutant concentrations from a wildfire or the uncontrolled spread of a wildfire?

As mentioned above, CALFIRE does not have any designated very high, high, or moderate fire hazard severity zones in the local or state responsibility areas within 30 miles of the Project site (CALFIRE 2022). The Seismic and Public Safety Element of the County General Plan also states that the potential for a major fire in the unincorporated areas of the County is generally low (County 1993). Moreover, the Project site is flat and is not within an area of risk due to slope. Although the County has experienced damage from heavy winds in the past, hazards in the County are managed by the MJHMP which is reviewed and updated every 5 years (County 2021). Further, during construction the Project site and access road will be cleared of all vegetation and cleared areas will be maintained throughout construction. Fire extinguishers will be available around the construction site as well. During operations, a brush control program will be prepared and implemented on those portions of the Project site that will not be developed. Hazardous materials onsite during operations may be flammable, but fire suppression systems will be installed and the ICFD will be consulted to review and approve any and all proposed fire equipment, apparatus, and related fire prevention plans. Thus, employees onsite would not be exposed to pollutant concentrations from a wildfire. Impacts would be less than significant and no further analysis is required.

Threshold c) Require the installation or maintenance of associated infrastructure (such as roads, fuel breaks, emergency water sources, power lines or other utilities) that may exacerbate fire risk or that may result in temporary or ongoing impacts to the environment?

CAL FIRE maps note that no very high, high, or moderate fire hazard severity zones in the local or State responsibility areas are within 30 miles of the Project site (CAL FIRE 2020). To prevent fire-related impacts on the Project site, the Project access road off Davis Road would be constructed with turnaround areas; a 100,000-gallon fire-fighting water storage tank will be constructed; and fire protection system will be installed. These features would help fire suppression and would not exacerbate fire risk. Further, these features will be constructed/installed and maintained within previously disturbed areas of the Project site in accordance with federal, State, and local fire codes; occupational health and safety regulations; and other jurisdictional codes, requirements, and standard practices. No significant environmental impacts would result. Impacts would be less than significant, and no further analysis is required.

Threshold d) Expose people or structures to significant risks, including downslope or downstream flooding or landslides, as a result of runoff, post-fire slope instability, or drainage changes?

The Project site is flat and is not located within an identified landslide zone (DOC 2022b). According to the County General Plan, the closest area of landslide activity is on the border of San Diego and Imperial Counties, approximately 30 miles west of the Project site (County 1993). As described in Section X Hydrology and Water Quality, flooding on site would be prevented by the flood protection berm on the western sides of the Project site. The Project would not expose people or structures to significant risks as a result of runoff, post fire instability, or drainage changes. Impacts would be less than significant, and no further analysis is required.

6.2 IRREVERSIBLE ENVIRONMENTAL CHANGES

According to CEQA Guidelines, “[u]ses of nonrenewable resources during the initial and continued phases of the project may be irreversible since a large commitment of such resources makes removal or nonuse thereafter unlikely. Primary impacts and, particularly, secondary impacts (such as highway improvement which provides access to a previously inaccessible area) generally commit future generations to similar uses. Also, irreversible damage can result from environmental accidents associated with the project. Irretrievable commitments of resources should be evaluated to assure that such current consumption is justified.” Therefore, the purpose of this analysis is to identify any significant irreversible environmental effects of Project implementation that cannot be avoided.

Energy resources needed for the construction and operation of the Project would contribute to the incremental depletion of renewable and nonrenewable resources. Resources, such as timber used in building construction are generally considered renewable and would ultimately be replenished. Nonrenewable resources, such as petrochemical construction materials, steel, copper, lead and other metals, gravel, concrete, and other materials, are typically considered finite and would not be replenished over the lifetime of the Project.

Although the Project is a mineral extraction project, the Project would use geothermal brine to produce quantities of lithium hydroxide, silica, bulk sulfide, and other minerals for commercial sale. Geothermal energy generation, which involves the extraction of geothermal brine, is considered a renewable process because its source is the almost unlimited amount of heat generated by the Earth's core. Even in

geothermal areas dependent on a reservoir of hot water, the volume taken out can be reinjected, making it a sustainable energy source. This is the case for the Project site, as spent process fluid will be reinjected into the geothermal resource; thus, the geothermal brine used for mineral extraction is considered a renewable resource, and no mineral resources would be depleted as a result of the Project. IID has met or exceeded all Renewable Portfolio Standard requirements to date, procuring renewable energy from diverse sources, including biomass, biowaste, geothermal, hydroelectric, solar, and wind. Nevertheless, according to IID's 2018 Integrated Resource Plan, only 35 percent of IID's overall generation delivered to customers was from renewable energy sources; and that number is anticipated to reach only 50 percent by 2030 (IID 2018c).

At the end of the Project's operation term, the Applicant may determine that the Project should be decommissioned and deconstructed. Should the Project be decommissioned, the Project Applicant is required to restore land to its pre-project state. Consequently, some of the resources on the site could potentially be retrieved after the site has been decommissioned. Concrete footings, foundations, and pads would be removed and recycled at an offsite location. All remaining components would be removed, and all disturbed areas would be reclaimed and recontoured. The Applicant anticipates using the best available recycling measures at the time of decommissioning.

6.3 GROWTH-INDUCING IMPACTS

Pursuant to Section 15126.2 of the CEQA Guidelines: an EIR must address whether a project will directly or indirectly foster growth as follows:

[An EIR shall] discuss the ways in which the Proposed Project could foster economic or population growth, or the construction of additional housing, either directly or indirectly, in the surrounding environment. Included in this are projects which would remove obstacles to population growth (a major expansion of wastewater treatment plant, might, for example, allow for more construction in service areas). Increases in the population may further tax existing community service facilities so consideration must be given to this impact. Also, discuss the characteristic of some projects, which may encourage and facilitate other activities that could significantly affect the environment, either individually or cumulatively. It must not be assumed that growth in any area is necessarily beneficial, detrimental, or of little significance to the environment.

As discussed below, this analysis evaluates whether the Project would directly or indirectly induce economic, population, or housing growth in the surrounding environment.

6.3.1 Direct Growth-Inducing Impacts

Direct growth-inducing impacts occur when the development of a project induces population growth or the construction of additional developments in the same area of a proposed project and produces related growth-associated impacts. Growth-inducing projects remove physical obstacles to population growth, such as the construction of a new road into an undeveloped area, a wastewater treatment plant expansion, and projects that allow new development in the service area.

If the growth is not consistent with or accommodated by local land use plans and growth management plans and policies for the area affected, then the growth inducement may constitute an adverse impact. Local land use plans provide for land use development patterns and growth policies that allow for the

orderly expansion of urban development supported by adequate urban public services. A project that would conflict with the local land use plans (i.e., “disorderly” growth) could indirectly cause additional adverse environmental impacts and other public services impacts. To assess whether a growth-inducing project would result in adverse secondary effects, the growth accommodated by a project must be assessed to determine if it would or would not be consistent with applicable land use plans.

The Project involves construction and operation of a plant to extract lithium hydroxide, silica, bulk sulfide, and other commercially viable substances from geothermal brine. The Project would not include the construction of any housing and would not involve the development of any new public roadways, new water systems, or sewer. Therefore, the Project would not further facilitate additional development into outlying areas.

The County General Plan designates the Project site as Agriculture land use; however, according to the General Plan Land Use Element, a nonagricultural land use may be permitted within General Plan-designated agricultural land if the use does not conflict with agricultural operations and will not result in the premature elimination of agricultural operations (County 2015a). No agricultural land exists on the Project site; thus, the Project would not conflict with or eliminate agricultural operations. The Project site is zoned Open Space (S-1-G), Open Space Preservation (S-2-G), Medium Industrial (M-2-G-PE) and is located within the geothermal overlay zone (G) and pre-existing allowed/restricted overlay zone (PE).

6.3.2 Indirect Growth-Inducing Impacts

CEQA Guidelines also specify that the environmental effects of induced growth are considered indirect impacts of the Proposed Project. The additional demand for housing, commodities, and services that new development causes or attracts by increasing population in the area are examples of indirect growth-inducing impacts or secondary effects of growth.

Indirect growth-inducing impacts typically include substantial new, permanent employment opportunities that can result from a project. The Project is located within the unincorporated area of Imperial County, and it does not involve the development of permanent residences that would directly result in population growth in the area. Approximately 200 to 250 workers are anticipated to be required at peak periods of Project construction. Beginning with startup operations, the Project is expected to be operated by a total staff of approximately 112 full-time, onsite employees. The unemployment rate in Imperial County as of December 2020 was 17.7 percent with 11,900 people unemployed (EDD 2021). The Applicant expects to utilize available workers from the local and regional area. Based on the unemployment rate and the availability of the local workforce, the Project would not have a growth-inducing effect related to workers moving into the area and increasing the demand for housing and services.

6.4 SIGNIFICANT UNAVOIDABLE ENVIRONMENTAL IMPACT

The potentially adverse effects of the Project are discussed in Chapter 3.0 of this Draft EIR. Mitigation measures have been recommended that would reduce impacts to biological resources, geology and soils, hazards and hazardous materials, utilities and service systems, and transportation impacts to less than significant based on each set of significance criteria. No significant and unavoidable impacts to any environmental resources would occur.

CHAPTER 7.0 – REFERENCES

The following is a list of references used in the preparation of this document.

American Elements

- 2021 Iron Silicate. Accessed March 2021. Available online at:
<https://www.americanelements.com/iron-silicate-13478-48-3>

Baldwin, B.G., D.H. Goldman, D.J. Keil, R. Patterson, T.J. Rosatti, and D.H. Wilken (editors)

- 2012 *The Jepson Manual: Vascular Plants of California, Second Edition*. University of California Press, Berkeley, CA.

Barbour, M.G., J.H. Burk, W.D. Pitts, F.S. Gilliam, and M.W. Schwartz

- 1999 *Terrestrial Plant Ecology, Third Edition*. Addison Wesley Longman, Inc. Menlo Park, California.

Bean and Lawton

- 1973 Some Explanations for the rise of Cultural Complexity in Native California with Comments on Proto-Agriculture and Agriculture. In *Native Californians: A Theoretical Perspective*, edited by Lowell J. Bean and Thomas C. Blackburn, pp. 19-48. Ballena Press, Socorro, New Mexico.

California Air Pollution Control Officers Association (CAPCOA)

- 2008 CEQA & Climate Change. Available Online at: <http://www.capcoa.org/wp-content/uploads/2012/03/CAPCOA-White-Paper.pdf>
- 2017 California Emissions Estimator Model User's Guide. Available Online at: http://www.aqmd.gov/docs/default-source/caleemod/01_user-39-s-guide2016-3-2_15november2017.pdf?sfvrsn=4

California Air Resources Board (CARB)

- 2008 Climate Change Scoping Plan. Available Online at: <https://ww2.arb.ca.gov/our-work/programs/ab-32-climate-change-scoping-plan/2008-scoping-plan-documents>
- 2009 Staff Report: Initial Statement of Reasons for Rulemaking. Available Online at: <https://www.arb.ca.gov/regact/2009/ghgpv09/ghgpvisor.pdf>
- 2017 California's 2017 Climate Change Scoping Plan. Available Online at: https://www.arb.ca.gov/cc/scopingplan/scoping_plan_2017.pdf
- 2020 Current California GHG Emission Inventory Data. <https://www.arb.ca.gov/cc/inventory/data/data.htm>. Accessed April 2023.

California Department of Conservation (DOC)

- 2018 The Williamson Act Status Report 2016-17. Available online at: https://www.conservation.ca.gov/dlrp/wa/Documents/stats_reports/2018%20WA%20Status%20Report.pdf.
- 2020a California Important Farmland Finder. Accessed October 2020. Available online at: <https://maps.conservation.ca.gov/DLRP/CIFF/>.

- 2020b Earthquake Zones of Required Investigation. Accessed October 2020. Available online at: <https://maps.conservation.ca.gov/cgs/EQZApp/app/>.
- 2020c Mines Online. Accessed October 2020. Available online at: <https://maps.conservation.ca.gov/mol/index.html>.
- 2021a Well Finder Database. Accessed February 2021. Available online at: <https://maps.conservation.ca.gov/doggr/wellfinder/#openModal/-115.57210/33.20239/16>.
- 2021b Earthquake Zones of Required Investigation. Accessed February 2021. Available online at: <https://maps.conservation.ca.gov/cgs/EQZApp/app/>.

California Department of Fish and Wildlife (CDFW)

- 2012 California Department of Fish and Wildlife, Natural Resources Agency. Staff Report on Burrowing Owl Mitigation. March 7, 2012.
- 2020 California Natural Diversity Database (CNDDDB). RareFind Version 3.1.0. Database Query for the *Niland, Obsidian Butte, Westmorland West, Westmorland East, West, Iris, Iris Wash, Wister, and Frink*, California USGS 7.5-minute quadrangles. Wildlife and Habitat Data Analysis Branch.

California Department of Forestry and Fire Protection (CAL Fire)

- 2022 Fire Hazard Severity Zone Viewer. Accessed February 2023. Available online at: <https://egis.fire.ca.gov/FHSZ/>.

California Department of Resources Recycling and Recovery (CalRecycle)

- 2019 Multi-Year Countywide Origin Summary. Available online at: <https://www2.calrecycle.ca.gov/LGCentral/DisposalReporting/Origin/CountywideSummary>.
- 2021a Solid Waste Cleanup Program Weights and Volumes for Project Estimates. Accessed March 2021. Available online at: <https://www.calrecycle.ca.gov/swfacilities/cdi/tools/calculations>.
- 2021b SWIS Facility/Site Activity Details: Imperial Landfill (13-AA-0019). Accessed March 2021. Available online at: <https://www2.calrecycle.ca.gov/SolidWaste/SiteDocument/Index/603>.
- 2021c SWIS Facility/Site Activity Details: Niland Solid Waste Site (13-AA-0009). Accessed March 2021. Available online at: <https://www2.calrecycle.ca.gov/SolidWaste/SiteActivity/Details/4184?siteID=596>.
- 2021d SWIS Facility/Site Activity Details: Salton City Solid Waste Site (13-AA-0011). Accessed March 2021. Available online at: <https://www2.calrecycle.ca.gov/SolidWaste/SiteActivity/Details/4186?siteID=598>.

California Department of Transportation (Caltrans)

- 2023 California State Scenic Highway System Map. Available online at : <https://caltrans.maps.arcgis.com/apps/webappviewer/index.html?id=465dfd3d807c46cc8e8057116f1aaca>
- 2013 Transportation and Construction Vibration Guidance Manual. Available Online at: http://www.dot.ca.gov/hq/env/noise/pub/TCVGM_Sep13_FINAL.pdf.

- 2019 List of eligible and officially designated State Scenic Highways (XLSX). Available online at: <https://dot.ca.gov/programs/design/lap-landscape-architecture-and-community-livability/lap-liv-i-scenic-highways>.

California Department of Water Resources (DWR)

- 2019 Sustainable Groundwater Management Act. Available online at: https://www.emwd.org/sites/default/files/file-attachments/sgma_basin_prioritization_2019_results.pdf?1559164669.

California Energy Commission (CEC)

- 2018 2017 California Annual Retail Fuel Outlet Report Results (CEC-A15), Energy Assessments Division. Available online at: https://ww2.energy.ca.gov/almanac/transportation_data/gasoline/2010-2017_A15_Results.xlsx. Published September 27, 2018.
- 2019 Electricity Consumption by Entity query for Imperial Irrigation District, 2019. Accessed April 2021. Available online at: <http://www.ecdms.energy.ca.gov/elecbyutil.aspx>.
- 2021a Electricity Consumption by County. Accessed March 2021. Available online at: <http://www.ecdms.energy.ca.gov/elecbycounty.aspx>.
- 2021b Gas Consumption by County. Accessed March 2021. Available online at: <http://www.ecdms.energy.ca.gov/gasbycounty.aspx>.
- 2021c Gas Consumption by Planning Area. Accessed March 2021. Available online at: <http://www.ecdms.energy.ca.gov/elecbyplan.aspx>.

California Native Plant Society (CNPS)

- 2020 Electronic Inventory (CNPSEI) of Rare and Endangered Vascular Plants (online edition) of California for *Niland*, *Obsidian Butte*, *Westmorland West*, *Westmorland East*, *West*, *Iris*, *Iris Wash*, *Wister*, and *Frink*, California USGS 7.5-minute quadrangles. Rare Plant Scientific Advisory Committee, California Native Plant Society, Sacramento, California. Accessed December 2020. Available online at: <http://www.cnps.org/inventory>.

California Regional Water Quality Control Board (RWQCB)

- 2021a Basin Planning, About the Basin. Accessed April 2021. Available online at: https://www.waterboards.ca.gov/coloradoriver/water_issues/programs/basin_planning/.
- 2021b Storm Water Program. Accessed April 2021. Available online at: https://www.waterboards.ca.gov/coloradoriver/water_issues/programs/stormwater/.

Castetter and Bell

- 1951 Yuman Indian Agriculture: Primitive Subsistence on the Lower Colorado and Gila Rivers. University of New Mexico Press. Castillo, Edward D.
- 1978 The Impact of Euro-American Exploration and Settlement. In *Handbook of North American Indians, Volume 8, California*, edited by R.F. Heizer, pp. 99-127. William C. Sturtevant, general editor. Smithsonian Institution, Washington D.C.

Chambers Group, Inc. (Chambers Group)

- 2021 *Archaeological and Paleontological Assessment Report for the Energy Source Mineral, LLC Project, Calipatria, Imperial County, California*. Prepared for County of Imperial. January.

City of Calipatria (Calipatria)

- 2018 Calipatria Service Area Plan. Available online at:
<https://www.iclafco.com/assets/cities/2018-city-of-calipatria-sap.pdf>.

City of Holtville (Holtville)

- 2017 Holtville Service Area Plan. Available online at:
http://www.holtville.ca.gov/documents/pdf/116.428_5.18.17_Revised-Draft-SAP.pdf

Cleland

- 1941 *The Cattle on a Thousand Hills: Southern California, 1850-1870*. Huntington Library, San Marino, California.

County of Imperial (County)

- 1993 General Plan. Available online at: <http://www.icpds.com/?pid=571>
1997a General Plan: Seismic and Public Safety Element. Available online at:
<https://www.icpds.com/assets/planning/seismic-and-public-safety.pdf>
1997b General Plan: Water Element. Available online at:
<https://www.icpds.com/assets/planning/water-element.pdf>.
2007 Land Use Map. Available online at: <https://www.icpds.com/assets/planning/land-use-element/landuse-map.pdf>.
2008 General Plan Circulation and Scenic Highways Element Sec 4.10
2013 General Plan: Housing Element. Available online at:
<https://www.icpds.com/assets/planning/3-imperialcountyhe-final-9-27-13.pdf>.
2015a General Plan: Land Use Element. Available online at:
<https://www.icpds.com/assets/planning/land-use-element/land-use-element-2015.pdf>.
2015b General Plan: Renewable Energy and Transmission Element. Available online at:
<https://www.icpds.com/assets/planning/renewable-energy-and-transmission-element-2015.pdf>.
2016 General Plan: Conservation and Open Space Element. Available online at:
<https://www.icpds.com/assets/planning/conservation-open-space-element-2016.pdf>.
2016b Imperial County Emergency Operations Plan. Available online at:
<https://firedept.imperialcounty.org/wp-content/uploads/2019/10/EmergencyOpPlan.pdf>.
2020 *Initial Study & Environmental Analysis for Energy Source Mineral ATLiS Project*.
December 11.
2021a [Imperial County Public Health Department, Solid Waste Facilities, County Residents Disposal Site, accessed April 2021](#). Available online at:
<https://www.icphd.org/environmental-health/solid-waste/solid-waste-facilities/>
2021b Imperial County Multi-Jurisdictional Hazard Mitigation Plan (MHMP). Available online at:
https://firedept.imperialcounty.org/wp-content/uploads/2021/01/Imperial-County-MHMP-2021-Plan-Update-2021_01_11.pdf.

Department of Toxic Substances Control (DTSC)

- 2021 EnviroStor Database. Accessed February 2021. Available online at:
<http://www.envirostor.dtsc.ca.gov/?surl=09vie>.

Department of Water Resources (DWR)

- 2021 SGMA Basin Prioritization Dashboard. Accessed February 2021. Available online at: <https://gis.water.ca.gov/app/bp-dashboard/final/>.

Ecology and Environment, Inc.

- 2011 *Background Noise Measurements for the Hudson Ranch II EIR*. Roadway Construction Noise Model (RCNM), Version 1.1.

EDAW, Inc (EDAW)

- 2006 Mesquite Specific Plan. Available online at: <https://www.icpds.com/assets/planning/ordinances/title-9-div-5b-mesquite-lake-specific-plan.pdf>.

Ehrlich P.R., D.S. Dobkin, and D. Wheye

- 1988 *The Birder's Handbook; A Field Guide to the Natural History of North American Birds*. Simon and Schuster Inc. New York.

Employment Development Department (EDD)

- 2021 Unemployment Rate, Imperial County Profile, accessed February 2021.

Federal Emergency Management Agency (FEMA)

- 2020 National Flood Hazard Layer Viewer. Accessed November 2020. Available online at: <https://hazards-fema.maps.arcgis.com/apps/webappviewer/index.html?id=8b0adb51996444d4879338b5529aa9cd>

Federal Transit Administration (FTA)

- 2006 Transit Noise and Vibration Impact Assessment. Available online at: https://docs.vcrma.org/images/pdf/planning/ceqa/FTA_Noise_and_Vibration_Manual.pdf.

Gifford, Edward W.

- 1931 The Kamia of Imperial Valley. *Bureau of American Ethnology Bulletin No. 97*. U.S. Government Printing Office, Washington, D.C.

Google

- 2021 Google Earth Pro, 2021.

Governor's Office of Planning and Research (OPR)

- 2018 Technical Advisory, OPR Guidance

GS Lyon Consultants, Inc. (GS Lyon)

- 2019 *Phase I ESA Report for Hudson Ranch Geothermal Plant*. Prepared for iCON Infrastructure Canada Inc. October 25, 2019 (Revised December 2, 2019).

HDR Engineering, Inc (HDR)

- 2012 *2010 Hudson Ranch Power II and Simbol Calipatria II Final Environmental Impact Report*. Available online at: <https://www.icpds.com/planning/environmental-impact-reports/final-eirs/hudson-ranch-simbol-ii-feir>. March 2012. San Diego, CA.

Imperial County Air Pollution Control District (ICAPCD)

- 2009 Final 2009 Imperial County State Implementation Plan for Particulate Matter Less than 10 Microns in Aerodynamic Diameter. August 11, 2009.
- 2014 Imperial County Air Pollution Control District (ICAPCD). 2014. Final 2013 State Implementation Plan for the 2006 24-Hour PM_{2.5} Moderate Nonattainment Area. December 2, 2014.
- 2017 *Imperial County 2017 State Implementation Plan for the 2008 8-Hour Ozone Standard (Ozone 2017 SIP)*. September.
- 2017 *California Environmental Quality Act (CEQA) Air Quality Handbook (ICAPCD Handbook)*. December 12.
- 2018a *Imperial County 2018 Annual Particulate Matter less than 2.5 Microns in Diameter State Implementation Plan (2018 PM_{2.5} SIP)*. April.
- 2018b *Imperial County 2018 Redesignation Request and Maintenance Plan for Particulate Matter less than 10 Microns in Diameter (2018 PM₁₀ Plan)*. October 23.
- 2018c 2018 Integrated Resource Plan. November.

Imperial Irrigation District (IID)

- 2008 Developer Project Guide. Available online at:
<https://www.iid.com/home/showpublisheddocument?id=2328>
- 2018a 2016 Water Conservation Plan. Available online at:
<https://www.iid.com/home/showpublisheddocument?id=17241>.
- 2018b Integrated Resource Plan. Available online at:
<https://www.iid.com/home/showpublisheddocument?id=9280>.
- 2021 About IID Energy. Accessed February 2021. Available online at:
<https://www.iid.com/energy/about-iid-energy>.

Imperial Water Forum (IWF)

- 2012 Imperial Integrated Regional Water Management Plan. Available online at:
<https://www.iid.com/water/water-supply/water-plans/imperial-integrated-regional-water-management-plan>.

Jennings

- 1967 Geologic map of California: Salton Sea Sheet. California Division of Mines and Geology.

Klute, D. S., L. W. Ayers, M. T. Green, W. H. Howe, S. L. Jones, J. A. Shaffer, S. R. Sheffield, and T. S. Zimmerman

- 2003 Status Assessment and Conservation Plan for the Western Burrowing Owl in the United States. U.S. Department of Interior, Fish and Wildlife Service, Biological Technical Publication FWS/BTP-R6001-2003, Washington, D.C.

LandMark Geo-Engineers and Geologists (LandMark)

- 2020 Preliminary Geotechnical Report. August. El Centro

Lawton and Bean

- 1968 A Preliminary Reconstruction of Aboriginal Agricultural Technology among the Cahuilla. *The Indian Historian* 1(5):18-24, 29.

Ldn Consulting, Inc.

- 2020 *Air Quality Assessment Hudson Ranch Mineral Recovery, County of Imperial.*
November 11.
2021 *Greenhouse Gas Screening Letter – County of Imperial* (March 23, 2021).

Linscott, Law & Greenspan

- 2020 *Traffic Impact Analysis, Hudson Ranch Mineral Recovery.* Imperial County, California.

Luomala

- 1978 Tipai-Ipai. In *Handbook of North American Indians, Volume 8, California.* Edited by Robert F. Heizer, pp. 592-609. W.C. Sturtevant, general editor. Smithsonian Institution, Washington, D.C.

Meighan, C.W.

- 1954 A Late Complex in Southern California Prehistory. *The Southwestern Journal of Anthropology* 10:215-227.

National Aeronautics and Space Administration (NASA)

- 2021 Press Release: 2020 Tied for Warmest Year on Record, NASA Data Shows. Released January 14, 2021. <https://www.nasa.gov/press-release/2020-tied-for-warmest-year-on-record-nasa-analysis-shows>. Accessed April 2023.

National Park Service (NPS)

- 1983 Archeology and Historic Preservation; Secretary of the Interior's Standards and Guidelines. 48 FR 44716-42.

National Oceanic and Atmospheric Administration (NOAA)

- 2021 Global Monitoring Laboratory. Updated April 7, 2021.

Regional Water Quality Control Board (RWQCB)

- 2002 Water Quality Control Plan: Colorado River Basin – Region 7. Available online at: https://www.waterboards.ca.gov/coloradoriver/water_issues/programs/basin_planning/docs/2020/rb7bp_e2019.pdf.
2021 Storm Water Program. Accessed March 2021. Available online at: https://www.waterboards.ca.gov/coloradoriver/water_issues/programs/stormwater/.

Sawyer, J.O., T. Keeler-Wolf, and J.M. Evens

- 2009 *Manual of California Vegetation, Second Edition.* California Native Plant Society, Sacramento, California.

Shipek

- 1988 Table of Tipai-Ipai population. Included on p. 596 of Luomala, Katherine (1978), Tipai-Ipai. In *Handbook of North American Indians, Volume 8, California.* Edited by Robert F. Heizer, pp. 592-609. W.C. Sturtevant, general editor. Smithsonian Institution, Washington, D.C.

SoCalGas

- 2021 Gas Transmission Pipeline Interactive Map – Imperial. Accessed March 2021. Available online at:

<https://socialgas.maps.arcgis.com/apps/webappviewer/index.html?id=2f1c4c8e42f445c88b4e1d2344c580b3>

Southern California Association of Governments (SCAG)

- 2016 Conformity Determination for SCAG 2016 RTP/SCS. Available online at:
<https://scag.ca.gov/sites/main/files/file-attachments/16rtpcondet.pdf?1604446850>

State Water Resources Control Board (SWRCB)

- 2020 Fact Sheet: Stormwater Management in California. Available online at:
https://www.waterboards.ca.gov/water_issues/programs/stormwater/docs/stormwater_factsheet.pdf
- 2021 Geotracker Database. Accessed February 2021. Available online at:
<https://geotracker.waterboards.ca.gov/map/?CMD=runreport&myaddress=477+mcdonald+road%2C+calipatria%2C+ca>

Titus

- 1987 Evidence for Prehistoric Occupation of Sites on San Clemente Island by Hokan and Uto-Aztecan Indians. Unpublished master's thesis, Department of Anthropology, University of California, Los Angeles.

Transportation and Land Management Agency (TLMA)

- 2006 Burrowing Owl Survey Instructions for the Western Riverside Multiple Species Habitat Conservation Plan Area. Riverside, California.

True

- 1966 Archaeological Differentiation of Shoshonean and Yuman Speaking Groups in Southern California. Unpublished Ph.D. dissertation, Department of Anthropology, University of California, Los Angeles.

Trulio, Lynne A.

- 1997 Strategies for Protecting Western Burrowing Owls (*Athene cunicularia hypugaea*) from Human Activities. In: Duncan, James R.; Johnson, David H.; Nicholls, Thomas H., eds. Biology and Conservation of Owls of the Northern Hemisphere: 2nd International symposium. Gen. Tech. Rep. NC-190. St. Paul, MN: U.S. Dept. of Agriculture, Forest Service, North Central Forest Experiment Station. 461-465.

United States Department of Agriculture (USDA)

- 2020 Websoil Survey Database. Accessed November 2020. Available online at:
<https://websoilsurvey.sc.egov.usda.gov/App/WebSoilSurvey.aspx>.

United States Environmental Protection Agency (USEPA)

- 2014 Global Greenhouse Gas Emissions Data, Global Emissions by Economic Sector. Sourced from the Intergovernmental Panel on Climate Change (IPCC) 2014.
<https://www.epa.gov/ghgemissions/global-greenhouse-gas-emissions-data>. Accessed April 2023.
- 2018 California Map of Radon Zones. <https://www.epa.gov/sites/production/files/2014-08/documents/california.pdf>. Updated March 1, 2018, accessed March 25, 2021.
- 2020 U.S. Greenhouse Gas Emissions and Sinks 1990-2018. April 13, 2020.

- 2023 Superfund Sites. Accessed February 2023. Available online at:
https://www.epa.gov/superfund/search-superfund-sites-where-you-live#map_
- United States Fish and Wildlife Service (USFWS)
- 2019 Sonny Bono Salton Sea Wildlife Refuge Map. Available online at:
<https://www.fws.gov/uploadedFiles/Sonny%20Bono%20Salton%20Sea%20NWR.pdf>
- 2020 Critical Habitat for Threatened & Endangered Species. Accessed November 2020.
Available online at:
<https://fws.maps.arcgis.com/home/webmap/viewer.html?webmap=9d8de5e265ad4fe09893cf75b8dbfb77>.
- 2021 National Wetlands Inventory (NWI). Accessed February 2021. Available online at:
<https://www.fws.gov/wetlands/data/Mapper.html>.
- United States Geological Survey (USGS)
- 2020 National Hydrography Dataset. Available online at: https://www.usgs.gov/core-science-systems/ngp/national-hydrography/national-hydrography-dataset?qt-science_support_page_related_con=0#qt-science_support_page_related_con
- Vellanoweth and Altschul
- 2002 Antiquarians, Cultural Historians, and Scientists: The Archaeology of the Bight. In Islanders and Mainlanders: Prehistoric Context for the Southern California Bight, edited by Jeffery H. Altschul and Donn R. Grenda, pp. 85-112. SRI Press, Tucson.
- Waugh
- 1986 Intensification and Land-Use: Archaeological Indication of Transition and Transformation in a Late Prehistoric Complex in Southern California. Ph.D. dissertation, University of California, Davis. University Microfilms, Ann Arbor, Michigan.

CHAPTER 8.0 – REPORT PREPARATION

8.1 EIR PREPARERS

This Draft EIR was prepared for the County of Imperial by Chambers Group, Inc. at 9620 Chesapeake Drive, Suite 202, San Diego, CA 92123. The following professionals participated in its preparation:

County of Imperial

Jim Minnick, Planning & Development Services Director
Michael Abraham, AICP, Assistant Planning & Development Services Director
David Black, Planner IV

Chambers Group, Inc.

Corinne Lytle-Bonine, Principal In Charge
Thomas Strand, Project Manager
Meghan Gibson, Senior Environmental Planner
Victoria Boyd, Senior Environmental Planner
Elizabeth Fortin, Environmental Planner
Erik Segura, Environmental Planner
Paul Morrissey, Senior Biologist
Heather Franklin, Biologist
Jessica Calvillo, Assistant Biologist
Sandra Pentney, Senior Archaeologist
Kellie Kandybowicz, Cultural Resource Specialist
Eduvijes Davis-Mullens, Assistant Cultural Resource Specialist
Niranjala Kottachchi, Paleontologist
Phillip Carlos, GIS Analyst
Bryna Fishcer, Technical Editor

Chambers Group was assisted by the following consultants:

Converse Consultants (Geotechnical Report Preparers and Peer Review of Phase I Environmental Site Assessment)
2021 Rancho Drive, Suite 1
Redlands, CA 92373

DKS Associates (VMT Analysis Preparers)
8950 Cal Center Drive Suite 340
Sacramento, CA 95826

General Technologies and Solutions (VMT Analysis Peer Review)
830 Traction Ave #3a
Los Angeles, CA 90013

GS Lyon Consultants, Inc. (Phase I Environmental Site Assessment Report)
780 North 4th Street
El Centro, CA 92243

Ldn Consulting, Inc. (Noise Report Preparer and Air Quality and Greenhouse Gas Assessments Peer Review)
42428 Chisolm Trail
Murrieta, CA 92562

Panaroma Environmental (Applicant's Consultant, Biological Resources Technical Report and Aquatic Resources Report Preparers)
717 Market Street, Suite 400
San Francisco, CA 94103

Power Engineers (Visual Simulation Preparers)
5675 Ruffin Road
San Diego, CA 92123

Q3 Consulting (Hydrology and Water Quality Report Preparers)
27042 Towne Centre Drive, Suite 110
Foothill Ranch, CA 92610

RCH Group (Air Quality and GHG Report Preparers)
11060 White Rock Rd #150-A
Rancho Cordova, CA 95670

Tierra Environmental Services, Inc. (Cultural Resources Report Preparers)
10650 Scripps Ranch Blvd., Ste. 105
San Diego, California 92131-1120

8.2 PERSONS AND ORGANIZATIONS CONTACTED

The following persons and organizations were contacted in preparation of this document:

- Quechan Indian Tribe
- Caltrans

CHAPTER 9.0 – ACRONYMS AND ABBREVIATIONS

Term	Definition
2018 PM ₁₀ Plan	<i>Imperial County 2018 Redesignation Request and Maintenance Plan for Particulate Matter Less than 10 Microns in Diameter</i>
2018 PM _{2.5} SIP	<i>Imperial County 2018 Annual Particulate Matter less than 2.5 Microns in Diameter State Implementation Plan</i>
µg/m ³	micrograms per cubic meter
AAC	All American Canal
AB	Assembly Bill
ACM	asbestos-containing material
A.D.	Anno Domini
ADT	Average Daily Traffic
AF	acre-foot
AFY	acre-foot per year
Air Basin	Salton Sea Air Basin
ALUCP	Airport Land Use Compatibility Plan
APN	Assessor Parcel Number
Applicant	Energy-Source Minerals LLC
ASCE	American Society of Civil Engineers
ASTM	American Society for Testing and Materials
BAU	business as usual
BG	Bare Ground
BLM	Bureau of Land Management
BMP	best management practice
bmsl	below mean sea level
B.P.	Before Present
Brawley Station	Brawley–220 Main Street Monitoring Station
BTR	Biological Technical Report
BUOW	burrowing owl
°C	degrees Celsius
CAAQS	California Ambient Air Quality Standards
CAFE	corporate average fuel economy
CAISO	California Independent System Operator
Cal/ARP	California Accidental Release Prevention Program
CAL FIRE	California Department of Forestry and Fire Protection
CalEEMod	California Emissions Estimator Model
CalEPA	California Environmental Protection Agency
CalGEM	California Geologic Energy Management Division
CALGreen	California Green Building Standards Code
Cal/OSHA	Division of Occupational Safety and Health
CalRecycle	California Department of Resources Recycling and Recovery

Term	Definition
Caltrans	California Department of Transportation
CAPCOA	California Air Pollution Control Officers Association
CARB	California Air Resources Board
CBC	California Building Code
CCC	California Coastal Commission
CCDEH	California Conference of Directors of Environmental Health
CCR	California Code of Regulations
CDFW	California Department of Fish and Wildlife
CDOGGR	California Division of Oil, Gas, and Geothermal Resources
CDRW	California Department of Water Resources
CEC	California Energy Commission
CEQA	California Environmental Quality Act
CFR	Code of Federal Regulations
CH ₄	methane
CHP	California Highway Patrol
CIWMP	Countywide Integrated Waste Management Plan
CNEL	Community Noise Equivalent Level
CNPS	California Native Plant Society
CNPSEI	California Native Plant Society Electronic Inventory
CNRA	California Natural Resources Agency
CO	carbon monoxide
CO ₂	carbon dioxide
County	Imperial County
CPT	cone penetrometer
CPUC	California Public Utilities Commission
CRB	Colorado River Basin
CRHR	California Register of Historical Resources
CRIT	Colorado River Indian Tribes
CRNA	California Natural Resources Agency
CRPR	California Rare Plant Rank
CSTDMM	California Statewide Travel Demand Model
CTR	Controlled Thermal Resources
CUP	Conditional Use Permit
CUPA	Certified Unified Program Agency
CWA	Clean Water Act
CWC	California Water Code
cy	cubic yard
dB	decibel
dba	A-weighted decibel
DHS	Department of Health Systems

Term	Definition
DOC	California Department of Conservation
DRECP	Desert Renewable Energy Conservation Plan
DTSC	Department of Toxic Substances Control
DWR	California Department of Water Resources
EI	expansion Index
EIR	Environmental Impact Report
EO	Executive Order
EOP	Emergency Operations Plan
ERP	Emergency Response Plan
°F	degrees Fahrenheit
FAA	Federal Aviation Administration
FCC	Federal Communications Commission
Fe	iron
FE	federally listed endangered
FEMA	Federal Emergency Management Agency
FERC	Federal Energy Regulatory Commission
FHWA	Federal Highway Administration
FT	federally listed threatened
FTA	Federal Transit Administration
g/h	gallons per hour
GHG	greenhouse gas
gpm	gallons per minute
GPS	Global Positioning Systems
GSA	groundwater sustainability agency
GWh	gigawatt-hours
GWP	global warming potential
H ₂ S	hydrogen sulfide
HAP	hazardous air pollutant
HCl	hydrochloric acid
HDPE/PVC	high-density polyethylene/polyvinyl chloride
HCF	hydrofluorocarbon
HI	hazard index
Highway 111	State Route (SR) 111
HKL1	Hell's Kitchen LithiumCo 1
HKP1	Hell's Kitchen PowerCo 1
HMBP	Hazardous Materials Business Plan
HR1	Hudson Ranch Power I Geothermal Plant
HR2	Hudson Ranch II and Simbol Calipatria II Geothermal Plant
HRA	Health Risk Assessment
HVAC	heating/ventilating/air conditioning

Term	Definition
HWCL	Hazardous Waste Control Law
IBC	International Building Code
ICAPCD	Imperial County Air Pollution Control District
ICFD	Imperial County Fire District
ICE	Intersection Control Evaluation
ICPDSD	Imperial County Planning and Development Services Department
IID	Imperial Irrigation District
IPCC	Intergovernmental Panel on Climate Change
IRWMP	Integrated Regional Water Management Plan
IS	Initial Study
IWF	Imperial Water Forum
IWMA	Integrated Waste Management Act
IWSP	Interim Water Supply Policy
JHA	job hazard analysis
kaf	kilo acre foot
kg	kilogram
KGRA	Known Geothermal Resource Area
kV	kilovolt
Ldn	Day-Night Average Level
LEED	Leadership in Energy and Environmental Design
Leq	the sound level in decibels equivalent to the total sound energy measured over a stated period of time
LEV	Low Emission Vehicle standards
Li	lithium
LiCl	lithium chloride
Li ₂ CO ₃	lithium carbonate
LiOH	lithium hydroxide monohydrate
L _{max}	maximum sound level during a measurement period or a noise event
LOS	Level of Service
maf	million acre-feet
MERV	Minimum Efficiency Reporting Value
mgd	million gallons per day
MJHMP	Multi-Jurisdiction Hazard Mitigation Plan
MLD	most likely descendant
MM	mitigation measure
MMT	million metric ton
MMTCO _{2e}	million metric ton of carbon dioxide equivalent
Mn	manganese
mph	miles per hour
MPO	Metropolitan Planning Organization

Term	Definition
MS4	Municipal Separate Storm Sewer System
MTCO ₂ e	metric tons of carbon dioxide equivalent
MW	megawatt
MWh	megawatt-hour
N ₂ O	nitrous oxide
NAAQS	National Ambient Air Quality Standards
NAGPRA	Native American Graves Protection and Repatriation Act
NAHC	Native American Heritage Commission
NCG	noncondensable gas
NEHRPA	National Earthquake Hazards Reduction Program
NHSTA	The National Highway Traffic Safety Administration
Niland Station	Niland–English Road Monitoring Station
NO ₂	nitrogen dioxide
NOI	Notice of Intent
NOP	Notice of Preparation
NO _x	nitrogen oxides
NPDES	National Pollutant Discharge Elimination System
NRHP	National Register of Historic Places
O ₃	ozone
OEHHA	California Office of Environmental Health Hazard Assessment
ONAC	Office of Noise Abatement and Control
ONC	California Office of Noise Control
OSHA	Occupational Safety and Health Administration
OSHPD	Office of Statewide Health Planning and Development
Pb	lead
PCB	polychlorinated biphenyl
PCE	Passenger Car Equivalent
pcf	equivalent fluid pressure
PFC	perfluorocarbon
PFO	Potential for Occurrence
PLA	Project Labor Agreement
PM _{2.5}	fine particulate matter less than 2.5 microns in diameter
PM ₁₀	inhalable particulate matter less than 10 microns in diameter
PPE	personal protective equipment
ppm	parts per million
PRC	Public Resources Code
PSD	Prevention of Significant Deterioration
psf	pounds per square foot
psi	pounds per square inch
PURPA	Public Utility Regulatory Policies Act

Term	Definition
PV	photovoltaic
QF	qualifying facility
QSA	Quantification Settlement Agreement
Q2	Business Quarter 2
Q3	Business Quarter 3
RCNM	Roadway Construction Noise Model
RCRA	Resource Conservation and Recovery Act
REC	recognized environmental condition
REL	reference exposure level
ROG	reactive organic gas
ROW	right-of-way
RPS	Renewable Portfolio Standards
RTP/SCS	Regional Transportation Plan/Sustainable Communities Strategy
RWQCB	Regional Water Quality Control Board
SB	Senate Bill
SCAG	Southern California Association of Governments
SCAQMD	South Coast Air Quality Management District
SCIC	South Coastal Information Center
SCS	Sustainable Communities Strategy
SDG&E	San Diego Gas and Electric Company
SDNHM	San Diego Natural History Museum
SF ₆	sulfur hexafluoride
SE	state listed endangered
SEAOC	Structural Engineers Association of California
SGMA	Sustainable Groundwater Management Act
SiO ₂	silica
SIP	State Implementation Plan
SLF	Sacred Lands File
SO ₂	sulfur dioxide
SPCC	spill prevention control and countermeasure
SR	State Route
SRRE	Source Reduction and Recycling Element
STLC	soluble threshold limit concentration
SWPPP	Stormwater Pollution Prevention Plan
SWRCB	State Water Resources Control Board
SSC	Species of Special Concern
ST	state listed threatened
SWR	State Water Project
TAC	toxic air contaminant
TAZ	Transportation Analysis Zone

Term	Definition
TCR	Tribal Cultural Resource
TIA	Traffic Impact Analysis
TTLC	total threshold limit concentration
TMDL	total maximum daily load
TWSC	Two-Way Stop Controlled (intersection)
UBC	Uniform Building Code
UCMP	University of California Museum of Paleontology
UNFCCC	United Nations Framework Convention on Climate Change
U.S.	United States
USACE	U.S. Army Corps of Engineers
U.S.C.	U.S. Code
USCS	Unified Soil Classification System
USDOT	U.S. Department of Transportation
USEPA	U.S. Environmental Protection Agency
USFWS	U.S. Fish and Wildlife Service
USGS	U.S. Geological Survey
USPS	U.S. Postal Service
UST	underground storage tank
UV	ultraviolet
V/C	volume to capacity
VMT	vehicle miles traveled
VOC	volatile organic compound
WPLT	Western Pluvial Lakes Tradition
WQMP	Water Quality Management Plan
WSA	Water Supply Assessment
Zn	zinc

Attachment D:
RESOLUTION for MMRP

RESOLUTION NO.

A RESOLUTION OF THE IMPERIAL COUNTY PLANNING COMMISSION FOR APPROVAL OF THE MITIGATION MONITORING AND REPORTING PROGRAM FOR THE HELL'S KITCHEN POWER & LITHIUM CO 1 LLC PROJECTS

WHEREAS, a Mitigation Monitoring and Reporting Program (MM&RP) has been prepared in accordance with the requirements of the California Environmental Quality Act, the State CEQA Guidelines, and the County's "Rules and Regulations to Implement CEQA as Amended"; and

WHEREAS, the Planning Commission of the County of Imperial has the authority to approve the MM&RP; and

WHEREAS, public notice of said application has been given, and the Planning Commission has considered evidence presented by the Planning & Development Services Department and other interested parties at a public hearing held with respect to this item on December 13, 2023.

NOW THEREFORE, the Planning Commission of the County of Imperial **DOES HEREBY RESOLVE** as follows:

SECTION 1. The Planning Commission has considered the proposed Mitigation Monitoring and Reporting Program (MM&RP) prior to making a decision on the project. The Planning Commission finds and determines that the Environmental Impact Report is adequate and prepared in accordance with the requirements of the California Environmental Quality Act (CEQA), which analyzes environmental effects, based upon the following findings and determinations.

SECTION 2. That in accordance with State Planning and Zoning law and the County of Imperial regulations, the following findings for the approval and certification of the Final EIR, MM&RP and Findings of Fact have been made as follows:

1. That the Final Project EIR SCH# 2022030704, Candidate CEQA Findings for the above projects have been prepared in accordance with the requirements of the California Environmental Quality Act, the State CEQA Guidelines, and the County's "Rules and Regulations to Implement CEQA as Amended".

2. That the County has reviewed, analyzed, and considered Final EIR, the environmental impacts therein identified for this Project, the Candidate CEQA Findings, and the Mitigation Monitoring and Reporting Program and the entire Record of Proceedings prior to approving this project.

**PLANNING COMMISSION RESOLUTION FOR
MMRP**

Page 2 of 3

3. That the Final EIR and the Candidate CEQA Findings reflect the independent judgment of the County.
4. That the Candidate CEQA Findings are supported by substantial evidence and backed by information provided to the County by experts, including but not limited to the County staff and the EIR preparer, on whom the County relies.
5. That the County accept as its own, incorporate as if set forth in full herein, and make each and every one of the findings contained in the Candidate CEQA Findings, including feasibility of mitigation measures pursuant to Public Resources Code 21081(a)/CEQA Guidelines 15091.
6. That the Mitigation Monitoring and Reporting Program is designed to ensure that during project implementation, the Developer and any other responsible parties shall implement the Project components and comply with feasible mitigation measures identified in the CEQA Findings, the Project entitlements, and the Mitigation Monitoring and Reporting Program and that these measures are fully enforceable through permit conditions, agreements, and/or other measures, such as their inclusion in the Mitigation Monitoring and Reporting Program.
7. That the Project will not individually or cumulative have an adverse effect on fish and wildlife resources, as defined in Section 711.2 of the Fish and Game Code.
8. That the Record of Proceedings consists of the Final EIR (and all its technical reports and addendums thereto); the County staff reports; the CEQA Findings; the Mitigation Monitoring and Reporting Program; the various Project entitlements and documents referenced therein; all final reports, applications, memoranda, maps, letters, and other planning documents prepared by the EIR planning/environmental consultant; all final reports, memoranda, maps, letters, and other planning documents prepared by the County staff; all documents submitted by members of the public and public agencies in connection with the Final EIR; minutes and transcripts of all public meetings and public hearings; all written and verbal public testimony presented during a noticed public hearing for the proposed project which such testimony was taken and any and all other materials which constitute the record of proceeding pursuant to Public Resources Code section 21167.6(e); and matters of common knowledge to the County staff and Planning Commission, including, but not limited to the County General Plan, the County Land Use Ordinance, County policies, which may be found during regular business hours, and the Imperial County Planning & Development Services Department at 801 Main Street, El Centro, CA 92243.
9. That the County does hereby approve the Findings and the MM&RP.

**PLANNING COMMISSION RESOLUTION FOR
MMRP**

Page 3 of 3

NOW, THEREFORE, based on the above findings, the Planning Commission of the County of Imperial **DOES HEREBY approves** the Mitigation Monitoring and Reporting Program for the Final EIR (SCH#2022030704):

Rudy Schaffner, Chairperson
Imperial County Planning Commission

I hereby certify that the preceding resolution was taken by the Planning Commission at a meeting conducted on **December 13, 2023** by the following vote:

AYES:

NOES:

ABSENT:

ABSTAIN:

ATTEST:

James A. Minnick, Director of Planning & Development Services
Secretary to the Planning Commission

S:\APN\020\010\012\hells kitchen Power co 1\pc\mmrpresolution.doc

PC ORIGINAL PKG

SECTION 9.0 – FINDINGS ON MITIGATION MONITORING AND REPORTING PLAN

9.1 INTRODUCTION

In accordance with CEQA, the Imperial County is acting as the Lead Agency for this Proposed Project. Pursuant to CEQA and *CEQA Guidelines* Sections 15091(d) and 15097, the Lead Agency must adopt a program for monitoring or reporting mitigation measures identified in the EIR, if the Lead Agency makes findings of significant impacts during the process of certifying the EIR.¹ The primary purpose of the MMRP is to ensure that the mitigation measures identified in the EIR are implemented thereby reducing or avoiding identified environmental impacts.

9.2 PURPOSE OF MITIGATION MONITORING AND REPORTING PROGRAM

The purpose of the MMRP is to ensure the effective implementation of the mitigation measures imposed by the Imperial County for the Proposed Project. In addition, this MMRP provides a means for identifying corrective actions, if necessary, before irreversible environmental damage occurs. This plan includes:

- A brief description of each impact expected to occur from the Proposed Project;
- Mitigation measure(s) associated with each impact;
- Responsible monitoring party;
- Responsible implementing party;
- Implementation phase (i.e., pre-construction, construction, prior to occupancy, post occupancy); and
- Complete date/initials of reviewing party.

As the Lead Agency for the Proposed Project, the Imperial County will be required to comply with all applicable plans, permits, and conditions of approval for the Proposed Project, in addition to implementation of this MMRP. The mitigation measures presented in Table 1 will be implemented as indicated to avoid or minimize environmental impacts of the Proposed Project.

¹ CEQA. Public Resources Code (PRC), Section 21081.6. 2007.

Mitigation Measure	Implementation Time Frame	Monitoring Method	Implementation Responsibility	Verification Responsibility
<p>Air Quality</p> <p>Mitigation Measure AQ-1</p> <p>Prior to commencing construction, the Project proponent shall submit a Dust Control Plan to the Imperial County Air Pollution Control District (ICAPCD) for approval identifying all sources of PM10 and PM2.5 emissions and associated mitigation measures during the construction and operational phases of the Project. The Project proponent shall submit a Construction Notification Form to the ICAPCD ten days prior to the commencement of any earthmoving activity. This plan would provide a detailed list of control measures to reduce fugitive emissions from construction and operational activities, including but not limited to watering of unpaved roads, vehicle speed limits, windbreaks, transport container covers, and cleaning and sweeping procedures. The Dust Control Plan submitted to the ICAPCD shall meet all applicable requirements for control of fugitive dust emissions, including the following measures designed to achieve the no greater than 20-percent opacity performance standard for dust control:</p> <ul style="list-style-type: none"> • All disturbed areas, including bulk material storage, that is not being actively used shall be effectively stabilized; and visible emissions shall be limited to no greater than 20 percent opacity for dust emissions by using water, chemical stabilizers, dust suppressants, tarps, or other suitable material, such as vegetative groundcover. Bulk material is defined as earth, rock, silt, sediment, and other organic and/or inorganic material consisting of or containing PM with 5 percent or greater silt content. • All on- and off-site unpaved roadway segments being used for 50 or more average vehicle trips per day shall be effectively stabilized, and visible emissions shall be limited to no greater than 20 percent opacity for dust emissions by the use of restricting vehicle access, paving, chemical stabilizers, dust suppressants, and/or watering. 	<p>Prior to Construction</p>	<p>Develop Dust Control Plan</p>	<p>Applicant</p>	<p>Department of Planning and Development Services and ICAPCD</p>

<ul style="list-style-type: none"> • All unpaved traffic areas one acre or more in size with 75 or more average vehicle trips per day shall be effectively stabilized, and visible emissions shall be limited to no greater than 20 percent opacity for dust emissions by paving, chemical stabilizers, dust suppressants, and/or watering. • All track-out or carry-out, which includes bulk materials that adhere to the exterior surfaces of motor vehicles and/or equipment (including tires) that may then fall onto the pavement on paved public roads, shall be cleaned at the end of each workday or immediately when mud or dirt extends a cumulative distance of 50 linear feet or more onto a paved road in an urban area. 			
<ul style="list-style-type: none"> • Movement of bulk material handling or transfer shall be stabilized prior to handling or at points of transfer with application of sufficient water or chemical stabilizers, or by sheltering or enclosing the operation and transfer line except, where such material or activity is exempted from stabilization by the rules of ICAPCD. 			
<ul style="list-style-type: none"> • Any temporary unpaved road shall be effectively stabilized and visible emissions shall be limited to no greater than 20 percent opacity for dust emission by paving, chemical stabilizers, dust suppressants and/or watering. • Fugitive dust generation during construction would be minimized by watering as needed to meet Imperial County standards for fugitive dust control. To further reduce fugitive dust emissions, vehicle traffic on unpaved roads would be kept below 15 miles per hour. 			
<ul style="list-style-type: none"> • During grading, the Project would be watering actively disturbed on-site areas at least three times a day as necessary to reduce fugitive dust emissions. • Access to the site would be via Highway 111, McDonald Road, and Davis Road. All workers, vendors and haul trucks would be required to utilize these roadways. • An agreement between County of Imperial Public Works and the applicant would be established requiring the applicant to improve a two-mile section of the unpaved Davis Road adjacent 			

<p>to the site by installing a 12- to 18-inch- thick engineered Class II base section. In addition, at the request of the County, the applicant would utilize the improved section during construction and would wet the site continuously during construction activities. The road would be immediately paved after construction prior to operations of the plant to avoid damaging a new asphalt section.</p> <ul style="list-style-type: none"> • During construction, the Project would be required to maintain daily dust suppression at the two-mile section of Davis Road adjacent to the site using a water truck operating continuously while vehicles are using the road. • The Project would provide wheel shakers at the exit(s) of the construction site to minimize dust being tracked off the Project site and onto the roadways. • Operational on-road trips shall not operate on unpaved dirt roads. 				
<p>Mitigation Measure AQ-2</p> <p>Prior to commencing construction, the Project proponent shall submit and commit to a Combustion Exhaust Emissions Control Program. This plan would provide a detailed list of control measures to minimize exhaust emissions during Project construction, including but not limited to fuel use, engine maintenance, and procedures:</p> <ul style="list-style-type: none"> • The Exhaust Emission Control Plan shall provide a detailed list of control measures to minimize exhaust emissions during Project construction, including but not limited to fuel use, engine maintenance, and procedures. • The construction contractor shall be required to utilize construction equipment using diesel engines less than 50 horsepower with certified NOx emissions rated as Tier 3 or better. All off-road diesel-powered equipment greater than 50 horsepower that is used on-site during construction of the Project shall meet USEPA Tier 4 offroad emission standards and Level 3 diesel particulate filters. 	<p>Prior to Construction</p>	<p>Develop Combustion Exhaust Emissions Control Program</p>	<p>Applicant</p>	<p>Department of Planning and Development Services and ICAPCD</p>

<ul style="list-style-type: none"> When commercially available, fossil fueled equipment shall be replaced with electrically driven equivalents (provided they are not run via a portable generator set). Idling times shall be minimized either by shutting equipment off when not in use or reducing the maximum idling time to five minutes (as required by the California Airborne Toxics Control Measure, Title 13, Section 2485 of California Code of Regulations). Clear signage shall be provided for construction workers at all access points. All construction equipment shall be maintained and properly tuned in accordance with manufacturer's specifications. All equipment shall be checked by a certified mechanic and determined to be running in proper condition prior to operation. Where access to alternative sources of power are available, portable diesel engines shall be prohibited. Haul truck shall be 2010 model year trucks or newer (a gross vehicle weight rating of at least 14,001 pounds), or best commercially available equipment, that meet the California Air Resources Board 2010 engine emissions standards at 0.01 g/horsepower-hour of particulate matter and 0.20 g/horsepower-hour of NOx emissions or newer, cleaner trucks. The volatile organic compounds (VOC) architectural coating limits specify that the use paints and solvents with a VOC content of 100 grams per liter or less for interior and 150 grams per liter or less for exterior surfaces shall be required. 				
Biological Resources				
<p>Mitigation Measure BIO-1. Designated Biologist: The Applicant shall retain the services of a Qualified Biologist. The Qualified Biologist will be employed during construction and all vegetation removal and ground-disturbing activities. The Qualified Biologist will document compliance with the projects mitigation measures and permits. The Qualified Biologist will have the authority to halt any Project activities that are in violation of the terms and conditions of the Project biological opinion(s) or incidental take permit, as appropriate.</p>	During construction	The Qualified Biologist will Document Compliance	Applicant	Department of Planning and Development Services

<p>Mitigation Measure BIO-2: Biological Monitors: Biological monitor(s) will be employed to assist the Designated Biologist in conducting preconstruction surveys and monitoring ground disturbance, grading, construction, decommissioning, and restoration activities. The biological monitor(s) will have sufficient education and field experience to understand resident wildlife species biology. To avoid and minimize effects to biological resources, the biological monitor(s) will assist the Designated Biologist with the following:</p> <ul style="list-style-type: none"> • Conduct inspections for listed species during ground-disturbing construction activities and document that habitat within the construction zone is not occupied by Yuma Ridgway's rail or desert pupfish. • Document compliance with all conservation measures, including but not limited to monitoring for presence of listed species; halting construction activity in the area if an individual listed species is found; and checking the staking/flagging of all disturbance areas to be sure that they are intact and that all construction activities are being kept within the staked/flagged limits. If a Yuma Ridgway's rail or desert pupfish is found within a work area, the Biological Monitor(s) will immediately notify the Designated Biologist, who will determine measures to be taken to ensure that the individual is not harmed, such as temporarily halting construction. 	<p>Prior to start of construction</p>	<p>Conduct Inspections</p>	<p>Applicant</p>	<p>Department of Planning and Development Services</p>
<p>Mitigation Measure BIO-3: Worker Environmental Awareness Program Training: A Worker Environmental Awareness Program will be implemented for construction crews prior to the commencement of Project activities. Training materials and briefings will include, but not be limited to, discussion of the federal and State statutes protecting threatened and endangered species, the consequence of noncompliance with these statutes, identification of values of wildlife and natural plant communities, hazardous substance spill prevention and containment measures, and review of all required conservation measures.</p>	<p>Prior to start of construction</p>	<p>Worker Environmental Awareness Program</p>	<p>Applicant</p>	<p>Department of Planning and Development Services</p>

<p>Mitigation Measure BIO-4: Flagging of Work Area Limits: All areas to be disturbed by the Project will be flagged prior to construction. All disturbance will be confined to these flagged areas, and all employees will be instructed that their activities must be confined to locations within the flagged areas.</p>	<p>Prior to Construction</p>	<p>Flagging Project Site</p>	<p>Applicant</p>	<p>Department of Planning and Development Services</p>
<p>Mitigation Measure BIO-5: Power Wash Equipment: All equipment used during construction of the Project will be required to be power washed prior to arrival at the Project site to prevent the transportation and establishment of noxious weeds in the area.</p>	<p>Prior to Construction</p>	<p>Power Wash Equipment</p>	<p>Applicant</p>	<p>Department of Planning and Development Services</p>

<p>Mitigation Measure BIO-6: Sediment and Erosion Control: The Project proponent will acquire the appropriate Clean Water Act regulatory permits, prepare a Stormwater Pollution and Prevention Plan (SWPPP), and implement BMPs prior to construction and site restoration. The SWPPP will identify specific actions and BMPs relating to the prevention of stormwater pollution from Project-related construction sources by identifying a practical sequence for site restoration, BMP implementation, contingency measures, responsible parties, and agency contacts. The SWPPP reflects localized surface hydrological conditions and will be reviewed by the USFWS prior to commencement of work. A SWPPP will be a condition of the contract with each contractor selected to build and decommission the Project. The SWPPP(s) at a minimum will incorporate soil stabilization and erosion control practices (e.g., hydroseeding, erosion control blankets, mulching), dewatering and/or flow diversion practices, sediment control practices (temporary sediment basins, fiber rolls), temporary and post-construction onsite and offsite runoff controls, and special considerations and BMPs for water crossings, wetlands, and drainages. The SWPPP will be prepared by a qualified SWPPP practitioner with BMPs selected to achieve maximum pollutant removal and that represent the best available technology that is economically achievable. Emphasis for BMPs is placed on controlling discharges of oxygen-depleting substances, floating material, oil and grease, acidic or caustic substances or compounds, and turbidity. Performance and effectiveness of these BMPs are determined either by visual means where applicable (i.e., observation of above-normal sediment release), or by actual water sampling in cases where verification of contaminant reduction or elimination (inadvertent petroleum release) is required to determine adequacy of the measure.</p>	<p>Prior to Construction</p>	<p>Develop SWPPP</p>	<p>Applicant</p>	<p>Department of Planning and Development Services</p>
---	------------------------------	----------------------	------------------	--

<p>Mitigation Measure BIO-7: Solid Waste Management: Solid waste will be properly contained in designated collection areas on site and regularly disposed of.</p>	<p>During Construction</p>	<p>Solid Waste Management</p>	<p>Applicant</p>	<p>Department of Planning and Development Services</p>
<p>Mitigation Measure BIO-8: Desert Pupfish Protection and Relocation Plan: A desert pupfish protection and relocation plan will be prepared prior to construction activities in any suitable habitat for desert pupfish. Its implementation will ensure construction in the drain mouths and channels will be conducted with minimal effects on desert pupfish. The plan will provide the following:</p> <ul style="list-style-type: none"> • Avoidance of construction activities within suitable habitat for desert pupfish during the desert pupfish spawning season (April to October). • Protocols for preconstruction surveys to assess species presence and spawning within or immediately adjacent to work areas (i.e., areas with ponded water). • Protocols for capture (e.g., trapping for construction) and transport methods that will minimize handling and stress as well as exposure to heat, low dissolve oxygen, and crowding. • Identification of locations for release of captured desert pupfish. 	<p>Prior to Construction</p>	<p>Desert Pupfish Protection and Relocation Plan</p>	<p>Applicant</p>	<p>Department of Planning and Development Services</p>

	During Construction	Construction Timing	Applicant	Department of Planning and Development Services
<p>Mitigation Measure BIO-9: Construction Timing: Construction activities within habitat for Yuma Ridgway's rail (i.e., cattail marsh) will be scheduled to avoid the nesting and molting flightless season (i.e., February 15 – September 15). Pile driving activities adjacent to Yuma Ridgway's rail habitat will avoid Yuma Ridgway's rail nesting season.</p> <p>Mitigation Measure BIO-10: Pre-Construction Surveys and Construction Monitoring for Yuma Ridgway's Rail and Black Rail: Pre-construction surveys for Yuma Ridgway's rail and black rail and construction monitoring will be conducted within all Project development areas within suitable habitat and a 500-foot buffer from suitable habitat. In the event that Yuma Ridgway's rail(s) or black rail(s) are detected within the work area (the area of active equipment use), all construction activities in the area will halt and the USFWS and CDFW will be notified no later than noon of the next business day. Project activities in the area may not proceed until the birds have left the work area. The USFWS and CDFW will also be notified if any Yuma Ridgway's rail are detected within 500 feet of the construction area. Project activities may proceed with caution in this buffer area under the direction of the Designated Biologist.</p>	<p>Prior to Construction</p>	<p>Pre-Construction Surveys and Construction Monitoring</p>	<p>Applicant</p>	<p>Department of Planning and Development Services</p>

<p>Mitigation Measure BIO-11: Reduced Vehicle Speed Adjacent to Rail Habitat: Vehicle speeds will be reduced to 15 miles per hour (mph) on access roads adjacent to Yuma Ridgway's rail habitat. These areas will be appropriately signed to identify the speed limit.</p>	<p>During Construction</p>	<p>Reduced Vehicle Speeds</p>	<p>Applicant</p>	<p>Department of Planning and Development Services</p>
<p>Mitigation Measure BIO-12: Noise Attenuation: The following noise attenuation measures will be implemented to minimize noise impacts on Yuma Ridgway's rail during the nesting season:</p> <ul style="list-style-type: none"> • At least 30 days prior to activities within 500 feet of Yuma Ridgway's rail habitat, the Applicant will conduct a noise study to evaluate the maximum predicted noise level within rail habitat. • If the maximum predicted noise is less than 60 A-weighted decibel scale (dBA) equivalent continuous sound level (Leq), no additional measures are required. • If the maximum predicted noise level exceeds 60 dBA Leq in rail habitat, noise attenuation measures such as noise walls or hay bales will be installed between the noise source and the suitable habitat. Noise monitors will be installed at the edge of the nearest Yuma Ridgway's rail habitat to assess the noise levels and verify that attenuation measures are successful. If necessary, additional noise reduction measures will be implemented to reduce the noise level to below 60 dBA at the edge of occupied habitat. 	<p>Prior to Construction</p>	<p>Noise Attenuation</p>	<p>Applicant</p>	<p>Department of Planning and Development Services</p>

<p>Mitigation Measure BIO-13. Habitat Conservation: To offset the loss of Yuma Ridgway's rail habitat, the Project proponent will preserve, create, or enhance habitat near the Project site for Yuma Ridgway's rail. The Project proponent will provide funding for construction and long-term management of the created habitat and will provide financial assurance for the construction of the wetland habitat in the form of performance bonds, escrow accounts, casualty insurance, or letters of credit. The performance bond, escrow account, casualty insurance, or letter of credit shall be of sufficient value to cover all construction, monitoring and reporting costs until the habitat is fully established. The financial assurance shall be in place prior to ground disturbance. Long-term management funding will be provided sufficient to cover, at a minimum, the management costs related to procurement of water from IID, weed control, levee and control structure maintenance, and control structure repair or replacement. The Applicant will prepare a detailed Habitat Enhancement Mitigation and Mitigation Monitoring Plan for review and approval by the USFWS, Corps, and CDFW prior to Project construction. Habitat creation activities will be conducted outside of the bird breeding season (February 15 – September 15) to avoid potential noise impacts on Yuma Ridgway's rail.</p>	<p>After Construction</p>	<p>Habitat Conservation</p>	<p>Applicant</p>	<p>Department of Planning and Development Services</p>
<p>Mitigation Measure BIO-14: Burrowing Owl. A pre-construction survey will be conducted for burrowing owls. The survey will be conducted during peak activity period (one hour before to two hours after sunrise or two hours before to one hour after sunset) no more than 14 days prior to the start of construction and within 500 feet surrounding the construction area. If owls are located during the pre-construction survey between February 1 and August 31 (nesting season), a buffer area will be established according to the guidelines in the 2012 Staff Report. A modified buffer reduction may be used with CDFW concurrence. If burrowing owls are located during the nonbreeding season, owls may be passively relocated in coordination with CDFW, by a qualified biologist according to the procedures outlined in the 2012 Staff Report on Burrowing Owl Mitigation. If burrowing owls are found on site during pre-construction surveys, the Project proponent shall contact CDFW to prepare a plan of action for buffers or passive relocation.</p>	<p>Prior To Construction</p>	<p>Burrowing Owl Surveys</p>	<p>Applicant</p>	<p>Department of Planning and Development Services</p>

<p>Mitigation Measure BIO-15: Lighting. Except as necessary for safety or security purposes, no lighting shall be allowed to impact wetland or riparian habitats.</p>	<p>During Construction</p>	<p>Lighting</p>	<p>Applicant</p>	<p>Department of Planning and Development Services</p>
<p>Mitigation Measure BIO-16: Nesting Bird Plan. A Nesting Bird Plan will be prepared that defines procedures for avoidance of nesting birds during Project construction. The Project will be scheduled to start construction activities outside the nesting season (February 1 through August 31), to the extent feasible. In the event that construction has to start during the nesting season, a qualified biologist will conduct surveys of the Project development area no more than 72 hours before any ground disturbance. If an active nest is observed in the Project development area, the qualified biologist will employ appropriate procedures for nest avoidance, and construction activities will not begin in the area of the active nest until all nesting activities have ceased and the young have fledged the nest.</p>	<p>Prior to Grading or Construction</p>	<p>Nesting Bird Plan</p>	<p>Applicant</p>	<p>Department of Planning and Development Services</p>

<p>Mitigation Measure BIO-18: Excavation Areas. Any open trench or excavated area shall be securely covered anytime Project activities within the excavated/trenched area have ceased. The designated biologist shall oversee the covering of all excavated, steep-walled holes or trenches by placing plywood or other barrier materials such that animals are unable to enter and become entrapped. The use of temporary fencing around the perimeter or trenches or holes may be an acceptable minimization measure, if deemed appropriate by the biological monitor. Before holes or trenches are filled, the Biological Monitors shall thoroughly inspect the areas for trapped animals. If any worker discovers that any animal has become trapped, they shall halt Project-related activities and notify the biological monitor immediately.</p>	<p>During Construction</p>	<p>Excavation Area</p>	<p>Applicant</p>	<p>Department of Planning and Development Services</p>
<p>Mitigation Measure BIO-19: Wetland and Riparian Area Restoration/Compensation. The Project will provide restoration/compensation for all unavoidable impacts on areas under the jurisdiction of USACE, RWQCB, and CDFW. Impacts on jurisdictional areas will be avoided to the extent feasible. Where avoidance of jurisdictional areas is not feasible, the Project applicant will provide the necessary mitigation required as part of wetland permitting, by creation, restoration, or preservation of suitable jurisdictional or equivalent habitat along with adequate buffers to protect the function and values of jurisdictional areas. The Mitigation ratio will be 1:1 or as approved by the permitting agencies. The proposed Mitigation Plan area is located in Section 35 approximately 2 miles north of the HKP1 and HKL1 Projects at the corner of Beach Road and Access Road. The proposed mitigation area will total 159.61 acres; approximately 152 acres will be created native wetland/open water habitat and approximately 7 acres will be enhanced native upland habitat. Proposed native wetland communities include Willow Scrub Shrub, Cattail Bullrush Marsh and Desert Riparian Woodlands. Proposed upland communities include Sonoran Desert Scrub/Alkali Sink.</p>	<p>During Construction</p>	<p>Wetland and Riparian Area Restoration/Compensation</p>	<p>Applicant</p>	<p>Department of Planning and Development Services</p>
Cultural Resources				
<p>Mitigation Measure CUL-1: The Applicant shall retain the services of a Qualified Archaeologist, meeting the Secretary of</p>	<p>During Grading or construction</p>	<p>Monitoring during construction</p>	<p>Applicant/Contractor</p>	<p>Department of Planning and</p>

<p>the Interior Standards or County standards, whichever is greater, and require that all initial ground-disturbing work be monitored by archaeological specialist (monitor) proficient in artifact and feature identification in monitoring contexts. The Consultant (Qualified Archaeologist and/or monitor) shall be present at the Project construction phase kickoff meeting.</p>				Development Services
<p>Mitigation Measure CUL-2: Prior to commencing construction activities and thus prior to any ground disturbance in the Proposed Project site, the Consultant shall conduct initial Worker Environmental Awareness Program (WEAP) training to all construction personnel, including supervisors, present at the outset of the Project construction work phase, for which the Lead Contractor and all subcontractors shall make their personnel available. A tribal monitor shall be provided an opportunity to attend the preconstruction briefing, if requested. This WEAP training will educate construction personnel on how to work with the monitor(s) to identify and minimize impacts to archaeological resources and maintain environmental compliance. This WEAP training will educate the monitor(s) of construction procedures to avoid construction-related injury or harm. This training may be performed periodically, such as for new personnel coming on to the Project as needed.</p>	Prior to Commencing Construction Activities	Worker Environmental Awareness Program	Applicant	Department of Planning and Development Services
<p>Mitigation Measure CUL-3: The Contractor shall provide the Consultant with a schedule of initial potential ground-disturbing activities. A minimum of 48 hours will be provided to the Consultant of commencement of any initial ground-disturbing activities such as vegetation grubbing or clearing, grading, trenching, or mass excavation.</p> <p>A monitor shall be present on-site at the commencement of ground-disturbing activities related to the Project. The monitor, in consultation with the Qualified Archaeologist, shall observe initial ground-disturbing activities and, as they proceed, adjust the number of monitors as needed to provide adequate observation and oversight. All monitors will have stop-work authority to allow for recordation and evaluation of finds during construction. The monitor will maintain a daily record of observations to serve as an ongoing reference resource and to provide a resource for final reporting upon completion of the Project.</p> <p>The Consultant and the Lead Contractor and subcontractors shall maintain a line of communication regarding schedule and activity such that the monitor is aware of all ground-disturbing</p>	Prior to Construction	Project Scheduling	Applicant	Department of Planning and Development Services

<p>activities in advance to provide appropriate oversight. Mitigation Measure: CUL-4: In the event of the discovery of previously unidentified archaeological materials, the Contractor shall immediately cease all work activities within an area of no less than 100 feet of the discovery. After cessation of excavation, the Contractor shall immediately contact the County. Except in the case of cultural items that fall within the scope of the Native American Grave Protection and Repatriation Act (NAGPRA), California Health and Safety Code 7050.5, CEQA 15064.5, or California Public Resources Code 5097.98, the discovery of any cultural resource within the Project area shall not be grounds for a Project-wide "stop work" notice or otherwise interfere with the Project's continuation except as set forth in this paragraph. Additionally, all consulting Native American Tribal groups that requested notification of any unanticipated discovery of archaeological resources on the Project shall be notified appropriately. If a discovery results in the identification of cultural items that fall within the scope of NAGPRA, the Contractor shall immediately cease all work activities within an area of no less than 100 feet (30 meters) of the discovery. In the event of an unanticipated discovery of archaeological materials during construction, the Applicant-retained Qualified Professional Archaeologist shall be contacted to evaluate the significance of the materials prior to resuming any construction-related activities near the find. If the Qualified Archaeologist determines that the discovery constitutes a significant resource under CEQA and it cannot be avoided, the Applicant shall implement an archaeological data recovery program.</p>	<p style="text-align: center;">During Construction</p>	<p style="text-align: center;">Identified Archaeological Materials Protocol</p>	<p style="text-align: center;">Applicant</p>	<p style="text-align: center;">Department of Planning and Development Services</p>
<p>Mitigation Measure: CUL-5: At the completion of all ground-disturbing activities, the Consultant shall prepare an Archaeological Resources Monitoring Report summarizing all monitoring efforts and observations, as performed, and any and all prehistoric or historic archaeological finds as well as providing follow-up reports of any finds to the SCCIC, as required. In the event unanticipated, buried prehistoric archaeological resources (lithic material, faunal, pottery, etc.) or historical archaeological resources (ceramics, building materials, glassware, etc.) are unearthed during construction or any ground disturbing activities within the Project area, additional resource treatments would become necessary. Once a potential resource has been identified, all work within 100 feet</p>	<p style="text-align: center;">After Ground Disturbing Activities</p>	<p style="text-align: center;">Archaeological Resources Monitoring Report</p>	<p style="text-align: center;">Applicant</p>	<p style="text-align: center;">Department of Planning and Development Services</p>

must be halted until the find can be assessed by a qualified archaeologist.				
Geology and Soils				
<p>Mitigation Measure GEO-1: A complete geotechnical engineering investigation shall be completed, with a Final Geotechnical Report to be prepared prior to submittal of a grading permit. The Final Geotechnical Report shall be prepared by a qualified consultant and be submitted to the County for review and approval. The investigation will include soil test borings; specific and detailed recommendations; soil and sediment analysis; detailed analysis and design standards; geotechnical design criteria; and detailed design recommendations.</p>	Prior to Construction	Final Geotechnical Report	Applicant	Department of Planning and Development Services
<p>Mitigation Measure GEO-2: All grading operations and construction shall be conducted in conformance with the recommendations included in the Geohazard Evaluation Report prepared on August 17, 2022, and Final Geotechnical Report on the Project site. Design, grading, and construction shall be performed in accordance with the recommendations of the project geotechnical consultant and corrosion engineer, subject to review by the County, prior to commencement of grading activities.</p>	During Grading and Construction	Conformance to Geohazard Evaluation Report	Applicant	Department of Planning and Development Services
<p>Mitigation Measure PALEO-1:The Applicant shall retain the services of a Qualified Paleontologist and require that all initial ground-disturbing work be monitored by someone trained in fossil identification in monitoring contexts. The Qualified Paleontologist shall prepare a Paleontological Resource Mitigation Plan to be implemented during ground-disturbing activity for the proposed Project. This program should outline the procedures for paleontological monitoring, including extent and duration; protocols for salvage and preparation of fossils; and the requirements for a final mitigation and monitoring report. The Qualified Paleontologist and a paleontological monitor shall be present at the Project construction-phase kickoff meeting.</p>	During Grading and Excavation	Paleontological Resource Mitigation Plan	Applicant	Department of Planning and Development Services
<p>Mitigation Measure PALEO-2: Prior to commencing construction activities and, thus, prior to any ground disturbance in the Proposed Project site, the Qualified Paleontologist and paleontological monitor shall conduct initial Worker Environmental Awareness Program (WEAP) training to all construction personnel, including supervisors, present at the start of the Project construction work phase, for which the</p>	Prior to Construction Activities	Worker Environmental Awareness Program (WEAP)	Applicant	Department of Planning and Development Services

<p>Applicant, or their designated Contractor, and all subcontractors shall make their personnel available. This WEAP training will educate construction personnel on how to work with the monitor(s) to identify and minimize impacts to paleontological resources and maintain environmental compliance, and it shall be performed periodically for new personnel coming on to the Project as needed.</p>				
<p>Mitigation Measure PALEO-3: The Applicant, or their designated Contractor, shall provide the Qualified Paleontologist with a schedule of initial potential ground-disturbing activities. A minimum of 48 hours will be provided to the consultant prior to the commencement of any initial ground-disturbing activities, such as vegetation grubbing or clearing, grading, trenching, or mass excavation.</p> <p>As detailed in the schedule provided, a paleontological monitor shall be present on-site at the commencement of ground-disturbing activities related to the Project. The monitor, in consultation with the Qualified Paleontologist, shall observe initial ground-disturbing activities and, as they proceed, make adjustments to the number of monitors as needed to provide adequate observation and oversight. All monitors will have stop-work authority to allow for recordation and evaluation of finds during construction. The monitor will maintain a daily record of observations as an ongoing reference resource and to provide a resource for final reporting upon completion of the Project.</p> <p>The Qualified Paleontologist, paleontological monitor, and the Applicant, or their designated Contractor, and subcontractors shall maintain a line of communication regarding schedule and activity such that the monitor is aware of all ground-disturbing activities in advance to provide appropriate oversight.</p>	<p>Prior to Construction Activities</p>	<p>Paleontologist Scheduling</p>	<p>Applicant</p>	<p>Department of Planning and Development Services</p>
<p>Mitigation Measure PALEO-4: If paleontological resources are discovered, construction shall be halted within 50 feet of any paleontological finds and shall not resume until the Qualified Paleontologist can determine the significance of the find and/or the find has been fully investigated, documented, and cleared.</p>	<p>During Construction Activities</p>	<p>Resource Investigation</p>	<p>Applicant</p>	<p>Department of Planning and Development Services</p>
<p>Mitigation Measure PALEO-5: At the completion of all ground-disturbing activities, the Qualified Paleontologist shall prepare a Paleontological Resources Monitoring Report summarizing all monitoring efforts and observations, as performed, and any and all paleontological finds and shall provide follow-up reports of any finds to the preferred</p>	<p>After Ground Disturbing Activities</p>	<p>Paleontological Resources Monitoring Report</p>	<p>Applicant</p>	<p>Department of Planning and Development Services</p>

paleontological repository, as required.				
Hazards and Hazardous Materials				
<p>Mitigation Measure HAZ-1: To avoid health risks to construction workers, the Applicant shall require the contractor to prepare and implement a site Health and Safety Plan (HSP) if areas containing hazardous materials are to be disturbed. This plan will outline measures that will be employed to protect construction workers and the public from exposure to hazardous materials during construction activities. This plan shall be prepared prior to any ground-disturbing activities and shall be reviewed and approved by the Project Applicant. Workers shall review and sign the site HSP prior to proceeding with the assigned work.</p>	Prior to Construction	Health and Safety Plan	Applicant	Department of Planning and Development Services
<p>Mitigation Measure HAZ-2: For any gen-ite structures or other areas of project ground disturbance that are close to a REC, a Phase 2 limited soil sampling shall be conducted to determine if there are any hazardous materials present on-site. The soil sampling shall be conducted during final design and prior to construction. Soil sampling will determine the California Human Health Screening Levels (CHHSL) of the testing protocol (CAM 17 metals, a list of 17 metals found typically in hazardous materials and mining sites). The CHHSLs are a list of 54 hazardous chemicals in soil or soil gas that the California Environmental Protection Agency (CalEPA) considers to be below thresholds for risks to human health. The Imperial County Public Health Department, Division of Environmental Health (DEH) shall review the soil sampling results. If the results are above the CHHSLs, then the DEH would refer the project to the California Department of Toxic Substances Control for proper soil handling and removal procedures.</p>	Prior to Construction Activities	Determination of Hazardous Materials	Applicant	Department of Planning and Development Services
Hydrology and Water Quality				
<p>Mitigation Measures HWQ-1: Prepare SWPPP and Implement BMPs Prior to Construction and Site Restoration. The Project applicant or its contractor shall prepare a Storm Water Pollution Prevention Plan (SWPPP) specific to the Project and be responsible for securing coverage under the State Water Resources Control Board's National Pollution Discharge Elimination System stormwater permit for general construction activity (Order 2009-0009-DWQ). The SWPPP shall identify specific actions and best management practices (BMPs) related to the prevention of stormwater pollution from Project-related construction sources by identifying a practical</p>	Prior to Construction	Storm Water Pollution Prevention Plan	Applicant	Department of Planning and Development Services

<p>sequence for site restoration, BMP implementation, contingency measures, responsible parties, and agency contacts. The SWPPP shall reflect localized surface hydrological conditions and shall be reviewed and approved by the appropriate agency prior to commencement of work and shall be made conditions of the contract with the contractor selected to build and decommission the Project. The SWPPP shall incorporate control measures in the following categories:</p> <ul style="list-style-type: none"> - Soil stabilization and erosion control practices - Sediment control practices - Temporary and postconstruction on- and off-site runoff controls - Special considerations and BMPs for water crossings and drainages - Monitoring protocols for discharge(s) and receiving waters, with emphasis place on the following water quality objectives: dissolved oxygen, floating material, oil and grease, potential of hydrogen (pH), and turbidity - Waste management, handling, and disposal control practices - Corrective action and spill contingency measures - Agency and responsible party contact information - Training procedures that shall be used to ensure that workers are aware of permit requirements and proper installation methods for BMPs specified in the SWPPP <p>The SWPPP shall be prepared by a Qualified SWPPP Practitioner and/or Qualified SWPPP Developer, with BMPs selected to achieve maximum pollutant removal and representative of the best available technology that is economically achievable. Emphasis for BMPs shall be placed on controlling discharges of oxygen-depleting substances; floating material; oil and grease; acidic or caustic substances or compounds; and turbidity. BMPs for soil-stabilization, erosion-control, and sediment-control practices will also be required. Performance and effectiveness of these BMPs shall be determined either by visual means where applicable (i.e., observation of above-normal sediment release), or by actual water sampling in cases where verification of contaminant reduction or elimination, (inadvertent petroleum release) is required to determine adequacy of the measure.</p>			
---	--	--	--

<p>Mitigation Measures HWQ-2: Incorporate Postconstruction Runoff BMPs into Project Drainage Plan. The Project Drainage Plan shall adhere to the County's Engineering Guidelines Manual, IID Draft Hydrology Manual or other recognized source with approval by the County Engineer to control and manage the on- and off-site discharge of stormwater to existing drainage systems. Infiltration basins will be integrated into the Drainage Plan to the maximum extent practical. The Drainage Plan shall provide both short and long-term drainage solutions to ensure the proper sequencing of drainage facilities and management of runoff generated from Project-related impervious surfaces as necessary.</p>	<p>Post Construction</p>	<p>Project Drainage Plan</p>	<p>Applicant</p>	<p>Department of Planning and Development Services</p>
<p>Tribal Cultural Resources</p>				
<p>Mitigation Measures CUL-1-CUL5 apply here</p>				
<p>Utilities and Service Systems</p>				
<p>Mitigation Measures UTIL-1: If the IID does not receive its annual 3.1 maf water apportionment according to the QSA obligations of Colorado River water during the Project's 30-year lifespan, the Applicant shall work with IID to ensure any reduction in water availability can be managed by the Project.</p>	<p>Prior to Construction</p>	<p>Water Apportionment</p>	<p>Applicant</p>	<p>Department of Planning and Development Services</p>

SECTION 10.0 – FINDINGS ON CHANGES TO THE DRAFT EIR AND RECIRCULATION

10.1 CHANGES TO DRAFT EIR

The Draft EIR has incorporated clarifications since its publication. These revisions have been incorporated into the Final EIR.

10.2 FINDINGS

Pursuant to CEQA, on the basis of the review and consideration of the Final EIR, the Board of Supervisors finds:

- Factual corrections and minor changes are set forth as additions and corrections to the Draft EIR.
- The factual and minor changes to the Draft EIR are not substantial changes that would deprive the public of a meaningful opportunity to comment on a substantial adverse environmental effect of the Proposed Project or any Proposed Project Alternative, a feasible way to mitigate or avoid such an effect, or a feasible Proposed Project alternative.
- The factual corrections and minor changes in the Draft EIR would not result in new significant environmental effects or substantially increase the severity of the previously identified significant effects disclosed in the Draft SEIR.
- The factual corrections and minor changes in the Draft EIR would not involve mitigation measures or alternatives that are considerably different from those analyzed in the Draft EIR that would substantially reduce one or more significant effect(s) on the environment.
- The Draft EIR is not fundamentally inadequate and/or so conclusionary in nature that meaningful public review and comment were precluded.

Thus, based on the Draft EIR, the Final EIR, and the whole of the record, none of the conditions set forth in *CEQA Guidelines* Section 15088.5 requiring recirculation of a Draft EIR have been met. Incorporation of the factual corrections and minor changes to the Draft EIR into the Final EIR does not require the Final EIR to be circulated for public and/or agency comment.

SECTION 12.0 – REFERENCES

California Department of Conservation (DOC)

2018 The Williamson Act Status Report 2016-17. Available online at: https://www.conservation.ca.gov/dlrp/wa/Documents/stats_reports/2018%20WA%20Status%20Report.pdf.

2020a California Important Farmland Finder. Accessed October 2020. Available online at: <https://maps.conservation.ca.gov/DLRP/CIFF/>

2020c Mines Online. Accessed October 2020. Available online at: <https://maps.conservation.ca.gov/mol/index.html>.

California Department of Forestry and Fire Protection (CAL Fire)

2022 Fire Hazard Severity Zone Viewer. Accessed February 2023. Available online at: <https://egis.fire.ca.gov/FHSZ/>.

County of Imperial (County)

1993 General Plan. Available online at: <http://www.icpds.com/?pid=571>

2007 Land Use Map. Available online at: <https://www.icpds.com/assets/planning/land-use-element/landuse-map.pdf>

2015a General Plan: Land Use Element. Available online at: <https://www.icpds.com/assets/planning/land-use-element/land-use-element-2015.pdf>.

2021 Imperial County Multi-Jurisdictional Hazard Mitigation Plan (MHMP). Available online at: https://firedept.imperialcounty.org/wp-content/uploads/2021/01/Imperial-County-MHMP-2021-Plan-Update-2021_01_11.pdf

Google

2022 Google Earth Pro, 2022.

Mitigation Monitoring and Reporting Program

For:

HELL'S KITCHEN POWERCO 1 AND LITHIUMCO 1 PROJECT



Prepared By:

COUNTY OF IMPERIAL

Planning & Development Services Department

801 Main Street

El Centro, CA 92243

(442) 265-1736

www.icpds.com

December 2023

PC ORIGINAL PKG

SECTION 1.0 – PURPOSE

Imperial County would adopt this Mitigation Monitoring and Reporting Program (MMRP) in accordance with Public Resources Code (PRC) Section 21081.6 and Section 15097 of the California Environmental Quality Act (CEQA) Guidelines. The purpose of the MMRP is to ensure that the Hell's Kitchen Powerco 1 And Lithium co 1 Project complies with all applicable environmental mitigation requirements identified in the Final Mitigated Negative Declaration (MND) for the Proposed Project. The mitigation measures for the Proposed Project would be adopted by the County, in conjunction with the adoption of the Final EIR. The mitigation measures from the Final EIR have been integrated into this MMRP. The MMRP provides a mechanism for monitoring the mitigation measures in compliance with the Final EIR, and general guidelines for the use and implementation of the monitoring program are described below. Within this document, the approved mitigation measures are organized and referenced by subject category. The specific mitigation measures are identified, as well as the method and timing of verification and the responsible party that would ensure that each action is implemented.

The mitigation measures applicable to the project include avoiding certain impacts altogether, minimizing impacts by limiting the degree or magnitude of the action and its implementation, and/or reducing or eliminating impacts over time by maintenance operations during the life of the action.

Public Resources Code Section 21081.6 requires the Lead Agency, for each project that is subject to CEQA, to monitor performance of the mitigation measures included in any environmental document to ensure that implementation takes place. The County is the designated Lead Agency for the MMRP. The County is responsible for reviewing all monitoring reports, enforcement actions, and document disposition. The Lead Agency is responsible for reviewing all monitoring reports, enforcement actions, and document disposition. The Imperial Irrigation District would rely on information provided by the monitor as accurate and up to date and would field check mitigation measure status as required.

A record of the MMRP would be maintained at County of Imperial Planning and Development Services Department Office at 801 Main Street, El Centro, CA 92243). All mitigation measures contained in the MND shall be made conditions of the project as may be further described below.

SECTION 2.0 – FORMAT

The mitigation measures applicable to the project involve minimizing impacts by limiting the degree or magnitude of the action and its implementation. Within this document, the approved mitigation measure is referenced by subject category. The mitigation measure has a numerical reference. The following items are identified for the mitigation measure.

- Mitigation Language and Numbering
- Mitigation Timing
- Methods for Monitoring and Reporting
- Responsible Parties

SECTION 3.0 – MITIGATION LANGUAGE AND NUMBERING

Provides the language of the mitigation measures in their entirety.

SECTION 4.0 – MITIGATION TIMING

The mitigation measures required for the project will be implemented prior to construction and during construction.

SECTION 5.0 – METHODS FOR MONITORING AND REPORTING

The MMRP includes the procedures for documenting and reporting mitigation implementation efforts. As the project proponent, the County is responsible for implementation of the mitigation measures.

SECTION 6.0 – RESPONSIBLE PARTIES

For the mitigation measures, the party responsible for implementation, monitoring and reporting, and verifying successful completion of the mitigation measures is identified

PC ORIGINAL PKG

Mitigation Measure	Implementation Time Frame	Monitoring Method	Implementation Responsibility	Verification Responsibility
Air Quality				
<p>Mitigation Measure AQ-1</p> <p>Prior to commencing construction, the Project proponent shall submit a Dust Control Plan to the Imperial County Air Pollution Control District (ICAPCD) for approval identifying all sources of PM10 and PM2.5 emissions and associated mitigation measures during the construction and operational phases of the Project. The Project proponent shall submit a Construction Notification Form to the ICAPCD ten days prior to the commencement of any earthmoving activity. This plan would provide a detailed list of control measures to reduce fugitive emissions from construction and operational activities, including but not limited to watering of unpaved roads, vehicle speed limits, windbreaks, transport container covers, and cleaning and sweeping procedures. The Dust Control Plan submitted to the ICAPCD shall meet all applicable requirements for control of fugitive dust emissions, including the following measures designed to achieve the no greater than 20-percent opacity performance standard for dust control:</p> <ul style="list-style-type: none"> • All disturbed areas, including bulk material storage, that is not being actively used shall be effectively stabilized; and visible emissions shall be limited to no greater than 20 percent opacity for dust emissions by using water, chemical stabilizers, dust suppressants, tarps, or other suitable material, such as vegetative groundcover. Bulk material is defined as earth, rock, silt, sediment, and other organic and/or inorganic material consisting of or containing PM with 5 percent or greater silt content. • All on- and off-site unpaved roadway segments being used for 50 or more average vehicle trips per day shall be effectively stabilized, and visible emissions shall be limited to no greater than 20 percent opacity for dust emissions by the use of restricting vehicle access, paving, chemical stabilizers, dust suppressants, and/or watering. 	<p>Prior to Construction</p>	<p>Develop Dust Control Plan</p>	<p>Applicant</p>	<p>Department of Planning and Development Services and ICAPCD</p>

<ul style="list-style-type: none"> • All unpaved traffic areas one acre or more in size with 75 or more average vehicle trips per day shall be effectively stabilized, and visible emissions shall be limited to no greater than 20 percent opacity for dust emissions by paving, chemical stabilizers, dust suppressants, and/or watering. • All track-out or carry-out, which includes bulk materials that adhere to the exterior surfaces of motor vehicles and/or equipment (including tires) that may then fall onto the pavement on paved public roads, shall be cleaned at the end of each workday or immediately when mud or dirt extends a cumulative distance of 50 linear feet or more onto a paved road in an urban area. • Movement of bulk material handling or transfer shall be stabilized prior to handling or at points of transfer with application of sufficient water or chemical stabilizers, or by sheltering or enclosing the operation and transfer line except, where such material or activity is exempted from stabilization by the rules of ICAPCD. • Any temporary unpaved road shall be effectively stabilized and visible emissions shall be limited to no greater than 20 percent opacity for dust emission by paving, chemical stabilizers, dust suppressants and/or watering. • Fugitive dust generation during construction would be minimized by watering as needed to meet Imperial County standards for fugitive dust control. To further reduce fugitive dust emissions, vehicle traffic on unpaved roads would be kept below 15 miles per hour. • During grading, the Project would be watering actively disturbed on-site areas at least three times a day as necessary to reduce fugitive dust emissions. • Access to the site would be via Highway 111, McDonald Road, and Davis Road. All workers, vendors and haul trucks would be required to utilize these roadways. • An agreement between County of Imperial Public Works and the applicant would be established requiring the applicant to improve a two-mile section of the unpaved Davis Road adjacent to the site by installing a 12- to 18-inch- thick engineered Class II 				
---	--	--	--	--

<p>base section. In addition, at the request of the County, the applicant would utilize the improved section during construction and would wet the site continuously during construction activities. The road would be immediately paved after construction prior to operations of the plant to avoid damaging a new asphalt section.</p> <ul style="list-style-type: none"> • During construction, the Project would be required to maintain daily dust suppression at the two-mile section of Davis Road adjacent to the site using a water truck operating continuously while vehicles are using the road. • The Project would provide wheel shakers at the exit(s) of the construction site to minimize dust being tracked off the Project site and onto the roadways. • Operational on-road trips shall not operate on unpaved dirt roads. 				
<p>Mitigation Measure AQ-2</p> <p>Prior to commencing construction, the Project proponent shall submit and commit to a Combustion Exhaust Emissions Control Program. This plan would provide a detailed list of control measures to minimize exhaust emissions during Project construction, including but not limited to fuel use, engine maintenance, and procedures:</p> <ul style="list-style-type: none"> • The Exhaust Emission Control Plan shall provide a detailed list of control measures to minimize exhaust emissions during Project construction, including but not limited to fuel use, engine maintenance, and procedures. • The construction contractor shall be required to utilize construction equipment using diesel engines less than 50 horsepower with certified NOx emissions rated as Tier 3 or better. All off-road diesel-powered equipment greater than 50 horsepower that is used on-site during construction of the Project shall meet USEPA Tier 4 offroad emission standards and Level 3 diesel particulate filters. 	<p>Prior to Construction</p>	<p>Develop Combustion Exhaust Emissions Control Program</p>	<p>Applicant</p>	<p>Department of Planning and Development Services and ICAPCD</p>

<ul style="list-style-type: none"> • When commercially available, fossil fueled equipment shall be replaced with electrically driven equivalents (provided they are not run via a portable generator set). • Idling times shall be minimized either by shutting equipment off when not in use or reducing the maximum idling time to five minutes (as required by the California Airborne Toxics Control Measure, Title 13, Section 2485 of California Code of Regulations). Clear signage shall be provided for construction workers at all access points. • All construction equipment shall be maintained and properly tuned in accordance with manufacturer's specifications. All equipment shall be checked by a certified mechanic and determined to be running in proper condition prior to operation. • Where access to alternative sources of power are available, portable diesel engines shall be prohibited. Haul truck shall be 2010 model year trucks or newer (a gross vehicle weight rating of at least 14,001 pounds), or best commercially available equipment, that meet the California Air Resources Board 2010 engine emissions standards at 0.01 g/horsepower-hour of particulate matter and 0.20 g/horsepower-hour of NOx emissions or newer, cleaner trucks. • The volatile organic compounds (VOC) architectural coating limits specify that the use paints and solvents with a VOC content of 100 grams per liter or less for interior and 150 grams per liter or less for exterior surfaces shall be required. 				
Biological Resources				
<p>Mitigation Measure BIO-1. Designated Biologist: The Applicant shall retain the services of a Qualified Biologist. The Qualified Biologist will be employed during construction and all vegetation removal and ground-disturbing activities. The Qualified Biologist will document compliance with the projects mitigation measures and permits. The Qualified Biologist will have the authority to halt any Project activities that are in violation of the terms and conditions of the Project biological opinion(s) or incidental take permit, as appropriate.</p>	<p>During construction</p>	<p>The Qualified Biologist will Document Compliance</p>	<p>Applicant</p>	<p>Department of Planning and Development Services</p>

<p>Mitigation Measure BIO-2: Biological Monitors: Biological monitor(s) will be employed to assist the Designated Biologist in conducting preconstruction surveys and monitoring ground disturbance, grading, construction, decommissioning, and restoration activities. The biological monitor(s) will have sufficient education and field experience to understand resident wildlife species biology. To avoid and minimize effects to biological resources, the biological monitor(s) will assist the Designated Biologist with the following:</p> <ul style="list-style-type: none"> • Conduct inspections for listed species during ground-disturbing construction activities and document that habitat within the construction zone is not occupied by Yuma Ridgway's rail or desert pupfish. • Document compliance with all conservation measures, including but not limited to monitoring for presence of listed species; halting construction activity in the area if an individual listed species is found; and checking the staking/flagging of all disturbance areas to be sure that they are intact and that all construction activities are being kept within the staked/flagged limits. If a Yuma Ridgway's rail or desert pupfish is found within a work area, the Biological Monitor(s) will immediately notify the Designated Biologist, who will determine measures to be taken to ensure that the individual is not harmed, such as temporarily halting construction. 	<p>Prior to start of construction</p>	<p>Conduct Inspections</p>	<p>Applicant</p>	<p>Department of Planning and Development Services</p>
<p>Mitigation Measure BIO-3: Worker Environmental Awareness Program Training: A Worker Environmental Awareness Program will be implemented for construction crews prior to the commencement of Project activities. Training materials and briefings will include, but not be limited to, discussion of the federal and State statutes protecting threatened and endangered species, the consequence of noncompliance with these statutes, identification of values of wildlife and natural plant communities, hazardous substance spill prevention and containment measures, and review of all required conservation measures.</p>	<p>Prior to start of construction</p>	<p>Worker Environmental Awareness Program</p>	<p>Applicant</p>	<p>Department of Planning and Development Services</p>

<p>Mitigation Measure BIO-4: Flagging of Work Area Limits: All areas to be disturbed by the Project will be flagged prior to construction. All disturbance will be confined to these flagged areas, and all employees will be instructed that their activities must be confined to locations within the flagged areas.</p>	<p>Prior to Construction</p>	<p>Flagging Project Site</p>	<p>Applicant</p>	<p>Department of Planning and Development Services</p>
<p>Mitigation Measure BIO-5: Power Wash Equipment: All equipment used during construction of the Project will be required to be power washed prior to arrival at the Project site to prevent the transportation and establishment of noxious weeds in the area.</p>	<p>Prior to Construction</p>	<p>Power Wash Equipment</p>	<p>Applicant</p>	<p>Department of Planning and Development Services</p>

<p>Mitigation Measure BIO-6: Sediment and Erosion Control: The Project proponent will acquire the appropriate Clean Water Act regulatory permits, prepare a Stormwater Pollution and Prevention Plan (SWPPP), and implement BMPs prior to construction and site restoration. The SWPPP will identify specific actions and BMPs relating to the prevention of stormwater pollution from Project-related construction sources by identifying a practical sequence for site restoration, BMP implementation, contingency measures, responsible parties, and agency contacts. The SWPPP reflects localized surface hydrological conditions and will be reviewed by the USFWS prior to commencement of work. A SWPPP will be a condition of the contract with each contractor selected to build and decommission the Project. The SWPPP(s) at a minimum will incorporate soil stabilization and erosion control practices (e.g., hydroseeding, erosion control blankets, mulching), dewatering and/or flow diversion practices, sediment control practices (temporary sediment basins, fiber rolls), temporary and post-construction onsite and offsite runoff controls, and special considerations and BMPs for water crossings, wetlands, and drainages. The SWPPP will be prepared by a qualified SWPPP practitioner with BMPs selected to achieve maximum pollutant removal and that represent the best available technology that is economically achievable. Emphasis for BMPs is placed on controlling discharges of oxygen-depleting substances, floating material, oil and grease, acidic or caustic substances or compounds, and turbidity. Performance and effectiveness of these BMPs are determined either by visual means where applicable (i.e., observation of above-normal sediment release), or by actual water sampling in cases where verification of contaminant reduction or elimination (inadvertent petroleum release) is required to determine adequacy of the measure.</p>	<p>Prior to Construction</p>	<p>Develop SWPPP</p>	<p>Applicant</p>	<p>Department of Planning and Development Services</p>
---	------------------------------	----------------------	------------------	--

<p>Mitigation Measure BIO-7: Solid Waste Management: Solid waste will be properly contained in designated collection areas on site and regularly disposed of.</p>	<p>During Construction</p>	<p>Solid Waste Management</p>	<p>Applicant</p>	<p>Department of Planning and Development Services</p>
<p>Mitigation Measure BIO-8: A desert pupfish protection and relocation plan will be prepared prior to construction activities in any suitable habitat for desert pupfish. Its implementation will ensure construction in any suitable habitat for desert pupfish will be conducted with minimal effects on desert pupfish. This plan will be submitted to the Service and the CDFW for review and approval prior to any ground-disturbing activities that have a water component. This plan will provide:</p> <ol style="list-style-type: none"> 1. Protocols for pre-construction or pre-maintenance surveys to assess species presence and spawning within or immediately adjacent to work areas (e.g., in, or at the end of, the irrigation drains/drain canals, open water areas, and around the open water margins). The protocols will also outline the qualifications required for biologists to conduct desert pupfish survey, capture, and relocation activities and the process for biologist approval. 2. Capture (e.g., trapping in the irrigation drains for construction and maintenance; or trapping, dip netting, and seining in open water areas that are drained or if the water level is dropped) and transport methods to minimize handling and stress as well as exposure to heat, low dissolved oxygen (DO), and crowding. 3. Identification of locations for release of captured desert pupfish. 	<p>Prior to Construction</p>	<p>Desert Pupfish Protection and Relocation Plan</p>	<p>Applicant</p>	<p>Department of Planning and Development Services</p>

<p>4. Timing windows when construction or maintenance in open water areas and in the irrigation drain mouths/canals may be conducted with minimal effects on desert pupfish spawning.</p> <p>5. Adaptive management procedures that include assessment of mitigation measure effectiveness, development of revised measures to improve effectiveness, and similar assessment of revised measures to verify effectiveness. Yuma Ridgway's Rail Measures, Black Rail, and Other Marsh Bird Measures.</p>				
<p>Mitigation Measure BIO-9. Construction Timing: Construction activities within habitat for Yuma Ridgway's rail (i.e., cattail marsh) will be scheduled to avoid the nesting and molting flightless season (i.e., February 15 – September 15). Pile driving activities adjacent to Yuma Ridgway's rail habitat will avoid Yuma Ridgway's rail nesting season.</p>	<p>During Construction</p>	<p>Construction Timing</p>	<p>Applicant</p>	<p>Department of Planning and Development Services</p>
<p>Mitigation Measure BIO-10: Pre-Construction Surveys and Construction Monitoring for Yuma Ridgway's Rail and Black Rail: Pre-construction surveys for Yuma Ridgway's rail and black rail and construction monitoring will be conducted within all Project development areas within suitable habitat and a 500-foot buffer from suitable habitat. In the event that Yuma Ridgway's rail(s) or black rail(s) are detected within the work area (the area of active equipment use), all construction activities in the area will halt and the USFWS and CDFW will be notified no later than noon of the next business day. Project activities in the area may not proceed until the birds have left the work area. The USFWS and CDFW will also be notified if any Yuma Ridgway's rail are detected within 500 feet of the construction area. Project activities may proceed with caution in this buffer area under the direction of the Designated Biologist.</p>	<p>Prior to Construction</p>	<p>Pre-Construction Surveys and Construction Monitoring</p>	<p>Applicant</p>	<p>Department of Planning and Development Services</p>

<p>Mitigation Measure BIO-11: Reduced Vehicle Speed Adjacent to Rail Habitat: Vehicle speeds will be reduced to 15 miles per hour (mph) on access roads adjacent to Yuma Ridgway's rail habitat. These areas will be appropriately signed to identify the speed limit.</p>	<p>During Construction</p>	<p>Reduced Vehicle Speeds</p>	<p>Applicant</p>	<p>Department of Planning and Development Services</p>
<p>Mitigation Measure BIO-12: Noise Attenuation: The following noise attenuation measures will be implemented to minimize noise impacts on Yuma Ridgway's rail during the nesting season:</p> <ul style="list-style-type: none"> • At least 30 days prior to activities within 500 feet of Yuma Ridgway's rail habitat, the Applicant will conduct a noise study to evaluate the maximum predicted noise level within rail habitat. • If the maximum predicted noise is less than 60 A-weighted decibel scale (dBA) equivalent continuous sound level (Leq), no additional measures are required. • If the maximum predicted noise level exceeds 60 dBA Leq in rail habitat, noise attenuation measures such as noise walls or hay bales will be installed between the noise source and the suitable habitat. Noise monitors will be installed at the edge of the nearest Yuma Ridgway's rail habitat to assess the noise levels and verify that attenuation measures are successful. If necessary, additional noise reduction measures will be implemented to reduce the noise level to below 60 dBA at the edge of occupied habitat. 	<p>Prior to Construction</p>	<p>Noise Attenuation</p>	<p>Applicant</p>	<p>Department of Planning and Development Services</p>

<p>Mitigation Measure BIO-13. Habitat Conservation: To offset the loss of Yuma Ridgway's rail habitat, the Project proponent will preserve, create, or enhance habitat near the Project site for Yuma Ridgway's rail. The Project proponent will provide funding for construction and long-term management of the created habitat and will provide financial assurance for the construction of the wetland habitat in the form of performance bonds, escrow accounts, casualty insurance, or letters of credit. The performance bond, escrow account, casualty insurance, or letter of credit shall be of sufficient value to cover all construction, monitoring and reporting costs until the habitat is fully established. The financial assurance shall be in place prior to ground disturbance. Long-term management funding will be provided sufficient to cover, at a minimum, the management costs related to procurement of water from IID, weed control, levee and control structure maintenance, and control structure repair or replacement. The Applicant will prepare a detailed Habitat Enhancement Mitigation and Mitigation Monitoring Plan for review and approval by the USFWS, Corps, and CDFW prior to Project construction. Habitat creation activities will be conducted outside of the bird breeding season (February 15 – September 15) to avoid potential noise impacts on Yuma Ridgway's rail.</p>	<p>After Construction</p>	<p>Habitat Conservation</p>	<p>Applicant</p>	<p>Department of Planning and Development Services</p>
<p>Mitigation Measure BIO-14: Burrowing Owl. A pre-construction survey will be conducted for burrowing owls. The survey will be conducted during peak activity period (one hour before to two hours after sunrise or two hours before to one hour after sunset) no more than 14 days prior to the start of construction and within 500 feet surrounding the construction area. If owls are located during the pre-construction survey between February 1 and August 31 (nesting season), a buffer area will be established according to the guidelines in the 2012 Staff Report. A modified buffer reduction may be used with CDFW concurrence. If burrowing owls are located during the nonbreeding season, owls may be passively relocated in coordination with CDFW, by a qualified biologist according to the procedures outlined in the 2012 Staff Report on Burrowing Owl Mitigation. If burrowing owls are found on site during pre-construction surveys, the Project proponent shall contact CDFW to prepare a plan of action for buffers or passive relocation.</p>	<p>Prior To Construction</p>	<p>Burrowing Owl Surveys</p>	<p>Applicant</p>	<p>Department of Planning and Development Services</p>

<p>Mitigation Measure BIO-15: Lighting. Except as necessary for safety or security purposes, no lighting shall be allowed to impact wetland or riparian habitats.</p>	<p>During Construction</p>	<p>Lighting</p>	<p>Applicant</p>	<p>Department of Planning and Development Services</p>
<p>Mitigation Measure BIO-16: Nesting Bird Plan. Construction activities shall take place outside the general bird breeding season (February 15 to September 30), to the maximum extent practicable. Regardless of the time of year, prior to ground-disturbing activities, a qualified biologist shall conduct a nesting bird survey to comply with CDFW Code 3503 and 3503.5 and the Migratory Bird Treaty Act. The survey shall occur no more than three (3) days prior to initiation of proposed Project activities and shall include any potential habitat (including trees, shrubs, the ground, or nearby structures). Any occupied passerine and/or raptor nests occurring within the proposed Project area or the Project's zone of influence (generally 100-300 feet) shall be delineated and a no-disturbance buffer zone (as determined by the avian biologist) shall be established and maintained during Project activities. Additional follow-up surveys may be required by the resource agencies and Imperial County. The buffer zone shall be sufficient in size to prevent impacts to the nest. A qualified biologist shall monitor active nests to determine whether construction activities are disturbing nesting birds or nestlings. If the qualified biologist determines that construction activities pose a disturbance to nesting, construction work shall be stopped in the area of the nest and the no disturbance buffer shall be expanded. Once nesting has ceased and the fledglings are no longer using the nest area as confirmed by a qualified biologist, the buffer may be removed. A nesting bird survey report shall be provided to Imperial County and CDFW. If an active nest is encountered</p>	<p>Prior to Grading or Construction</p>	<p>Nesting Bird Plan</p>	<p>Applicant</p>	<p>Department of Planning and Development Services</p>

<p>during construction, construction shall stop immediately until a qualified biologist can determine the status of the nest and when work can proceed without risking violation to state or federal laws..</p>				
<p>Mitigation Measure BIO-18: Excavation Areas. Any open trench or excavated area shall be securely covered anytime Project activities within the excavated/trenched rea have ceased. The designated biologist shall oversee the covering of all excavated, steep-walled holes or trenches by placing plywood or other barrier materials such that animals are unable to enter and become entrapped. The use of temporary fencing around the perimeter or trenches or holes may be an acceptable minimization measure, if deemed appropriate by the biological monitor. Before holes or trenches are filled, the Biological Monitors shall thoroughly inspect the areas for trapped animals. If any worker discovers that any animal has become trapped, they shall halt Project-related activities and notify the biological monitor immediately.</p>	<p>During Construction</p>	<p>Excavation Area</p>	<p>Applicant</p>	<p>Department of Planning and Development Services</p>

<p>Mitigation Measure BIO-19: Wetland and Riparian Area Restoration/Compensation. The Project will provide restoration/compensation for all unavoidable impacts on areas under the jurisdiction of USACE, RWQCB, and CDFW. Impacts on jurisdictional areas will be avoided to the extent feasible. Where avoidance of jurisdictional areas is not feasible, the Project applicant will provide the necessary mitigation required as part of wetland permitting, by creation, restoration, or preservation of suitable jurisdictional or equivalent habitat along with adequate buffers to protect the function and values of jurisdictional areas. The Mitigation ratio will be 1:1 or as approved by the permitting agencies. The proposed Mitigation Plan area is located in Section 35 approximately 2 miles north of the HKP1 and HKL1 Projects at the corner of Beach Road and Access Road. The proposed mitigation area will total 159.61 acres; approximately 152 acres will be created native wetland/open water habitat and approximately 7 acres will be enhanced native upland habitat. Proposed native wetland communities include Willow Scrub Shrub, Cattail Bullrush Marsh and Desert Riparian Woodlands. Proposed upland communities include Sonoran Desert Scrub/Alkali Sink.</p>	<p>During Construction</p>	<p>Wetland and Riparian Area Restoration/Compensation</p>	<p>Applicant</p>	<p>Department of Planning and Development Services</p>
<p>Cultural Resources</p>				
<p>Mitigation Measure CUL-1: The Applicant shall retain the services of a Qualified Archaeologist, meeting the Secretary of the Interior Standards or County standards, whichever is greater, and require that all initial ground-disturbing work be monitored by archaeological specialist (monitor) proficient in artifact and feature identification in monitoring contexts. The Consultant (Qualified Archaeologist and/or monitor) shall be present at the Project construction phase kickoff meeting.</p>	<p>During Grading or construction</p>	<p>Monitoring during construction</p>	<p>Applicant/Construction contractor</p>	<p>Department of Planning and Development Services</p>
<p>Mitigation Measure CUL-2: Prior to commencing construction activities and thus prior to any ground disturbance in the Proposed Project site, the Consultant shall conduct initial Worker Environmental Awareness Program (WEAP) training to all construction personnel, including supervisors, present at the outset of the Project construction work phase, for which the Lead Contractor and all subcontractors shall make their personnel available. A tribal monitor shall be provided an opportunity to attend the preconstruction briefing, if requested. This WEAP training will educate construction personnel on how to work with the monitor(s) to identify and minimize impacts to archaeological resources and maintain environmental compliance. This WEAP</p>	<p>Prior to Commencing Construction Activities</p>	<p>Worker Environmental Awareness Program</p>	<p>Applicant</p>	<p>Department of Planning and Development Services</p>

<p>training will educate the monitor(s) of construction procedures to avoid construction-related injury or harm. This training may be performed periodically, such as for new personnel coming on to the Project as needed.</p>				
<p>Mitigation Measure CUL-3: The Contractor shall provide the Consultant with a schedule of initial potential ground-disturbing activities. A minimum of 48 hours will be provided to the Consultant of commencement of any initial ground-disturbing activities such as vegetation grubbing or clearing, grading, trenching, or mass excavation.</p> <p>A monitor shall be present on-site at the commencement of ground-disturbing activities related to the Project. The monitor, in consultation with the Qualified Archaeologist, shall observe initial ground-disturbing activities and, as they proceed, adjust the number of monitors as needed to provide adequate observation and oversight. All monitors will have stop-work authority to allow for recordation and evaluation of finds during construction. The monitor will maintain a daily record of observations to serve as an ongoing reference resource and to provide a resource for final reporting upon completion of the Project.</p> <p>The Consultant and the Lead Contractor and subcontractors shall maintain a line of communication regarding schedule and activity such that the monitor is aware of all ground-disturbing activities in advance to provide appropriate oversight.</p>	<p>Prior to Construction</p>	<p>Project Scheduling</p>	<p>Applicant</p>	<p>Department of Planning and Development Services</p>
<p>Mitigation Measure: CUL-4: In the event of the discovery of previously unidentified archaeological materials, the Contractor shall immediately cease all work activities within an area of no less than 100 feet of the discovery. After cessation of excavation, the Contractor shall immediately contact the County. Except in the case of cultural items that fall within the scope of the Native American Grave Protection and Repatriation Act (NAGPRA), California Health and Safety Code 7050.5, CEQA 15064.5, or California Public Resources Code 5097.98, the discovery of any cultural resource within the Project area shall not be grounds for a Project-wide “stop work” notice or otherwise interfere with the Project’s continuation except as set forth in this paragraph. Additionally, all consulting Native American Tribal groups that requested notification of any unanticipated discovery of archaeological resources on the Project shall be notified appropriately. If a discovery results in the identification of cultural items that fall within the scope of NAGPRA, the Contractor shall immediately cease all work activities within an area of no less than 100 feet (30 meters) of the discovery. In the event of an</p>	<p>During Construction</p>	<p>Identified Archaeological Materials Protocol</p>	<p>Applicant</p>	<p>Department of Planning and Development Services</p>

<p>unanticipated discovery of archaeological materials during construction, the Applicant-retained Qualified Professional Archaeologist shall be contacted to evaluate the significance of the materials prior to resuming any construction-related activities near the find. If the Qualified Archaeologist determines that the discovery constitutes a significant resource under CEQA and it cannot be avoided, the Applicant shall implement an archaeological data recovery program.</p>				
<p>Mitigation Measure: CUL-5: At the completion of all ground-disturbing activities, the Consultant shall prepare an Archaeological Resources Monitoring Report summarizing all monitoring efforts and observations, as performed, and any and all prehistoric or historic archaeological finds as well as providing follow-up reports of any finds to the SCCIC, as required.</p> <p>In the event unanticipated, buried prehistoric archaeological resources (lithic material, faunal, pottery, etc.) or historical archaeological resources (ceramics, building materials, glassware, etc.) are unearthed during construction or any ground disturbing activities within the Project area, additional resource treatments would become necessary. Once a potential resource has been identified, all work within 100 feet must be halted until the find can be assessed by a qualified archaeologist.</p>	<p>After Ground Disturbing Activities</p>	<p>Archaeological Resources Monitoring Report</p>	<p>Applicant</p>	<p>Department of Planning and Development Services</p>
<p>Geology and Soils</p>				
<p>Mitigation Measure GEO-1: A complete geotechnical engineering investigation shall be completed, with a Final Geotechnical Report to be prepared prior to submittal of a grading permit. The Final Geotechnical Report shall be prepared by a qualified consultant and be submitted to the County for review and approval. The investigation will include soil test borings; specific and detailed recommendations; soil and sediment analysis; detailed analysis and design standards; geotechnical design criteria; and detailed design recommendations.</p>	<p>Prior to Construction</p>	<p>Final Geotechnical Report</p>	<p>Applicant</p>	<p>Department of Planning and Development Services</p>
<p>Mitigation Measure GEO-2: All grading operations and construction shall be conducted in conformance with the recommendations included in the Geohazard Evaluation Report prepared on August 17, 2022, and Final Geotechnical Report on the Project site. Design, grading, and construction shall be performed in accordance with the recommendations of the project geotechnical consultant and corrosion engineer, subject to review by the County, prior to commencement of grading activities.</p>	<p>During Grading and Construction</p>	<p>Conformance to Geohazard Evaluation Report</p>	<p>Applicant</p>	<p>Department of Planning and Development Services</p>

<p>Mitigation Measure PALEO-1:The Applicant shall retain the services of a Qualified Paleontologist and require that all initial ground-disturbing work be monitored by someone trained in fossil identification in monitoring contexts. The Qualified Paleontologist shall prepare a Paleontological Resource Mitigation Plan to be implemented during ground-disturbing activity for the proposed Project. This program should outline the procedures for paleontological monitoring, including extent and duration; protocols for salvage and preparation of fossils; and the requirements for a final mitigation and monitoring report. The Qualified Paleontologist and a paleontological monitor shall be present at the Project construction-phase kickoff meeting.</p>	<p>During Grading and Excavation</p>	<p>Paleontological Resource Mitigation Plan</p>	<p>Applicant</p>	<p>Department of Planning and Development Services</p>
<p>Mitigation Measure PALEO-2: Prior to commencing construction activities and, thus, prior to any ground disturbance in the Proposed Project site, the Qualified Paleontologist and paleontological monitor shall conduct initial Worker Environmental Awareness Program (WEAP) training to all construction personnel, including supervisors, present at the start of the Project construction work phase, for which the Applicant, or their designated Contractor, and all subcontractors shall make their personnel available. This WEAP training will educate construction personnel on how to work with the monitor(s) to identify and minimize impacts to paleontological resources and maintain environmental compliance, and it shall be performed periodically for new personnel coming on to the Project as needed.</p>	<p>Prior to Construction Activities</p>	<p>Worker Environmental Awareness Program (WEAP)</p>	<p>Applicant</p>	<p>Department of Planning and Development Services</p>
<p>Mitigation Measure PALEO-3: The Applicant, or their designated Contractor, shall provide the Qualified Paleontologist with a schedule of initial potential ground-disturbing activities. A minimum of 48 hours will be provided to the consultant prior to the commencement of any initial ground-disturbing activities, such as vegetation grubbing or clearing, grading, trenching, or mass excavation.</p> <p>As detailed in the schedule provided, a paleontological monitor shall be present on-site at the commencement of ground-disturbing activities related to the Project. The monitor, in consultation with the Qualified Paleontologist, shall observe initial ground-disturbing activities and, as they proceed, make adjustments to the number of monitors as needed to provide adequate observation and oversight. All monitors will have stop-work authority to allow for recordation and evaluation of finds during construction. The monitor will maintain a daily record of observations as an ongoing reference resource and to provide a</p>	<p>Prior to Construction Activities</p>	<p>Paleontologist Scheduling</p>	<p>Applicant</p>	<p>Department of Planning and Development Services</p>

resource for final reporting upon completion of the Project. The Qualified Paleontologist, paleontological monitor, and the Applicant, or their designated Contractor, and subcontractors shall maintain a line of communication regarding schedule and activity such that the monitor is aware of all ground-disturbing activities in advance to provide appropriate oversight.				
Mitigation Measure PALEO-4: If paleontological resources are discovered, construction shall be halted within 50 feet of any paleontological finds and shall not resume until the Qualified Paleontologist can determine the significance of the find and/or the find has been fully investigated, documented, and cleared.	During Construction Activities	Resource Investigation	Applicant	Department of Planning and Development Services
Mitigation Measure PALEO-5: At the completion of all ground-disturbing activities, the Qualified Paleontologist shall prepare a Paleontological Resources Monitoring Report summarizing all monitoring efforts and observations, as performed, and any and all paleontological finds and shall provide follow-up reports of any finds to the preferred paleontological repository, as required.	After Ground Disturbing Activities	Paleontological Resources Monitoring Report	Applicant	Department of Planning and Development Services
Hazards and Hazardous Materials				
Mitigation Measure HAZ-1: To avoid health risks to construction workers, the Applicant shall require the contractor to prepare and implement a site Health and Safety Plan (HSP) if areas containing hazardous materials are to be disturbed. This plan will outline measures that will be employed to protect construction workers and the public from exposure to hazardous materials during construction activities. This plan shall be prepared prior to any ground-disturbing activities and shall be reviewed and approved by the Project Applicant. Workers shall review and sign the site HSP prior to proceeding with the assigned work.	Prior to Construction	Health and Safety Plan	Applicant	Department of Planning and Development Services
Mitigation Measure HAZ-2: For any gen-tie structures or other areas of project ground disturbance that are close to a REC, a Phase 2 limited soil sampling shall be conducted to determine if there are any hazardous materials present on-site. The soil sampling shall be conducted during final design and prior to construction. Soil sampling will determine the California Human Health Screening Levels (CHHSL) of the testing protocol (CAM 17 metals, a list of 17 metals found typically in hazardous materials and mining sites). The CHHSLs are a list of 54 hazardous chemicals in soil or soil gas that the California Environmental Protection Agency (CalEPA) considers to be below thresholds for risks to human health. The Imperial County Public Health Department, Division of Environmental Health (DEH) shall review the soil sampling results. If the results are above the CHHSLs, then the DEH would refer the project to the	Prior to Construction Activities	Determination of Hazardous Materials	Applicant	Department of Planning and Development Services

California Department of Toxic Substances Control for proper soil handling and removal procedures.				
Hydrology and Water Quality				
<p>Mitigation Measures HWQ-1: Prepare SWPPP and Implement BMPs Prior to Construction and Site Restoration. The Project applicant or its contractor shall prepare a Storm Water Pollution Prevention Plan (SWPPP) specific to the Project and be responsible for securing coverage under the State Water Resources Control Board's National Pollution Discharge Elimination System stormwater permit for general construction activity (Order 2009-0009-DWQ). The SWPPP shall identify specific actions and best management practices (BMPs) related to the prevention of stormwater pollution from Project-related construction sources by identifying a practical sequence for site restoration, BMP implementation, contingency measures, responsible parties, and agency contacts. The SWPPP shall reflect localized surface hydrological conditions and shall be reviewed and approved by the appropriate agency prior to commencement of work and shall be made conditions of the contract with the contractor selected to build and decommission the Project. The SWPPP shall incorporate control measures in the following categories:</p> <ul style="list-style-type: none"> - Soil stabilization and erosion control practices - Sediment control practices - Temporary and postconstruction on- and off-site runoff controls - Special considerations and BMPs for water crossings and drainages - Monitoring protocols for discharge(s) and receiving waters, with emphasis place on the following water quality objectives: dissolved oxygen, floating material, oil and grease, potential of hydrogen (pH), and turbidity - Waste management, handling, and disposal control practices - Corrective action and spill contingency measures - Agency and responsible party contact information - Training procedures that shall be used to ensure that workers are aware of permit requirements and proper installation methods for BMPs specified in the SWPPP <p>The SWPPP shall be prepared by a Qualified SWPPP Practitioner and/or Qualified SWPPP Developer, with BMPs selected to achieve maximum pollutant removal and representative of the</p>	<p>Prior to Construction</p>	<p>Storm Water Pollution Prevention Plan</p>	<p>Applicant</p>	<p>Department of Planning and Development Services</p>

best available technology that is economically achievable. Emphasis for BMPs shall be placed on controlling discharges of oxygen-depleting substances; floating material; oil and grease; acidic or caustic substances or compounds; and turbidity. BMPs for soil-stabilization, erosion-control, and sediment-control practices will also be required. Performance and effectiveness of these BMPs shall be determined either by visual means where applicable (i.e., observation of above-normal sediment release), or by actual water sampling in cases where verification of contaminant reduction or elimination, (inadvertent petroleum release) is required to determine adequacy of the measure.				
Mitigation Measures HWQ-2: Incorporate Postconstruction Runoff BMPs into Project Drainage Plan. The Project Drainage Plan shall adhere to the County's Engineering Guidelines Manual, IID Draft Hydrology Manual or other recognized source with approval by the County Engineer to control and manage the on- and off-site discharge of stormwater to existing drainage systems. Infiltration basins will be integrated into the Drainage Plan to the maximum extent practical. The Drainage Plan shall provide both short and long-term drainage solutions to ensure the proper sequencing of drainage facilities and management of runoff generated from Project-related impervious surfaces as necessary.	Post Construction	Project Drainage Plan	Applicant	Department of Planning and Development Services
Tribal Cultural Resources				
Mitigation Measures CUL1-CUL5 apply here				
Utilities and Service Systems				
Mitigation Measures UTIL-1: If the IID does not receive its annual 3.1 maf water apportionment according to the QSA obligations of Colorado River water during the Project's 30-year lifespan, the Applicant shall work with IID to ensure any reduction in water availability can be managed by the Project.	Prior to Construction	Water Apportionment	Applicant	Department of Planning and Development Services

Attachment E
RESOLUTION CUP 21-0020

RESOLUTION NO.

A RESOLUTION OF THE PLANNING COMMISSION OF THE COUNTY OF IMPERIAL, CALIFORNIA, APPROVING “CONDITIONAL USE PERMIT # 21-0020” FOR THE HELL’S KITCHEN POWERCO 1 LLC PROJECTS.

WHEREAS, the Hell’s Kitchen PowerCo 1 LLC submitted an application for Conditional Use Permit #21-0020 for the construction, operation, maintenance and decommissioning of a geothermal power plant facility;

WHEREAS, an Environmental Impact Report and CEQA Findings have been prepared in accordance with the requirements of the California Environmental Quality Act, the State Guidelines, and the County’s “Rules and Regulations to Implement CEQA, as Amended”;

WHEREAS, the Planning Commission of the County of Imperial has approved Conditional Use Permit #21-0020, APNs

020-010-012	HKP1 and HKL1 Shared Facilities	S-1-G and S-2-G
020-010-013	HKP1 and HKL1 Shared Facilities	S-1-G
020-070-060	HKP1 and HKL1 Shared Facilities	S-1-G
020-010-042	Gen-Tie and Power Line	S-1-G
020-060-001	Gen-Tie and Power Line	S-1-G
020-060-002	Gen-Tie and Power Line	S-1-G
020-060-039	Gen-Tie and Power Line	S-1-G
020-060-040	Gen-Tie and Power Line	S-1-G
020-070-026	Gen-Tie and Power Line	S-1-G
020-070-025	Gen-Tie and Power Line	S-1-G
020-070-029	Gen-Tie and Power Line	S-1-G
020-070-055	Gen-Tie and Power Line	S-1-G
020-010-031	Gen-Tie and Power Line	S-1-G
020-010-032	Gen-Tie and Power Line	S-1-G
020-010-035	Gen-Tie and Power Line	M-2-G-PE
020-100-044	Gen-Tie and Power Line	M-2-G-PE

and project site is located approximately 3.8 miles Southwest of the Townsite of Niland;

WHEREAS, public notice of said application has been given, and the Planning Commission has considered evidence presented by the Imperial County Planning and Development Services Department and has heard, received and considered all oral and

written protests, objections and evidence presented by interested parties at a public hearing held with respect to this item on December 13, 2023; and

WHEREAS, on August 30, 2023, the Draft EIR was submitted to the State Clearinghouse and circulated for 50+ days. All comments are due by October 23, 2023

THEREFORE, the Planning Commission of the County of Imperial **DOES HEREBY RESOLVE** as follows:

SECTION 1. The Planning Commission has considered the proposed Conditional Use Permit #21-0020 prior to approval and the County’s consideration of the project was noticed in compliance with the law.

SECTION 2. That the project complies with the requirements of the Imperial County Code and is in accordance with State Planning and Zoning law, therefore, the following findings are made pursuant to Imperial County Code §90203.09 as follows:

A. The proposed use is consistent with goals and policies of the adopted County General Plan. (Imperial County Code §90203.09.A)

The General Plan designates the subject site as “Agriculture” and the Renewable Energy and Transmission Element designates the subject site within one of the four Geothermal Overlay Zones that were approved previously by the County to be incorporated into the Renewable Energy Overlay Zone. The Land Use Ordinance, Division 17, authorizes the development and operation of renewable energy projects, including geothermal projects, within the Renewable Energy Overlay Zone with an approved Conditional Use Permit (CUP), the CUP is subject to the discretionary approval of the Imperial County Planning Commission. Additionally, an analysis of the project’s consistency with the General Plan goals and objectives relevant to the project is provided in the Final EIR and the project is considered consistent with the applicable policies of the Final EIR.

The Planning Commission has also examined the relevant, applicable portions of the Imperial County General Plan’s, *Land Use Element* and the *Geothermal/Alternative Energy & Transmission Element* and has determined that the *Land Use Element* provides that the evaluation and approval of non-agricultural uses on lands designated agriculture will occur through the implementation of zoning and the conditional use permit (CUP) review process. Further, the Land Use Compatibility Matrix in the ICGP provides that a conditionally compatible category could be found to be compatible when additional use restrictions can be

included by use of an “overlay”, the proposed project is within the Geothermal Overlay zone, therefore, pursuant to Land Use Ordinance, Section 91703.04, a geothermal project is permitted with approval of a Conditional Use Permit.

The County further finds that the project does not have a significant adverse effect on agricultural production. “...Significant adverse effect on agricultural production...” means a significant unmitigated impact, as defined under CEQA, to agricultural resources resulting from the permanent elimination of agricultural uses or resulting from removal agricultural land from the “Agricultural” land use category.

The proposed use provides a clear long term economic benefit to the County. The mineral extraction facility will provide economic growth to the region and economic benefit to the County and Goal 2 of the *Land Use Element* states that the County should “[d]iversify employment and economic opportunities in the County while preserving agricultural activity...” the project shall create jobs and other economic opportunities in the County at a time of high County unemployment.

B. The proposed use is consistent with the purpose of the zone or sub-zone within which the use will be used. (Imperial County Code §90203.09.B)

The purpose of the project is for the construction of geothermal power plant facility. Pursuant to Title 9, Division 5, Sections 90518.02, 90519.02, and 90516.02, Major facilities relating to the generation and transmission of electrical energy is a use that is permitted in the S-1-G (Open Space, Geothermal Overlay), S-2-G (Open Space/Recreation, Geothermal Overlay), and M-2-G (Medium Industrial, Geothermal Overlay) Zone subject to approval of a CUP from the County. Therefore, the proposed use is consistent with the purpose of the zone or sub-zone within which the uses will be located.

C. The proposed use is listed as a use within the zone or sub-zone or is found to be similar to a listed conditional use according to the procedures of Section 90203.00. (Imperial County Code §90203.09.C)

The proposed geothermal power plant facility is listed as a use subject to a Conditional Use Permit in Land Use Ordinance, Sections 90518.02, 90519.02, and 90516.02 under Major facilities relating to the generation and transmission of electrical energy. Geothermal projects within the Renewable Energy Overlay Zone are also listed as a use subject to a Conditional Use Permit in Land Use Ordinance Division 17, Section 91703.04.

D. The proposed use meets the minimum requirements of this Title applicable to the use and complies with all applicable laws, ordinances and regulation of the County of Imperial and the State of California. (Imperial County Code §90203.09.D)

The project complies with the minimum requirements of this Title by, among other things, obtaining a CUP, complying with the California Environmental Quality Act, and participating in the public review and hearing process. Development standards have been established for the Project pursuant to these processes, and will be enforced via imposition and enforcement of the Mitigation Monitoring and Reporting Program recommended for approval by separate Resolution, as well as the conditions of approval imposed on this CUP. The Conditions of Approval will further insure that the project complies with all applicable regulations of the County of Imperial and the State of California. Therefore, the proposed project will meet the minimum requirements of the Land Use Ordinance, Section 90203.00.

E. The proposed use will not be detrimental to the health, safety, and welfare of the public or to the property and residents in the vicinity. (Imperial County Code §90203.09.E)

The geothermal facility is not in near proximity to very large residential areas and are generally surrounded by agricultural uses and IID managed marshlands to the north, east and south.

The closest residence is located over two miles to the northwest of the project site. A commercial algae production facility is located southeast of the site but is no longer in operation with a mobile home on-site. Noise associated with operation and maintenance would also meet the County's noise ordinance requirements at the project property lines. Further, the project's structural facilities, with the exception of the overhead transmission lines would generally be below 55 feet in height. A variance is submitted for any structures over 35 feet in height. The Environmental Impact Report prepared for the project analyzed the project's potential effects on the health, safety, and welfare of the public and property and found that, with mitigation, the Project has less than significant affects in all resource areas. Finally, the Permittee has agreed to conditions of approval that support and promote the protection of the health, safety, and welfare of the County's citizens and property, and ensures that the County will not be negatively impacted environmentally or fiscally.

F. The proposed use does not violate any other law or ordinance. (Imperial County Code §90203.09.F)

The proposed project will be subject to the Conditional Use Permit and current Federal, State and Local regulations. State Planning and Zoning Law (Cal. Govt. Code §§ 65000-66035) establishes minimum statewide standards for the regulation of local land use through planning and zoning. The County regulates local land use via Title 9 of the Imperial County Code. As found above, the proposed project is conditioned to be consistent with Imperial County, Title 9, Land Use Ordinance and CEQA mitigation measures and therefore complies with both State and local laws and ordinance. Pursuant to CEQA, the County has prepared an EIR for the Project, which EIR analyzes the Project's compliance and consistency with other federal, state, and local laws and ordinances regulating the environment. Substantial evidence supports the conclusions in the EIR that the project complies with said environmental laws. The County is aware of no other laws or ordinances that might be implicated by the Project, and thus the finds that the proposed use does not violate any other law or ordinance. The proposed project will be subject to the Conditional Use Permit and current Federal, State and local regulations.

G. The proposed use is not granting a special privilege. (Imperial County Code §90203.09.G)

A Major geothermal project within the Renewable Energy Overlay Zone is a permitted use subject to approval of a Conditional Use Permit under Land Use Ordinance, Division 17, Section 91703.04 *et. seq.* and will not grant a special privilege.

SECTION 3. Approval of the Project are conditioned upon the terms and conditions set forth in the Agreement for Conditional Use Permit No. 21-0020, attached hereto and incorporated herein by this reference.

NOW, THEREFORE, based on the above findings, the Imperial County Planning Commission **DOES HEREBY APPROVE** Conditional Use Permit #21-0020, subject to the attached Conditions of Approval.

Rudy Schaffner, Chairman

Imperial County Planning Commission

I hereby certify that the preceding resolution was taken by the Planning Commission at a meeting conducted on December 13, 2023 by the following vote:

AYES:

NOES:

ABSENT:

ABSTAIN:

ATTEST:

James A Minnick, Director of Planning & Development Services
Secretary to the Planning Commission

S: APN 020\010-012\hells kitchen power\PC\ cup resolution 21 0020.

When Recorded Return To:

Imperial County Planning & Development Services Dept.
801 Main Street
El Centro, California 92243

**AGREEMENT FOR
CONDITIONAL USE PERMIT #21-0020
Hell's Kitchen PowerCo 1, LLC**

This agreement is hereby made and entered into on this _____ day of January _____ 24, by and between Controlled Thermal Resources (US) Inc. via its subsidiary Hell's Kitchen PowerCo 1, LLC hereinafter referred to as the Permittee, and the COUNTY OF IMPERIAL, a political subdivision of the State of California, (hereinafter referred to as "COUNTY").

RECITALS

WHEREAS, Permittee is the owner, lessee or successor-in-interest in certain land in Imperial County with the applicant proposing Hell's Kitchen PowerCo 1 (HKP1) to construct and operate a commercial geothermal, Hell's Kitchen LithiumCo 1, LLC is proposing the Hell's Kitchen LithiumCo 1 (HKL1). The geothermal plant (HKP1) and lithium facilities (HKL1) project is within portions of Sections 11 and 12 of Township 11 South, Range 13 East, S.B.B.M.; the gen-tie/power line ROW corridor is located within portions of Sections 12, 13 and 14 of Township 11 South, Range 13 East, S.B.B.M., and is approximately 3.8 miles southwest of the Townsite of Niland, Assessor Parcel Numbers:

020-010-012	HKP1 and HKL1 Shared Facilities	S-1-G and S-2-G
020-010-013	HKP1 and HKL1 Shared Facilities	S-1-G
020-070-060	HKP1 and HKL1 Shared Facilities	S-1-G
020-010-042	Gen-Tie and Power Line	S-1-G
020-060-001	Gen-Tie and Power Line	S-1-G
020-060-002	Gen-Tie and Power Line	S-1-G
020-060-039	Gen-Tie and Power Line	S-1-G
020-060-040	Gen-Tie and Power Line	S-1-G
020-070-026	Gen-Tie and Power Line	S-1-G
020-070-025	Gen-Tie and Power Line	S-1-G
020-070-029	Gen-Tie and Power Line	S-1-G
020-070-055	Gen-Tie and Power Line	S-1-G
020-010-031	Gen-Tie and Power Line	S-1-G
020-010-032	Gen-Tie and Power Line	S-1-G
020-010-035	Gen-Tie and Power Line	M-2-G-PE
020-100-044	Gen-Tie and Power Line	M-2-G-PE

WHEREAS, Permittee has applied to the County of Imperial for a Conditional Use Permit #21-0020 allowing for the geothermal facility and associated interconnections to the proposed Hell's Kitchen Geothermal Plant that includes pipelines, conveyors, conduits and other mechanical connections to/from plant, additionally, the Permittee has applied for a variance for height increase needed for facility construction and operation.

The letter "G" shows the "GENERAL CONDITIONS". These conditions are conditions that either routinely and commonly are included in all Conditional Use Permits as "standardized conditions and/or are conditions that the Imperial County Planning Commission has established as a requirement on all CUP's for consistent application and enforcement. The Permittee is hereby advised that the General Conditions are as applicable as the SITE SPECIFIC conditions.

GENERAL CONDITIONS:

G-1 GENERAL LAW:

The Permittee shall comply with all local, state and/or federal laws, rules, regulations, ordinances, and/or standards (LORS) as they may pertain to the Project whether specified herein or not.

G-2 PERMITS/LICENSES:

The Permittee shall obtain all local, state and/or federal permits, licenses, and/or other approvals for the construction and/or operation of the Project. This shall include, but not be limited to, local requirements for Health, Building, Sanitation, ICAPCD, Public Works, County Sheriff, Fire Protection/Office of Emergency Services, Regional Water Quality Control Board, California Division of Oil, Gas and Geothermal Resources (CDOGGR), among others. Permittee shall likewise comply with all such permit requirements. Additionally, Permittee shall if so requested submit a copy of such additional permit and/or licenses to the Planning & Development Services Department within thirty (30) days of receipt, including amendments or alternatives thereto.

G-3 RECORDATION:

This permit shall not be effective until CUP is recorded at the Imperial County Recorder's Office and payment of the recordation fee shall be the responsibility of the Permittee. If the Permittee fails to pay the recordation fee within six (6) months from the date of approval, this permit shall be deemed null and void. The Planning & Development Department will submit the executed Permit to the Imperial County Recorder's office for recordation purposes. Permittee shall commence construction of the permitted activities or provide evidence of substantial process within twelve (12) months from the effective date of this permit, i.e. approval date. The Planning Director shall have the authority to extend this time limit not to exceed 24 months if so requested by the Permittee.

G-4 CONDITION PRIORITY:

The Project shall be constructed and operated as described in this Permit, the project description and as specified herein. If a conflict occurs between the permitting/regulatory agencies, the most stringent condition shall govern and takes precedence.

G-5 INDEMNIFICATION:

As a condition of this permit, Permittee agrees to defend, indemnify, hold harmless, and release the County, its agents, officers, attorneys, and employees from any claim, action, or proceeding brought against any of them, the purpose of which is to attack, set aside, void, or annul the permit or adoption of the environmental document which accompanies it. This indemnification obligation shall include, but not be limited to, damages, costs, expenses, attorney's fees, or expert witness fees that may be asserted by any person or entity, including the Permittee, arising out of or in connection with the approval of this permit, whether there is concurrent, passive or active negligence on the part of the County, its agents, officers, attorneys, or employees.

G-6 INSURANCE:

The Permittee shall secure and maintain liability in tort and property damage, insurance at a minimum of \$1,000,000.00 or proof of financial responsibility to protect persons or property from injury or damage caused in any way by construction, or operation, of permitted facilities. The Permittee and/or operator shall require that proper Workers' Compensation insurance covers all laborers working on such facilities, e.g. construction and operational activities, as required by the State of California. The Permittee shall also secure liability insurance and such other insurance as may be required by the State and/or Federal Law.

Evidence of such insurance shall be provided to the County prior to commencement of any activities authorized by this permit, e.g. a Certificate of Insurance is to be provided to the Planning & Development Services Department by the insurance carrier and said insurance and certificate shall be kept current for the life of the permitted Project. Certificate(s) of insurance shall be sent directly to the Planning & Development Services Department by the insurance carrier and shall name the Department as a recipient of both renewal and cancellation notices.

G-7 INSPECTION AND RIGHT OF ENTRY:

The County reserves the right to enter the premises to make appropriate inspection(s) and to determine if the condition(s) of this permit are complied with. The owner or operator shall allow authorized County representative(s) access upon the presentation of credentials and other documents as may be required by law to:

(a) Enter at reasonable times upon the owner's or operator's premises where a permitted facility or activity is located or conducted, or where records must be kept under the conditions of the permit;

(b) Have access to and copy, at reasonable times, any records that must be kept under the conditions of the permit; and,

(c) Inspect at reasonable times any facilities, equipment (including monitoring and control equipment), practices, or operations regulated or required under the permit.

G-8 SEVERABILITY:

Should any condition(s) of this permit be determined by a Court or other agency with proper jurisdiction to be invalid for any reason, such determination shall not invalidate the remaining provision(s) of this permit.

G-9 PROVISION TO RUN WITH THE LAND/PROJECT:

The provisions of this project are to run with the land/project and shall bind the current and future owner(s), successor(s)-in-interest, assignee(s) and/or transferee(s) of said project. Permittee shall not without prior notification to the Planning & Development Services Department assign, sell or transfer, or grant control of project or any right or privilege therein. The Permittee shall provide a minimum of sixty (60) days written notice prior to such proposed transfer becoming effective. The permitted use identified herein is limited for use upon the permitted properties described herein and may not be transferred to any another parcels.

G-10 TIME LIMIT:

Unless otherwise specified within the specific conditions, this permit shall be limited to a maximum of thirty (30) years from the recordation of the CUP. The CUP may be extended for a successive thirty (30) year period by the Planning Director upon a finding by the Planning & Development Services Department that the project is in compliance with all conditions of the CUP as stated herein and any applicable Land Use regulation of the County of Imperial.

If an extension is necessary, the Permittee shall file a written extension request with the Planning Director at least sixty (60) days prior to the expiration date of the Permit. Such an extension request shall include the appropriate extension fee, pursuant to the Land Use Ordinance, Title 9, Division 9, Section 90901.03 *et. seq.*, General Planning fees. If the original approval was granted by the Planning Commission and/or the Board of Supervisors, such an extension shall only be considered by the approving body, after a noticed public hearing. Nothing stated or implied within this permit shall constitute a guarantee that an extension will be granted. An extension may not be granted if the project is in violation of any one or all of the conditions or if there is a history of non-compliance with the permit conditions.

G-11 COST:

The Permittee shall pay any and all amounts determined by the County Planning & Development Services Department to defray any and all cost(s) for the review of reports, field investigations, subsidence/seismicity monitoring, provisions for geothermal waste services, and other activities directly related to the enforcement/monitoring for compliance of this Permit, County Ordinance or any other applicable law as provided in the Land Use Ordinance, Section 90901.03 *et. seq.*, General Planning fees. All County Departments', directly involved in the monitoring/enforcement of this project may bill Permittee under this provision; however, said billing shall only be through and with the approval of the Planning & Development Services Department.

G-12 REPORTS/INFORMATION:

If requested in writing by the Planning Director, Permittee shall provide any such documentation/report as necessary to ascertain compliance with the Permit. The format, content and supporting documentation shall be as required by the Planning Director.

G-13 DEFINITIONS:

In the event of a dispute the meaning(s) or the intent of any word(s), phrase(s) and/or conditions or sections herein shall be determined by the Planning Commission of the County of Imperial. Their determination shall be final unless an appeal is made to the Board of Supervisors within the required time, i.e. ten (10) calendar days, pursuant to the Land Use Ordinance, Title 9, Division 1, Chapter 4, Section 90104.05, *Appeal from Decision*.

G-14 MINOR AMENDMENTS:

The Planning Director may approve minor changes or modifications to the design, construction, and/or operation of the Project provided said changes are necessary for the project to meet other laws, regulations, codes, or conditions of the CUP and provided further, that such changes will not result in any additional environmental impacts.

G-15 SPECIFICITY:

The issuance of this permit does not authorize the Permittee to construct or operate the Project in violation of any state, federal, local law nor beyond the specified boundaries of the Project as shown in the application/project description/permit, nor shall this permit allow any accessory or ancillary use not specified herein. This permit does not provide any prescriptive right or use to the Permittee for future addition and/or modifications to the Project.

G-16 NON-COMPLIANCE (ENFORCEMENT & TERMINATION):

Should the Permittee violate any condition herein, the County shall give notice of such violation. If Permittee does not act to correct the identified violation, and after having given reasonable notice and opportunity, the County may revoke the permit.

(a) If the Planning Commission finds and determines that the Permittee or successor-in-interest has not complied with the terms and conditions of the CUP, or cannot comply with the terms and conditions of the CUP, or the Planning Commission determines that the permitted activities constitute a public nuisance, the Planning Director shall provide Permittee with notice and a reasonable opportunity to comply with the enforcement or abatement order; and,

(b) If after receipt of the order, (1) Permittee fails to comply, and/or (2) Permittee cannot comply with the conditions set forth in the CUP, then the matter shall be referred to the Planning Commission for permit modification, suspension, or termination, or to the appropriate prosecuting authority.

G-17 GENERAL WELFARE:

All construction and operations shall be conducted with consistency with all laws, conditions, adopted County policies, plans and the application so that the Project will be in harmony with the area and not conflict with the public health, safety, comfort, convenience, and general welfare.

G-18 PERMITS OF OTHER AGENCIES INCORPORATED:

Permits granted by other governmental agencies in connection with the Project are incorporated herein by reference. The County reserves the right to apply conditions of those permits, as the County deems appropriate; provided that enforcement of a permit granted by another governmental agency shall require concurrence by the respective agency.

G-19 HEALTH HAZARD:

If the County Health Officer determines that a significant health hazard exists to the public, the Health Officer may require appropriate measures and the Permittee shall implement such measures to mitigate the health hazard. If the hazard to the public is determined to be imminent, such measures may be imposed immediately and may include temporary suspension of permitted activities, the measures imposed by the County Health Officer shall not prohibit the Permittee from requesting a special Planning Commission meeting, provided Permittee bears all related costs.

G-20 APPROVALS AND CONDITIONS SUBSEQUENT TO GRANTING PERMIT:

Permittee acceptance of this permit shall be deemed to constitute agreement with the terms and conditions contained herein.

- Where requirements are imposed in this permit that Permittee shall conduct monitoring and where the County has reserved the right to impose or modify conditions with which the Permittee must comply based on data obtained therefrom.
- Where Permittee is required to prepare specific plans for County approval and disagreement arises, the Permittee, operator and/or agent, the Planning Director or other affected party, to be determined by the Planning Director, may request that a hearing be conducted before the Planning Commission whereby they may state the requirements which will implement the applicable conditions as intended herein. Upon receipt of a request, the Planning Commission shall conduct a hearing and make a written determination. The Planning Commission may request support and advice from a technical advisory committee. Failure to take any action shall constitute endorsement of staff's determination.

G-21 CHANGE OF OWNER/OPERATOR:

In the event the ownership of the site or the operation of the site transfers from the current Permittee to a new successor Permittee, the successor Permittee shall be bound by all terms and conditions of this permit as if said successor was the original Permittee. Current Permittee shall inform the County Planning and Development Services Department in writing at least 60 days prior to any such transfer. Failure of a notice of change of ownership or change of operator shall be grounds for the immediate revocation of the CUP. In the event of a change, the new Owner/Operator shall file with the Department, via certified mail, a letter stating that they are fully aware of all conditions and acknowledge that they will adhere to all. If this permit or any subservient or associated permit requires financial surety, the transfer of this permit shall not be effective until the new Permittee has requisite surety on file. Furthermore existing surety shall not be released until replacement surety is accepted by County. Failure to provide timely notice of transfer by Permittee shall forfeit current surety.

G-22 COMPLIANCE WITH ORDINANCE:

Permittee is aware of, has been provided a current copy of and has agreed to be bound by and maintain compliance with the "Communications Ordinance", being Title 9, Division 24 of the County's codified ordinances.

(The remainder of this page is intentionally left blank)

CUP #21-0020 GEOTHERMAL POWER PLANT FACILITY :

SITE SPECIFIC CONDITIONS:

S-1 AUTHORIZED SCOPE OF ACTIVITIES:

The Permittee is authorized to construct and operate the following facilities in compliance with the County's General Plan, Renewable Energy and Transmission Element, Land Use Ordinance, CUP application and all other applicable local, state, and federal laws, ordinances, regulations and standards (LORS):

The Proposed Project is the construction and operation of a geothermal power facility (HKP1) and commercial geothermal mineral extraction and production plant (HKL1) within the Salton Sea geothermal field in Imperial County (County), California (Project). HKP1 involves the development of a geothermal power plant that will produce up to 49.9 megawatts (MW) net of geothermal power. The Proposed Project would consist of the following activities:

- Construction and operation of a 49.9 MW geothermal power plant;
- Construction of well pads with geothermal production and injection wells;
- Construction of pipelines between HKP1 and HKL1 to facilitate the movement of brine between the facilities;
- Construction of ingress and egress to the Project site from Davis Road;
- Paving of Davis Road from McDonald Road to Noffsinger Road (approximately 2 miles);
- Construction of a 230-kV gen-tie line and collocated power line (approximately 2 miles south) ultimately deeding this gen-tie line and its appurtenances to the Imperial Irrigation District for operation; and
- Construction of shared administrative facilities, offices, repair facilities, shipping and receiving facilities, and other infrastructure components.
- On June 14, 2017, the County authorized Geothermal CUP #16-0001, which allowed construction of up to four well pads as well as drilling and maintenance of up to six separate geothermal exploratory wells on the Project site. A well pad, Well Pad 1, north of Alcott Road and west of Davis Road, and two geothermal wells were constructed on the site in 2021. Rough grading for Well Pad 3, south of Noffsinger Road and east of Davis Road began in November 2021. The remaining Project site is undeveloped..

Structures:

The HKP1 will include construction of the following structures:

- Production and injection wells and well pads.
- Geothermal fluid production and injection pipelines
- A brine processing facility
- A brine pond
- 49.9 MW net geothermal turbine generator facility
- A cooling tower
- Material equipment and storage

Implementation of these project(s) requires an approval of Conditional Use Permit(s) and Variance(s) to allow for the construction and operation of the proposed 49.9MW net geothermal power plant and mineral extraction and processing facility.

S-2 AESTHETICS:

The Permittee shall design and maintain all permanent structures to be harmonious in appearance and compatible with the approved landscaping plans for screening and restoration of laydown areas, facility painting/treatment plan and lighting plan.

Permittee shall install a six (6) foot (minimum) perimeter security fence. Landscaping will be installed between the fence and the public roadway along the frontage of the property with special attention at the entrance. The landscaping will need design approval from the Imperial County Planning & Development Services Department prior to installation.

Site Abandonment Plan:

Prior to the first building permit being issued, Hell's Kitchen PowerCo 1 LLC shall submit to the County of Imperial Planning & Development Services Department, a Site Abandonment Plan to return the property to its previous condition. The first building permit shall be exclusive of a temporary electrical permit or the grading permit.

The Site Abandonment Plan shall include a reclamation cost estimate prepared by a California-licensed general contractor or civil engineer. Permittee shall provide financial assurance/bonding in the amount equal to the reclamation cost estimate to restore the site to its pre-construction condition including removal of all structures and equipment, soil testing for and clean-up of contaminants in the soil and any other clean up and repair necessary to return the land to its previous condition within 180days of the first building permit being issued. The term "building permit" shall not include a temporary power permit or a grading permit.

S-3 AGRICULTURE:

Agricultural Commission Conditions:

The Project shall:

- Monitor for all pests including insects, vertebrates, weeds, and pathogens. Promptly control or eradicate pests when found, or when notified by the Agricultural Commissioner's office that a pest problem is present on the project site. A qualified applicator or a licensed pest control operator must perform all treatments.
- "Control" means to reduce the population of common pests below economically damaging levels, and includes attempts to exclude pests before infestation, and effective control methods after infestation. Effective control methods may include physical/mechanical removal, biocontrol, cultural control, or chemical treatments.
- Allow access by Agricultural Commissioner staff for routine visual and trap pest surveys, compliance inspections, eradication of exotic pests, and other official duties.

Reimbursement:

- The project shall reimburse the Agricultural Commissioner's office for the actual cost of investigations, inspections, or other required non-routine responses to the site that are not

funded by other sources if the investigation shows that the Permittee created the problem alleged in the complaint.

S-4 AIR QUALITY:

The project site shall comply with the Imperial County APCD (ICAPCD) Rule VIII regulations for compliance with the following measures:

Obtain Authority to Construct (ATC) and Permit to Operate (PTO):

The Project shall submit, in a timely manner, an application for an Authority to Construct (ATC) and an application for a Permit to Operate (PTO) to the ICAPCD prior to any construction and operation of the Project as required by Rule 207, New and Modified Source Review. The Project shall comply with all review design conditions contained in the ATC/PTO including but not limited to plant design, which shall include a system that controls emissions assuring compliance with Federal and State standards, testing and verification requirements. All harmful and noxious odors shall be controlled according to the ATC/PTO conditions to ensure that quantities released because of plant operations do not exceed Federal or State standards.

The Project will be required to comply with all offset requirements in the event that potential emissions exceed Rule 207 thresholds.

Permittee shall submit two dust control plans. The first dust control plan shall be the "Construction" Dust Control Plan and shall be submitted to and approved by the ICAPCD prior to issuance of any construction permit. The second dust control plan shall be an "Operational" Dust Control Plan and shall be submitted to and approved by the ICAPCD prior to the start of operations. Both Dust Control Plans shall identify existing and potential sources of fugitive PM 10 and shall identify the mitigation measures, which shall be applied to maintain visible dust emissions below 20% opacity and where applicable, provide evidence that the area is stabilized.

NOx Controls, the project shall comply with all applicable standard mitigation measures for construction combustion equipment for the reduction of excess NOx emissions:

- a. Utilize all Tier 3 or Tier 4 construction equipment;
- b. Prohibit idling of equipment not in use; for equipment in use reduce idling time to a maximum of 5 minutes;
- c. Where feasible replace fossil fuel burning equipment with electrically driven equivalents provided they are not powered via a portable generator;
- d. Register all portable engines 50 horse power or greater with the ICAPCD;

- e. Submit to the ICAPCD prior to any earthmoving activity a complete list of all construction equipment to be utilized during the construction phase identifying Make, Model, Year, Horsepower, estimated hours of usage per equipment and total number of each piece of equipment.

The project shall also apply enhanced dust control plan with measures to assure reduced levels of NOx are maintained during the construction phase of the project: In the event, NOx emissions are calculated to exceed ICAPCD thresholds for construction; the Permittee shall provide for "offsite" mitigation or comply with Policy number 5. Policy number 5 allows a project to pay in-lieu impact fees utilizing the most current Carl Moyer Cost Effective methodology to reduce excess NOx emissions.

- a. A construction Equipment List in Excel format detailing the equipment type, make, model, year horsepower, hours of daily operation, date arrived onsite, and date removed from site must be submitted to the Air District on a regular basis.
- b. Formal written notification must be given to the Air District 10 days prior to the start of construction.
- c. Any generator greater than 50 brake horsepower must be permitted through the Permitting and Engineering.
- d. Watering must be performed continuously at all times on all roadways with record keeping to document such.
- e. Reduced speed for all vehicle types not to exceed 40 mph on paved surfaces/roadways and no more than 15 mph on unpaved surfaces/roadways.

S-5 BIOLOGICAL RESOURCES:

In order to minimize potential impacts to burrowing owl, the following shall be implemented prior to and during construction activities:

BIO-1: The Applicant shall ensure that prior to and during construction, onsite occupied burrows shall be avoided during nesting season (February 1 through August 31).

BIO-2: The Applicant shall conduct a preconstruction survey within 30 days of ground-breaking activities to identify any burrowing owls on site.

BIO-3: If burrowing owls are found within the Project site, a Burrowing Owl Mitigation Plan must be prepared by a qualified biologist and approved by CDFW prior to any ground-disturbing activities.

BIO-4: The construction or site manager shall ensure that no construction occurs within 250 feet of the artificial burrows or other active or occupied burrows unless active or occupied burrows are sheltered with hay bales and monitored by a qualified biologist; if this is done, work may occur within 20 feet of active or occupied burrows. If qualified biologists observe burrowing owls' agitation, work in the vicinity will stop. Additional shelter materials can be added until burrowing owls remain calm during construction activities.

BIO-5: If passive relocation is required, it shall be done by a qualified biologist from September 1 to January 31 and will follow the CDFW Staff Report on Burrowing Owl Mitigation Guidelines (CDFW 2012).

S-6 CONSTRUCTION STANDARDS:

The geothermal and other structures shall be built in accordance with the County Building Code requirements applicable to "Seismic Category D". All structures and facilities shall be designed in accordance with the publication entitled "Recommended Lateral Force Requirements and Commentary by the Structural Engineers Association of California". The structural components of the permitted facilities shall be reviewed by the County Building Official/Planning Director. Building permits shall be procured for all non-electric utility facilities from the County prior to commencement of any construction.

S-7 EMERGENCY RESPONSE PLAN (ERP):

An Emergency Response Plan shall be prepared covering possible emergencies, e.g. blow-outs, major fluid spills, earthquakes, fires, floods and other foreseeable accidents and emergencies. At

all times, there shall be at least one employee either on the facility premises or on call (i.e., available to respond to an emergency by reaching the facility within a short period of time) with the responsibility of coordinating all emergency response measures. This Emergency Coordinator shall be thoroughly familiar with all aspects of the facility's Emergency Response Plan, all operations and activities at the facility, location of all records within the facility and the facility layout. This person shall have the authority to commit the resources needed to carry out the contingency plan to include appropriate first aid provisions during project construction and operation with appropriate first aid training for Project employees. Adequate personnel and equipment shall be available to respond to emergencies and to insure compliance with the conditions of the permit.

(a) The Emergency Response Plan shall be prepared in consultation with, but not be limited to, the Regional Water Quality Control Board (RWQCB), Imperial County Office of Emergency Services, and local emergency service agencies, and other appropriate state and county agencies and shall include information useful in combating the emergency. The Plan shall be available on-site, and provided to agencies responsible for preparing for and addressing emergencies, on request. The plan shall include a notification list of response agencies which shall be notified immediately upon the discovery of a reportable unauthorized discharge and the list shall include: Imperial Fire/Office of Emergency Services, Planning & Development Services Department, Environmental Health Services/Health Department, RWQCB, Imperial Irrigation District (IID), Department of Public Works (DPW), Sheriff's office, as applicable.

(b) A Hazardous Materials Business Plan shall be prepared and be submitted to the Certified Unified Program Agency, Imperial County Hazardous Materials/Waste Unit and shall be maintained by the Permittee. The Permittee shall provide adequate safety devices against the hazard of fire and explosion for activities that involve the use and storage of flammable, explosive or highly corrosive or reactive materials as well as adequate fire-fighting and fire suppression equipment and devices standard in the industry with compliance with applicable state and local laws as determined by the Imperial County Fire Chief.

(c) The Permittee shall meet all NFPA requirements, and also submit an Engineer-certified (California-licensed Engineer) fire suppression/protection plan to the Imperial County Fire/OES Department, prior to issuance of a building permit.

All designated employees shall be provided with communication devices, cell phones or walkie-talkies, in the event of an emergency situation on-site.

S-8 FIRST AID:

Appropriate first aid provisions for facility operations shall be made for emergency response during project construction and operation with appropriate first aid training for project employees. During construction, a member of each working crew shall be trained in basic first aid and supplied with necessary medical equipment to respond to emergencies as provided for in the Emergency Response Plan required hereinabove.

S-9 GEOTECHNICAL:

The Permittee shall conduct applicable on-site geotechnical investigations of soil characteristics affecting the permitted facilities by qualified persons at the Permittee's expense and any soil reports shall be made available to the County.

S-10 GEOLOGY & SOILS & GEOLOGIC HAZARDS:

All grading operations and construction shall be conducted in conformance with the recommendations included in the Preliminary Geotechnical Report on the Project site that has been prepared by Land-Mark Geo-Engineers and Geologists (Land-Mark) in August 2020. Design, grading, and construction shall be performed in accordance with the recommendations of the project geotechnical consultant as summarized in a final written report, subject to review by the County, prior to commencement of grading activities.

S-11 HAZARDS & HAZARDOUS MATERIALS:

A comprehensive Hazardous Materials Business Plan shall be prepared for the project in accordance with the California Accidental Release Prevention Program. The Hazardous Materials Management Plan (HMMP) shall include (1) an Inventory and Site Map, (2) an Emergency Response Plan (ERP) and Owner/Operator Identification, and (3) employee training.

The HMMP will be prepared and submitted to the California Department of Toxic Substances Control (DTSC), as the Certified Unified Program Agency (CUPA) for Imperial County. The HMMP will be maintained and revised as necessary.

The DTSC ICUPA understands that you are conducting a business in Imperial County (Email from Nyein Aung/Roger Vintze, DTSC Imperial CUPA, dated May 8, 2014)

California Health and Safety Code, Chapter 6.95, Section 25500 requires you to establish an implement Hazardous Materials Release Response Plan and Inventory (Business Plan) for emergency response to any hazardous material mishap, if at any one time your facility handles a hazardous waste in quantities equal to or greater than 55 gallons for liquids, 500 pounds for solids, and 200 cubic feet for compressed gases. With the passage of Assembly Bill (AB) 408 on October 8, 2011, the inventory reporting quantities were changed as follows:

For a solid or liquid hazardous material that is classified as a hazard solely as an irritant or sensitizer, the new reporting quantity is 5,000 pounds;

For a hazardous material that is a gas, at standard temperature or pressure, and for which the only health and physical hazards are simple asphyxiation and the release of pressure, the new reporting quantity is 1,000 cubic feet (Reporting of gases in a cryogenic state remains unchanged);

For oil-filled electrical equipment that is not contiguous to an electrical facility, the new reporting quantity for the oil is 1,320 gallons. Moreover, if you generate, store or handle any amount of hazardous waste at any one time must report to DTSC ICUPA and register for hazardous waste generator program.

S-12 LAND USE:

The Permittee shall prepare an appropriate parking plan for the permitted facilities and any signs shall require compliance with the Land Use Ordinance provisions and provide the necessary laydown/staging areas for permitted facilities.

S-13 HYDROLOGY AND WATER QUALITY:

The Permittee shall furnish a Drainage and Grading Plan/Study to provide for property grading and drainage control, which shall also include prevention of sedimentation of damage to off-site properties. The Study/Plan shall be submitted to the Department of Public Works for review and

approval. The Permittee shall implement the approved plan. Employment of the appropriate Best Management Practices (BMP's) shall be included.

Implementation of a SWPPP:

The project could violate water quality standards or waste discharge requirements unless mitigated as follows:

1. Prior to the issuance of grading permits, Permittee shall obtain coverage under the SWRCB's General Permit for Stormwater Discharges Associated with Construction Activity. Permittee shall prepare a SWPPP to be administered during grading and Project construction. The SWPPP must contain BMPs and construction techniques accepted by the County for use in the Project area at the time of construction that meet the technical standards of the General Construction Permit to ensure that potential water quality impacts (including on- and off-site erosion) during construction phases are minimized, that shall reduce the potential for runoff, and the release, mobilization, and exposure of pollutants from the construction area, and that no water quality standards are violated.
2. The SWPPP must address spill prevention and include a countermeasure plan describing measures to ensure proper collection and disposal of all pollutants handled or produced on the site during construction, including sanitary wastes, cement, and petroleum products. Countermeasures may include measures to prevent or clean up spills of hazardous waste and of hazardous materials used for equipment operation, and emergency procedures for responding to spills. BMPs included in the SWPPP must be consistent with the California Stormwater Best Management Practices Handbook for Construction.
3. The SWPPP must be submitted to California RWQCB CRB and Imperial County for review prior to the issuance of grading permits.
4. The SWPPP shall identify and specify the pollutants that are likely to be used during construction that could be present in stormwater drainage and non-stormwater discharges, including fuels, lubricants, and other types of materials used for equipment operation and the means of waste disposal.
5. The SWPPP shall specify personnel training requirements and procedures that shall be used to ensure that workers are aware of permit requirements and proper installation methods for BMPs specified in the SWPPP.
6. The SWPPP shall also specify the appropriate personnel responsible for supervisory duties related to implementation of the SWPPP.
7. Permittee shall file a Notice of Intent with the SWQCB to comply with the NPDES General Stormwater Permit and prepare a SWPPP that meets the Linear/Underground Overhead provisions in Attachment A of the General Permit.
8. A copy of the approved SWPPP(s) shall be maintained and available at all times on the construction site(s).

S-14 POTABLE WATER TREATMENT PLANT:

Permittee shall provide potable water meeting California state standards. At a minimum this includes obtaining a State Domestic Water Supply Permit for a non-transient non-community public water system through the Imperial County Public Health Department (ICPHD). Permittee under CUP #21-0020 may provide potable water under one of the following options:

- (a) The Hell's Kitchen Power Plant would expand its water system, located within the footprint of this property, to provide water for both facilities;

- (b) Hell's Kitchen PowerCo 1 and LithiumCo 1 facilities would form a separate corporate entity to provide potable water to both plants. Under this option, the water treatment system would be expanded to provide potable water to both facilities,
- (c) Hell's Kitchen PowerCo 1 and LithiumCo 1 would form a special district, which then can provide potable water to anyone within that district. Formation of the "special district" would require approval from the Imperial County Local Agency Formation Commission (LAFCO)
- (d) Hells Kitchen PowerCo 1 would build a water treatment facility for the facility on the Permittee property.

S-15 ODOR CONTROL:

The Permittee shall control hydrogen sulfide and other non-condensable emissions to insure that quantities released do not exceed the mandatory standards. The Permittee shall control all harmful or noxious emissions and the odors shall be controlled to insure that quantities or air contaminants released as a result of the permitted facilities do not exceed State or Federal standards.

S-16 OPERATIONS:

Permittee shall have a responsible agent on-site whose name, title, e-mail address and telephone number (office & cell #'s) shall be provided to the CUPA (Imperial County Hazardous Materials/Waste Unit), Department of Toxic Substances Control, County Department of Public Works, County Fire/OES Department, County Environmental Health Services/Health Department, Sheriff's Department and the County Planning & Development Services Department.

S-17 PERMITS:

Except as specifically authorized in this permit, separate permits shall be required for any supplemental activities required to operate the geothermal facility .

S-18 PROJECT DESIGN:

The following shall be the Project design:

- (a) Construction and maintenance activities relating to the brine pipelines to and from the geothermal resource shall be coordinated.
- (b) All facility access on public rights-of-way and visitor parking areas within the plant site shall be constructed to standards approved by the ICPDSD and/or DPW.
- (c) Shrubs, trees and ground cover shall be planted and maintained to compliment the appearance of permitted facilities, in accordance with any landscaping plan approved by the County Planning and Development Services Department. The exterior finish of building materials shall be painted an earth tone color to blend into the background. Exterior finishes shall be limited to non-reflective materials such as concrete, masonry, or stucco, though metal or synthetic wall panels with similar appearance to the aforementioned materials may also be acceptable as determined by the Planning and Development Services Department.

(d) All equipment, pipes, tanks and lines used at the geothermal facility to handle, transfer or pump geothermal fluids and on-site hazardous materials shall be maintained in a manner that prevents leaking and spilling, e.g. effective performance, adequate funding, operator staffing and training, and adequate laboratory and process controls, including appropriate quality assurance procedures, with the operation of back-up or auxiliary facilities when necessary to achieve compliance with the permit conditions.

(e) The facility shall be designed not interfere with the irrigation and drainage pattern, and shall comply with the requirements and regulations of the Imperial Irrigation District.

(f) All permanent sumps, brine ponds, waste holding ponds, and any other pond, shall be designed and constructed to meet sound engineering standards and the regulations and requirements of the RWQCB under the supervision of a California-licensed Civil Engineer.

(g) Prior to site restoration and abandonment, it shall be the Permittee's responsibility to comply with all regulations of the County and state, including the purging of on-site brine ponds when the project ceases, salts removed from the dikes and bottoms and the berms then leveled to the satisfaction of the landowners and the County Planning and Development Services Department.

(h) Permittee shall utilize and comply with applicable California Building Code requirements for the geothermal plant and related power distribution lines.

S-19 RETURN OF SPENT BRINE:

Any processed brine that is not used by Hell's Kitchen LithiumCo 1 shall be sent back to the Hell's Kitchen PowerCo 1 Geothermal Plant.

S-20 SPILLS AND RUNOFF:

The Permittee shall design and construct the permitted facilities to prevent spills from endangering adjacent properties and waterways, and to prevent runoff from any source being channeled or directed in an unnatural way so as to cause erosion, siltation, or other detriments. The plant site shall be graded and constructed so that all spills shall drain into the on-site ponding areas.

S-21 SYSTEM CLOSURE AND SITE RESTORATION:

The Permittee shall comply with all closure requirements and site restoration, when operation of the permitted facilities herein authorized has ceased. All plant facilities shall be dismantled, all brine pipelines and related facilities shall be demolished and the site restored as required by the County and the land involved be made compatible with the surrounding uses or as requested by the landowner and as agreed to by the County Planning Director. In the event that some structures are still viable for a permitted use on-site, such as the manufacturing facilities, office, warehouse, and maintenance shop or other potentially usable structures, the structures may remain on-site if the Permittee and landowner so request and Planning Director so approves.

S-22 TRANSPORTATION AND CIRCULATION:

In order to prevent traffic delays related to the Project, the Applicant shall comply with mitigation measures as listed in the Certified EIR.

A Commute Trip Reduction (CTR) program shall be implemented to discourage single-occupancy vehicle trips and encourage alternative modes of transportation such as carpooling, taking transit,

walking, and biking. The CTR program could include features such as carpooling encouragement, ride-matching assistance, preferential carpool parking, half-time transportation coordinator, vanpool assistance, and bicycle end-trip facilities (parking, showers, and lockers) and provide employees with assistance in using alternative modes of travel.

S-23 WATER CONSERVATION:

The Permittee shall consult with the Imperial Irrigation District and comply with the approved water contract. If the IID does not receive its annual 3.1 maf water apportionment according to the QSA obligations of Colorado River water during the Project's 30-year lifespan, the Applicant shall work with IID to ensure any reduction in water availability can be managed by the Project.

S-24 WATER FACILITIES:

The Permittee shall obtain and comply with applicable General NPDES Permit for Discharges of Water Associated with Construction and Waste Discharge Requirements for permitted facilities as well as developing and implementing an applicable Storm Water Pollution Prevention Plan for the facilities. The Permittee shall prepare and implement a Drainage, Erosion and Sedimentation Control Plan relating to the permitted facilities.

S-25 WASTE DISPOSAL:

The Permittee shall insure that all wastes, liquid or solid, shall be disposed in compliance with appropriate local, state, and federal regulations, in effect or subsequently duly and legally enacted.

(a) Any discharge of wastes into surface water shall meet all requirements of the Regional Water Quality Control Board, e.g. National Pollution Discharge Elimination System permit restrictions to include a water quality monitoring program as approved by applicable law.

(b) All solid wastes shall be disposed of in any approved solid waste disposal site in accordance with County, State and Federal regulations. However, nothing herein is intended to define any portion of the geothermal brine resource as a waste or to prohibit the extraction of resources from spent geothermal brine or materials for useful purposes as either allowed herein or later applied for and approved.

S-26 SALES TAXES BENEFIT

SALES TAX ALLOCATION REQUIREMENT.

To the extent permitted by applicable law, Developer will require that all qualifying contractors and subcontractors exercise their option to obtain a California Department of Tax and Fee Administration ("CDTFA") sub-permit for the jobsite and allocate all eligible sales and use tax payments to County and the Local Transit Authority ("LTA"). Prior to commencement of any construction activity on-site, Developer shall require that the contractor or subcontractor provide County with a copy of their CDTFA account number and sub-permit. Developer shall either cause its construction contractor to treat the Project in accordance with California Sales and Use Tax Regulation 1521(b)(2)(B), California Sales and Use Tax Regulation 1521(c)(13)(B), and California Sales and Use Tax Regulation 1826(b) for sales and use tax purposes, or form a "Buying Company" as defined in the California Sales and Use Tax Regulation 1699(h). Developer may adopt an alternate methodology to accomplish this goal if such methodology is approved by the County's Executive Officer prior to issuance of any building permit. No later than forty-five (45) days after the due date for filing sales and use tax returns for each calendar quarter, occurring after

the commencement of any construction activity on-site through including the first anniversary of commercial operating date ("COD"), developer shall report, or cause its general contractor to report to County, the total amount of sales and use taxes related to the Project that are allocated to the County, and reported on Developer's, general contractor's and subcontractors' applicable California sales and use tax returns.

Should Developer become aware of a change in circumstances that would materially affect the sales/use tax allocation requirement, then Developer shall, within forty-five (45) days of learning of such change in circumstances, inform the County in writing of the change in circumstances. If the County determines that such change in circumstances warrants an adjustment to the sales/use tax allocation requirement, then County shall negotiate in good faith with Developer in revising the sales/use tax allocation requirement. If the Parties are unable to agree upon a revised allocation, then the dispute shall be referred to an independent accountant mutually acceptable to both Parties. The costs for such nonbinding mediation shall be borne by Developer. Failure of the Developer to inform the County of the change in circumstances shall constitute a waiver of Developer's ability to seek any adjustment to the sales/use tax allocation based on such change in circumstances

The complete sales / use tax allocation amount due to County and LTA for the Project must be received within one (1) year after COD for this Project, or such later date as any applicable sales / use tax is due or is transmitted from the CDTFA, unless it is delayed due to causes beyond Developer's control or for which Developer is not responsible. If, within one (1) year after issuance of the final certificate of occupancy, or such later date as any applicable sales / use tax is due or is transmitted from the CDTFA, the sales / use taxes received by the County are less than the sales / use tax allocation amounts mandated under paragraph B, then Developer shall pay the difference to the County.

Payments to County and LTA as a result of a shortfall shall be due within forty-five (45) calendar days of Developer's receipt of written notice of shortfall from the County.

Failure to make such payment within the forty-five (45) day timeframe shall be considered a default pursuant to section VI paragraph Q. of this Agreement, and may lead to termination of this Agreement. Developer hereby agrees to pay interest at the rate of six percent (6%) per annum of the payment due for any payment received by County beyond the forty-five (45) day due date. The obligation to pay interest shall survive the termination of this Agreement. The obligation to pay interest shall be stayed for up to thirty (30) calendar days when such amounts are disputed in good faith, so long as Developer submits the payments "under written protest" with a complete explanation of the reasons for the protest. Upon resolution of the protested payment, such late charges may be assessed if it is determined by County that the dispute was not made in good faith. Repeated protests of the same point rejected in a prior protest shall be considered a protest in bad faith. Any such payments later found not to be due by Developer shall be refunded by County promptly, and in all events within thirty (30) calendar days after the determination of the amounts owing is made.

In the event that Developer repowers or replaces the equipment onsite, to the extent permitted under then applicable law, each site shall be designated as the "point of sale" so as to create an additional local tax-funding source for the County of Imperial.

1. Hell's Kitchen PowerCo 1 LLC shall be the master developer and shall be responsible as for all improvements, septic, water plant, roads and other improvements, Conditional Use Permit Application and CUP Conditions, EIR, and MM&RP.

2. If Hell's Kitchen PowerCo 1, LLC sells all or part of this project, an approved agreement shall be in place for new owner to build and maintain as agreed to by the previous conditions. The Planning and Development Services Director shall approve of any agreement between permittee and a new master developer.

S-27 DURATION OF THIS PERMIT:

The time limit under condition G-10 shall allow for the plant to be constructed and the 30 years shall commence upon issuance of the Certificate of Occupancy and/or the official starting date of commercial operations, whichever is later.

S-28 JOINT USE FACILITIES:

Permittee may construct and/or operate certain facilities within the project area of both the Hell's Kitchen PowerCo 1 LLC and Hell's Kitchen LithiumCo 1 LLC projects that are of a common use, including but not limited to the storm-water retention basin, the wastewater treatment system, and/or the potable water treatment system. Additionally, Permittee may construct connection, interconnection and/or return lines, including communication, power and control systems, between the projects, which may be necessary and incidental to the operation of the facilities.

Additional Conditions

PALEO-1: The Applicant shall retain the services of a Qualified Paleontologist and require that all initial ground- disturbing work be monitored by someone trained in fossil identification in monitoring contexts. The Qualified Paleontologist shall prepare a Paleontological Resource Mitigation Plan to be implemented during ground- disturbing activity for the proposed Project. This program should outline the procedures for paleontological monitoring, including extent and duration; protocols for salvage and preparation of fossils; and the requirements for a final mitigation and monitoring report. The Qualified Paleontologist and a paleontological monitor shall be present at the Project construction-phase kickoff meeting.

PALEO-2: Prior to commencing construction activities and, thus, prior to any ground disturbance in the Proposed Project site, the Qualified Paleontologist and paleontological monitor shall conduct initial Worker Environmental Awareness Program (WEAP) training to all construction personnel, including supervisors, present at the start of the Project construction work phase, for which the Applicant, or their designated Contractor, and all subcontractors shall make their personnel available. This WEAP training will educate construction personnel on how to work with the monitor(s) to identify and minimize impacts to paleontological resources and maintain environmental compliance, and it shall be performed periodically for new personnel coming on to the Project as needed.

PALEO-3: The Applicant, or their designated Contractor, shall provide the Qualified Paleontologist with a schedule of initial potential ground-disturbing activities. A minimum of 48 hours will be provided to the consultant prior to the commencement of any initial ground-disturbing activities, such as vegetation grubbing or clearing, grading, trenching, or mass excavation. As detailed in the schedule provided, a paleontological monitor shall be present on-site at the commencement of

ground-disturbing activities related to the Project. The monitor, in consultation with the Qualified Paleontologist, shall observe initial ground-disturbing activities and, as they proceed, make adjustments to the number of monitors as needed to provide adequate observation and oversight. All monitors will have stop-work authority to allow for recordation and evaluation of finds during construction. The monitor will maintain a daily record of observations as an ongoing reference resource and to provide a resource for final reporting upon completion of the Project.

The Qualified Paleontologist, paleontological monitor, and the Applicant, or their designated Contractor, and subcontractors shall maintain a line of communication regarding schedule and activity such that the monitor is aware of all ground-disturbing activities in advance to provide appropriate oversight.

PALEO-4: If paleontological resources are discovered, construction shall be halted within 50 feet of any paleontological finds and shall not resume until the Qualified Paleontologist can determine the significance of the find and/or the find has been fully investigated, documented, and cleared.

PALEO-5: At the completion of all ground-disturbing activities, the Qualified Paleontologist shall prepare a Paleontological Resources Monitoring Report summarizing all monitoring efforts and observations, as performed, and any and all paleontological finds and shall provide follow-up reports of any finds to the preferred paleontological repository, as required.

NOW THEREFORE, County hereby issues the Conditional Use Permit CUP #21-0020 and Permittee hereby accepts permit upon the terms and conditions set forth herein.

IN WITNESS THEREOF, the parties hereto have executed this Agreement the day and year first written.

PERMITTEE

Jim Turner, President

Date

COUNTY OF IMPERIAL, a political subdivision of the STATE OF CALIFORNIA

Jim Minnick, Director
Planning & Development Services

Date

PERMITTEE NOTARIZATION

Dated _____

STATE OF CALIFORNIA

COUNTY OF _____ } S.S.

On _____ before me,
_____ a Notary Public in and for
said _____ County and _____ State, personally appeared
_____, who proved to on the basis

of satisfactory evidence to be the person(s) whose name(s) is/are subscribed to the within
instrument and acknowledged to me that he/she/they executed the same in his/her/their
authorized capacity(ies), and that by his/her/their signature(s) on the instrument the
person(s), or the entity upon behalf of which the person(s) acted, executed the instrument.

I certify under PENALTY OF PERJURY under the laws of the State of California that the
foregoing paragraph is true and correct.

WITNESS my hand and official seal

Signature _____

ATTENTION NOTARY: Although the information requested below is OPTIONAL, it could
prevent fraudulent attachment of this certificate to unauthorized document.

Title or Type of Document _____

Number of Pages _____ Date of Document _____

Signer(s) Other Than Named Above _____

Dated _____

COUNTY NOTARIZATION

STATE OF CALIFORNIA

COUNTY OF IMPERIAL } S.S.

On _____ before me,
_____ a Notary Public in and for
said _____ County and State, personally appeared
_____, who proved to me on the
basis of satisfactory evidence to be the person(s) whose name(s) is/are subscribed to the
within instrument and acknowledged to me that he/she/they executed the same in
his/her/their authorized capacity(ies), and that by his/her/their signature(s) on the
instrument the person(s), or the entity upon behalf of which the person(s) acted, executed
the instrument.

I certify under PENALTY OF PERJURY under the laws of the State of California that the
foregoing paragraph is true and correct.

WITNESS my hand and official seal

Signature _____

ATTENTION NOTARY: Although the information requested below is OPTIONAL, it could
prevent fraudulent attachment of this certificate to unauthorized document.

Title or Type of Document _____
Number of Pages _____ Date of Document _____
Signer(s) Other Than Named Above _____

**ATTACHMENT F
RESOLUTION CUP 21-
0021**

RESOLUTION NO.

A RESOLUTION OF THE PLANNING COMMISSION OF THE COUNTY OF IMPERIAL, CALIFORNIA, APPROVING “CONDITIONAL USE PERMIT # 20-0021” FOR THE HELL’S KITCHEN LITHIUMCO 1 LLC PROJECTS.

WHEREAS, Hell’s Kitchen LithiumCo 1 LLC submitted an application for Conditional Use Permit #21-0021 for the construction, operation, maintenance and decommissioning of a mineral extraction and production facility adjacent to a proposed geothermal flash power plant;

WHEREAS, an Environmental Impact Report and CEQA Findings have been prepared in accordance with the requirements of the California Environmental Quality Act, the State Guidelines, and the County’s “Rules and Regulations to Implement CEQA, as Amended”;

WHEREAS, the Planning Commission of the County of Imperial has approved Conditional Use Permit #21-0021, APNs

020-010-012	HKP1 and HKL1 Shared Facilities	S-1-G and S-2-G
020-010-013	HKP1 and HKL1 Shared Facilities	S-1-G
020-070-060	HKP1 and HKL1 Shared Facilities	S-1-G
020-010-042	Gen-Tie and Power Line	S-1-G
020-060-001	Gen-Tie and Power Line	S-1-G
020-060-002	Gen-Tie and Power Line	S-1-G
020-060-039	Gen-Tie and Power Line	S-1-G
020-060-040	Gen-Tie and Power Line	S-1-G
020-070-026	Gen-Tie and Power Line	S-1-G
020-070-025	Gen-Tie and Power Line	S-1-G
020-070-029	Gen-Tie and Power Line	S-1-G
020-070-055	Gen-Tie and Power Line	S-1-G
020-010-031	Gen-Tie and Power Line	S-1-G
020-010-032	Gen-Tie and Power Line	S-1-G
020-010-035	Gen-Tie and Power Line	M-2-G-PE
020-100-044	Gen-Tie and Power Line	M-2-G-PE

and project site is located approximately 3.8 miles Southwest of the Townsite of Niland;

WHEREAS, public notice of said application has been given, and the Planning Commission has considered evidence presented by the Imperial County Planning and Development Services Department and has heard, received and considered all oral and

written protests, objections and evidence presented by interested parties at a public hearing held with respect to this item on December 13, 2023; and

WHEREAS, on August 30, 2023, the Draft EIR was submitted to the State Clearinghouse and circulated for 50+ days. All comments are due by October 23, 2023

THEREFORE, the Planning Commission of the County of Imperial **DOES HEREBY RESOLVE** as follows:

SECTION 1. The Planning Commission has considered the proposed Conditional Use Permit #21-0021 prior to approval and the County's consideration of the project was noticed in compliance with the law.

SECTION 2. That the project complies with the requirements of the Imperial County Code and is in accordance with State Planning and Zoning law, therefore, the following findings are made pursuant to Imperial County Code §90203.09 as follows:

A. The proposed use is consistent with goals and policies of the adopted County General Plan. (Imperial County Code §90203.09.A)

The General Plan designates the subject site as "Agriculture" and the Renewable Energy and Transmission Element designates the subject site within one of the four Geothermal Overlay Zones that were approved previously by the County to be incorporated into the Renewable Energy Overlay Zone. The Land Use Ordinance, Division 17, authorizes the development and operation of renewable energy projects, including geothermal projects, within the Renewable Energy Overlay Zone with an approved Conditional Use Permit (CUP), the CUP is subject to the discretionary approval of the Imperial County Planning Commission. Additionally, an analysis of the project's consistency with the General Plan goals and objectives relevant to the project is provided in the Final EIR and the project is considered consistent with the applicable policies of the Final EIR.

The Planning Commission has also examined the relevant, applicable portions of the Imperial County General Plan's, *Land Use Element* and the *Geothermal/Alternative Energy & Transmission Element* and has determined that the *Land Use Element* provides that the evaluation and approval of non-agricultural uses on lands designated agriculture will occur through the implementation of zoning and the conditional use permit (CUP) review process. Further, the Land Use Compatibility Matrix in the ICGP provides that a conditionally compatible category could be found to be compatible when additional use restrictions can be

included by use of an “overlay”, the proposed project is within the Geothermal Overlay zone, therefore, pursuant to Land Use Ordinance, Section 91703.04, a geothermal project is permitted with approval of a Conditional Use Permit.

The County further finds that the project does not have a significant adverse effect on agricultural production. “...Significant adverse effect on agricultural production...” means a significant unmitigated impact, as defined under CEQA, to agricultural resources resulting from the permanent elimination of agricultural uses or resulting from removal agricultural land from the “Agricultural” land use category.

The proposed use provides a clear long term economic benefit to the County. The mineral extraction facility will provide economic growth to the region and economic benefit to the County and Goal 2 of the *Land Use Element* states that the County should “[...]diversify employment and economic opportunities in the County while preserving agricultural activity...” the project shall create jobs and other economic opportunities in the County at a time of high County unemployment.

B. The proposed use is consistent with the purpose of the zone or sub-zone within which the use will be used. (Imperial County Code §90203.09.B)

The purpose of the project is for the construction of a mineral extraction facility using geothermal brine. The proposed project is zoned S-1-G (Open Space, Geothermal Overlay), S-2-G (Open Space/Recreation, Geothermal Overlay), and M-2-G (Medium Industrial, Geothermal Overlay). Pursuant to Title 9, Division 17, Section 91703.04, geothermal is a use permitted subject to approval of a CUP from the County. The purpose of the Geothermal Overlay zone is to designate areas that “...could be developed with any form of renewable energy technology, including geothermal production...” with an approved CUP. Therefore, the proposed use is consistent with the purpose of the zone or sub-zone within which the uses will be located.

C. The proposed use is listed as a use within the zone or sub-zone or is found to be similar to a listed conditional use according to the procedures of Section 90203.00. (Imperial County Code §90203.09.C)

Geothermal projects within the Renewable Energy Overlay Zone are listed as a use subject to a Conditional Use Permit in Land Use Ordinance Division 17, Section 91703.04. Production facilities for Geothermal Projects shall include, but are not limited to power plants, extraction plants, and separators (§91703.00.I).

Therefore, the proposed mineral extraction and processing facility is consisted with the procedures of Section 90203.00.

D. The proposed use meets the minimum requirements of this Title applicable to the use and complies with all applicable laws, ordinances and regulation of the County of Imperial and the State of California. (Imperial County Code §90203.09.D)

The project complies with the minimum requirements of this Title by, among other things, obtaining a CUP, complying with the California Environmental Quality Act, and participating in the public review and hearing process. Development standards have been established for the Project pursuant to these processes, and will be enforced via imposition and enforcement of the Mitigation Monitoring and Reporting Program recommended for approval by separate Resolution, as well as the conditions of approval imposed on this CUP. The Conditions of Approval will further insure that the project complies with all applicable regulations of the County of Imperial and the State of California. Therefore, the proposed project will meet the minimum requirements of the Land Use Ordinance, Section 90203.00.

E. The proposed use will not be detrimental to the health, safety, and welfare of the public or to the property and residents in the vicinity. (Imperial County Code §90203.09.E)

The mineral extraction/production facility is not in near proximity to very large residential areas and are generally surrounded by open space including agricultural uses and IID managed marshlands to the north, east and south.

The closest residence is located approximately two+ miles to the northwest of the project site. A commercial algae production facility is located southeast of the site but is no longer in operation with a mobile home on-site. Noise associated with operation and maintenance would also meet the County's noise ordinance requirements at the project property lines. Further, the project's structural facilities, with the exception of the overhead transmission lines would generally be below 55 feet in height. A variance was submitted for review and approval for structures over the thirty-five (35) height limit for S-1, S-2 and M-2 zones limits. The Environmental Impact Report prepared for the project analyzed the project's potential effects on the health, safety, and welfare of the public and property and found that, with mitigation, the Project has less than significant affects in all resource areas. Finally, the Permittee has agreed to conditions of approval that support and promote the protection of the health, safety, and welfare of the

County's citizens and property, and ensures that the County will not be negatively impacted environmentally or fiscally.

F. The proposed use does not violate any other law or ordinance. (Imperial County Code §90203.09.F)

The proposed project will be subject to the Conditional Use Permit and current Federal, State and Local regulations. State Planning and Zoning Law (Cal. Govt. Code §§ 65000-66035) establishes minimum statewide standards for the regulation of local land use through planning and zoning. The County regulates local land use via Title 9 of the Imperial County Code. As found above, the proposed project is conditioned to be consistent with Imperial County, Title 9, Land Use Ordinance and CEQA mitigation measures and therefore complies with both State and local laws and ordinance. Pursuant to CEQA, the County has prepared an EIR for the Project, which EIR analyzes the Project's compliance and consistency with other federal, state, and local laws and ordinances regulating the environment. Substantial evidence supports the conclusions in the EIR that the project complies with said environmental laws. The County is aware of no other laws or ordinances that might be implicated by the Project, and thus the finds that the proposed use does not violate any other law or ordinance. The proposed project will be subject to the Conditional Use Permit and current Federal, State and local regulations.

G. The proposed use is not granting a special privilege. (Imperial County Code §90203.09.G)

The mineral extraction/production from geothermal brine is associated with the geothermal project and is compatible with the Geothermal Overlay Zone, Major Geothermal projects within the Renewable Energy Overlay Zone are a permitted use subject to approval of a Conditional Use Permit under Land Use Ordinance, Division 17, Section 91703.04 *et. seq.* and will not grant a special privilege.

SECTION 3. Approval of the Project are conditioned upon the terms and conditions set forth in the Agreement for Conditional Use Permit No. 21-0021, attached hereto and incorporated herein by this reference.

NOW, THEREFORE, based on the above findings, the Imperial County Planning Commission **DOES HEREBY APPROVE** Conditional Use Permit #21-0021, subject to the attached Conditions of Approval.

Rudy Schaffner, Chairman
Imperial County Planning Commission

I hereby certify that the preceding resolution was taken by the Planning Commission at a meeting conducted on **December 13, 2023** by the following vote:

AYES:

NOES:

ABSENT:

ABSTAIN:

ATTEST:

James A Minnick, Director of Planning & Development Services
Secretary to the Planning Commission

S: APN 0201010-012|hells kitchen power/PC/ cup resolution 21 0021.

As
When Recorded Return To:

Imperial County Planning & Development Services Dept.
801 Main Street
El Centro, California 92243

**AGREEMENT FOR
CONDITIONAL USE PERMIT #21-0021
Hell's Kitchen LithiumCo 1, LLC**

This agreement is hereby made and entered into on this _____ day of January _____ 2024, by and between Controlled Thermal Resources (US) Inc. via its subsidiary Hell's Kitchen LithiumCo 1, LLC hereinafter referred to as the Permittee, and the COUNTY OF IMPERIAL, a political subdivision of the State of California, (hereinafter referred to as "COUNTY").

RECITALS

WHEREAS, Permittee is the owner, lessee or successor-in-interest in certain land in Imperial County with the applicant proposing Hell's Kitchen LithiumCo 1 (HKL1) to construct and operate a commercial geothermal mineral extraction processing plant, Hell's Kitchen LithiumCo 1, LLC is proposing the Hell's Kitchen LithiumCo 1 (HKL1). The geothermal plant (HKP1) and lithium facilities (HKL1) project is within portions of Sections 11 and 12 of Township 11 South, Range 13 East, S.B.B.M.; the gen-tie/power line ROW corridor is located within portions of Sections 12, 13 and 14 of Township 11 South, Range 13 East, S.B.B.M., approximately 3.8 miles southwest of the Townsite of Niland, Assessor's Parcel Numbers:

020-010-012	HKP1 and HKL1 Shared Facilities	S-1-G and S-2-G
020-010-013	HKP1 and HKL1 Shared Facilities	S-1-G
020-070-060	HKP1 and HKL1 Shared Facilities	S-1-G
020-010-042	Gen-Tie and Power Line	S-1-G
020-060-001	Gen-Tie and Power Line	S-1-G
020-060-002	Gen-Tie and Power Line	S-1-G
020-060-039	Gen-Tie and Power Line	S-1-G
020-060-040	Gen-Tie and Power Line	S-1-G
020-070-026	Gen-Tie and Power Line	S-1-G
020-070-025	Gen-Tie and Power Line	S-1-G
020-070-029	Gen-Tie and Power Line	S-1-G
020-070-055	Gen-Tie and Power Line	S-1-G
020-010-031	Gen-Tie and Power Line	S-1-G
020-010-032	Gen-Tie and Power Line	S-1-G
020-010-035	Gen-Tie and Power Line	M-2-G-PE
020-100-044	Gen-Tie and Power Line	M-2-G-PE

WHEREAS, Permittee has applied to the County of Imperial for a Conditional Use Permit #20-0021 allowing for the construction and operation of a geothermal lithium mineral extraction facility and associated interconnections to the Geothermal Plant that includes pipelines, conveyors,

conduits and other mechanical connections to/from geothermal plant, additionally, the Permittee has applied for a variance for height increase needed for facility construction and operation.

The letter "G" shows the "GENERAL CONDITIONS". These conditions are conditions that either routinely and commonly are included in all Conditional Use Permits as "standardized conditions and/or are conditions that the Imperial County Planning Commission has established as a requirement on all CUP's for consistent application and enforcement. The Permittee is hereby advised that the General Conditions are as applicable as the SITE SPECIFIC conditions.

GENERAL CONDITIONS:

G-1 GENERAL LAW:

The Permittee shall comply with all local, state and/or federal laws, rules, regulations, ordinances, and/or standards (LORS) as they may pertain to the Project whether specified herein or not.

G-2 PERMITS/LICENSES:

The Permittee shall obtain all local, state and/or federal permits, licenses, and/or other approvals for the construction and/or operation of the Project. This shall include, but not be limited to, local requirements for Health, Building, Sanitation, ICAPCD, Public Works, County Sheriff, Fire Protection/Office of Emergency Services, Regional Water Quality Control Board, California Division of Oil, Gas and Geothermal Resources (CDOGGR), among others. Permittee shall likewise comply with all such permit requirements. Additionally, Permittee shall if so requested submit a copy of such additional permit and/or licenses to the Planning & Development Services Department within thirty (30) days of receipt, including amendments or alternatives thereto.

G-3 RECORDATION:

This permit shall not be effective until CUP is recorded at the Imperial County Recorder's Office and payment of the recordation fee shall be the responsibility of the Permittee. If the Permittee fails to pay the recordation fee within six (6) months from the date of approval, this permit shall be deemed null and void. The Planning & Development Department will submit the executed Permit to the Imperial County Recorder's office for recordation purposes. Permittee shall commence construction of the permitted activities or provide evidence of substantial process within twelve (12) months from the effective date of this permit, i.e. approval date. The Planning Director shall have the authority to extend this time limit not to exceed 24 months if so requested by the Permittee.

G-4 CONDITION PRIORITY:

The Project shall be constructed and operated as described in this Permit, the project description and as specified herein. If a conflict occurs between the permitting/regulatory agencies, the most stringent condition shall govern and takes precedence.

G-5 INDEMNIFICATION:

As a condition of this permit, Permittee agrees to defend, indemnify, hold harmless, and release the County, its agents, officers, attorneys, and employees from any claim, action, or proceeding brought against any of them, the purpose of which is to attack, set aside, void, or annul the permit or adoption of the environmental document which accompanies it. This indemnification obligation shall include, but not be limited to, damages, costs, expenses, attorney's fees, or expert witness fees that may be asserted by any person or entity, including the Permittee, arising out of or in

connection with the approval of this permit, whether there is concurrent, passive or active negligence on the part of the County, its agents, officers, attorneys, or employees. This indemnification shall include Permittee's actions involved in construction, operation or abandonment of the permitted activities.

G-6 INSURANCE:

The Permittee shall secure and maintain liability in tort and property damage, insurance at a minimum of \$1,000,000.00 or proof of financial responsibility to protect persons or property from injury or damage caused in any way by construction, or operation, of permitted facilities. The Permittee and/or operator shall require that proper Workers' Compensation insurance covers all laborers working on such facilities, e.g. construction and operational activities, as required by the State of California. The Permittee shall also secure liability insurance and such other insurance as may be required by the State and/or Federal Law.

Evidence of such insurance shall be provided to the County prior to commencement of any activities authorized by this permit, e.g. a Certificate of Insurance is to be provided to the Planning & Development Services Department by the insurance carrier and said insurance and certificate shall be kept current for the life of the permitted Project. Certificate(s) of insurance shall be sent directly to the Planning & Development Services Department by the insurance carrier and shall name the Department as a recipient of both renewal and cancellation notices.

G-7 INSPECTION AND RIGHT OF ENTRY:

The County reserves the right to enter the premises to make appropriate inspection(s) and to determine if the condition(s) of this permit are complied with. The owner or operator shall allow authorized County representative(s) access upon the presentation of credentials and other documents as may be required by law to:

(a) Enter at reasonable times upon the owner's or operator's premises where a permitted facility or activity is located or conducted, or where records must be kept under the conditions of the permit;

(b) Have access to and copy, at reasonable times, any records that must be kept under the conditions of the permit; and,

(c) Inspect at reasonable times any facilities, equipment (including monitoring and control equipment), practices, or operations regulated or required under the permit.

G-8 SEVERABILITY:

Should any condition(s) of this permit be determined by a Court or other agency with proper jurisdiction to be invalid for any reason, such determination shall not invalidate the remaining provision(s) of this permit.

G-9 PROVISION TO RUN WITH THE LAND/PROJECT:

The provisions of this project are to run with the land/project and shall bind the current and future owner(s), successor(s)-in-interest, assignee(s) and/or transferee(s) of said project. Permittee shall not without prior notification to the Planning & Development Services Department assign, sell or transfer, or grant control of project or any right or privilege therein. The Permittee shall provide a minimum of sixty (60) days written notice prior to such proposed transfer becoming effective. The

permitted use identified herein is limited for use upon the permitted properties described herein and may not be transferred to any another parcels.

G-10 TIME LIMIT:

Unless otherwise specified within the specific conditions, this permit shall be limited to a maximum of thirty (30) years from the recordation of the CUP. The CUP may be extended for a successive thirty (30) year period by the Planning Director upon a finding by the Planning & Development Services Department that the project is in compliance with all conditions of the CUP as stated herein and any applicable Land Use regulation of the County of Imperial.

If an extension is necessary, the Permittee shall file a written extension request with the Planning Director at least sixty (60) days prior to the expiration date of the Permit. Such an extension request shall include the appropriate extension fee, pursuant to the Land Use Ordinance, Title 9, Division 9, Section 90901.03 *et. seq.*, General Planning fees. If the original approval was granted by the Planning Commission and/or the Board of Supervisors, such an extension shall only be considered by the approving body, after a noticed public hearing. Nothing stated or implied within this permit shall constitute a guarantee that an extension will be granted. An extension may not be granted if the project is in violation of any one or all of the conditions or if there is a history of non-compliance with the permit conditions.

G-11 COST:

The Permittee shall pay any and all amounts determined by the County Planning & Development Services Department to defray any and all cost(s) for the review of reports, field investigations, subsidence/seismicity monitoring, provisions for geothermal waste services, and other activities directly related to the enforcement/monitoring for compliance of this Permit, County Ordinance or any other applicable law as provided in the Land Use Ordinance, Section 90901.03 *et. seq.*, General Planning fees. All County Departments', directly involved in the monitoring/enforcement of this project may bill Permittee under this provision; however, said billing shall only be through and with the approval of the Planning & Development Services Department.

G-12 REPORTS/INFORMATION:

If requested in writing by the Planning Director, Permittee shall provide any such documentation/report as necessary to ascertain compliance with the Permit. The format, content and supporting documentation shall be as required by the Planning Director.

G-13 DEFINITIONS:

In the event of a dispute the meaning(s) or the intent of any word(s), phrase(s) and/or conditions or sections herein shall be determined by the Planning Commission of the County of Imperial. Their determination shall be final unless an appeal is made to the Board of Supervisors within the required time, i.e. ten (10) calendar days, pursuant to the Land Use Ordinance, Title 9, Division 1, Chapter 4, Section 90104.05, *Appeal from Decision*.

G-14 MINOR AMENDMENTS:

The Planning Director may approve minor changes or modifications to the design, construction, and/or operation of the Project provided said changes are necessary for the project to meet other laws, regulations, codes, or conditions of the CUP and provided further, that such changes will not result in any additional environmental impacts.

G-15 SPECIFICITY:

The issuance of this permit does not authorize the Permittee to construct or operate the Project in violation of any state, federal, local law nor beyond the specified boundaries of the Project as shown in the application/project description/permit, nor shall this permit allow any accessory or ancillary use not specified herein. This permit does not provide any prescriptive right or use to the Permittee for future addition and/or modifications to the Project.

G-16 NON-COMPLIANCE (ENFORCEMENT & TERMINATION):

Should the Permittee violate any condition herein, the County shall give notice of such violation. If Permittee does not act to correct the identified violation, and after having given reasonable notice and opportunity, the County may revoke the permit.

(a) If the Planning Commission finds and determines that the Permittee or successor-in-interest has not complied with the terms and conditions of the CUP, or cannot comply with the terms and conditions of the CUP, or the Planning Commission determines that the permitted activities constitute a public nuisance, the Planning Director shall provide Permittee with notice and a reasonable opportunity to comply with the enforcement or abatement order; and,

(b) If after receipt of the order, (1) Permittee fails to comply, and/or (2) Permittee cannot comply with the conditions set forth in the CUP, then the matter shall be referred to the Planning Commission for permit modification, suspension, or termination, or to the appropriate prosecuting authority.

G-17 GENERAL WELFARE:

All construction and operations shall be conducted with consistency with all laws, conditions, adopted County policies, plans and the application so that the Project will be in harmony with the area and not conflict with the public health, safety, comfort, convenience, and general welfare.

G-18 PERMITS OF OTHER AGENCIES INCORPORATED:

Permits granted by other governmental agencies in connection with the Project are incorporated herein by reference. The County reserves the right to apply conditions of those permits, as the County deems appropriate; provided that enforcement of a permit granted by another governmental agency shall require concurrence by the respective agency.

G-19 HEALTH HAZARD:

If the County Health Officer determines that a significant health hazard exists to the public, the Health Officer may require appropriate measures and the Permittee shall implement such measures to mitigate the health hazard. If the hazard to the public is determined to be imminent, such measures may be imposed immediately and may include temporary suspension of permitted activities, the measures imposed by the County Health Officer shall not prohibit the Permittee from requesting a special Planning Commission meeting, provided Permittee bears all related costs.

G-20 APPROVALS AND CONDITIONS SUBSEQUENT TO GRANTING PERMIT:

Permittee acceptance of this permit shall be deemed to constitute agreement with the terms and conditions contained herein.

- Where requirements are imposed in this permit that Permittee shall conduct monitoring and where the County has reserved the right to impose or modify conditions with which the Permittee must comply based on data obtained therefrom.
- Where Permittee is required to prepare specific plans for County approval and disagreement arises, the Permittee, operator and/or agent, the Planning Director or other affected party, to be determined by the Planning Director, may request that a hearing be conducted before the Planning Commission whereby they may state the requirements which will implement the applicable conditions as intended herein. Upon receipt of a request, the Planning Commission shall conduct a hearing and make a written determination. The Planning Commission may request support and advice from a technical advisory committee. Failure to take any action shall constitute endorsement of staff's determination.

G-21 CHANGE OF OWNER/OPERATOR:

In the event the ownership of the site or the operation of the site transfers from the current Permittee to a new successor Permittee, the successor Permittee shall be bound by all terms and conditions of this permit as if said successor was the original Permittee. Current Permittee shall inform the County Planning and Development Services Department in writing at least 60 days prior to any such transfer. Failure of a notice of change of ownership or change of operator shall be grounds for the immediate revocation of the CUP. In the event of a change, the new Owner/Operator shall file with the Department, via certified mail, a letter stating that they are fully aware of all conditions and acknowledge that they will adhere to all. If this permit or any subservient or associated permit requires financial surety, the transfer of this permit shall not be effective until the new Permittee has requisite surety on file. Furthermore existing surety shall not be released until replacement surety is accepted by County. Failure to provide timely notice of transfer by Permittee shall forfeit current surety.

G-22 COMPLIANCE WITH ORDINANCE:

Permittee is aware of, has been provided a current copy of and has agreed to be bound by and maintain compliance with the "Communications Ordinance", being Title 9, Division 24 of the County's codified ordinances.

(The remainder of this page is intentionally left blank)

CUP #21-0021 GEOTHERMAL MINERAL EXTRACTION:

SITE SPECIFIC CONDITIONS:

S-1 AUTHORIZED SCOPE OF ACTIVITIES:

The Permittee is authorized to construct and operate the following facilities in compliance with the County's General Plan, Renewable Energy and Transmission Element, Land Use Ordinance, CUP application and all other applicable local, state, and federal laws, ordinances, regulations and standards (LORS):

The Proposed Project is the construction and operation of a geothermal power facility (HKP1) and commercial geothermal mineral extraction and production plant (HKL1) within the Salton Sea geothermal field in Imperial County, California (Project). HKL1 involves to develop mineral extraction and processing facilities capable of producing lithium hydroxide, silica, and polymetallic products for commercial sale. The Project would consist of the following activities:

- Construction of pipelines between HKP1 and HKL1 to facilitate the movement of brine between the facilities;
- Construction and operation of a mineral-extraction facility to extract lithium hydroxide, silica, and polymetallic products, and possibly other mineral compounds from the geothermal brine;
- Construction of ingress and egress to the Project site from Davis Road;
- Paving of Davis Road from McDonald Road to Noffsinger Road (approximately 2 miles);
- Construction of an interconnection line with IID substation located at Davis Road; and
- Construction of shared administrative facilities, offices, repair facilities, shipping and receiving facilities, and other infrastructure components.

Structures

HKL1 will include the construction of the following structures:

- Geothermal pipelines to transfer brine from HKP1
- A cooling tower
- Truck entrance security
- Brine crystallizers, clarifiers, thickeners, and filter presses
- A lithium recovery resin vessel and systems
- Raw water filtration, fire-water storage, and reverse osmosis facilities
- Electrical buildings to house electric power switchgear and electrical metering
- Reagent storage and preparation buildings
- Two motor-control centers
- Lithium product handling and packing buildings (that will house the filtration and drying equipment for the lithium products and bagging and palletizing of finished products)
- Polymetallic product handling facilities
- Bulk boron containing product handling facilities
- Two lime silos
- Hydrochloric acid offloading and storage tanks
- A reverse osmosis water treatment facility or similar technology

Implementation of these project(s) requires an approval of Conditional Use Permit(s) and Variance(s) to allow for the construction and operation of the proposed 49.9MW net geothermal power plant and mineral extraction and processing facility.

S-2 AESTHETICS:

The Permittee shall design and maintain all permanent structures to be harmonious in appearance and compatible with the approved landscaping plans for screening and restoration of laydown areas, facility painting/treatment plan and lighting plan. The Permittee shall coordinate the painting of all mineral production facilities and pipelines with the County and blend in with the existing environment as discussed above.

Permittee shall install a six (6) foot (minimum) perimeter security fence. Landscaping will be installed between the fence and the public roadway along the frontage of the property with special attention at the entrance. The landscaping will need design approval from the Imperial County Planning & Development Services Department prior to installation.

Site Abandonment Plan:

Prior to the first building permit being issued, Hell's Kitchen LithiumCo 1 LLC shall submit to the County of Imperial Planning & Development Services Department, a Site Abandonment Plan to return the property to its previous condition. The first building permit shall be exclusive of a temporary electrical permit or the grading permit. The Site Abandonment Plan shall include a reclamation cost estimate prepared by a California-licensed general contractor or civil engineer. Permittee shall provide financial assurance/bonding in the amount equal to the reclamation cost estimate to restore the site to its pre-construction condition including removal of all structures and equipment, soil testing for and clean-up of contaminants in the soil and any other clean up and repair necessary to return the land to its previous condition within 180days of the first building permit being issued. The term "building permit" shall not include a temporary power permit or a grading permit.

S-3 AGRICULTURE:

Agricultural Commission Conditions:

The Project shall:

- Monitor for all pests including insects, vertebrates, weeds, and pathogens. Promptly control or eradicate pests when found, or when notified by the Agricultural Commissioner's office that a pest problem is present on the project site. A qualified applicator or a licensed pest control operator must perform all treatments.
- "Control" means to reduce the population of common pests below economically damaging levels, and includes attempts to exclude pests before infestation, and effective control methods after infestation. Effective control methods may include physical/mechanical removal, biocontrol, cultural control, or chemical treatments.
- Allow access by Agricultural Commissioner staff for routine visual and trap pest surveys, compliance inspections, eradication of exotic pests, and other official duties.

Reimbursement:

- The project shall reimburse the Agricultural Commissioner's office for the actual cost of investigations, inspections, or other required non-routine responses to the site that are not

funded by other sources if the investigation shows that the Permittee created the problem alleged in the complaint.

S-4 AIR QUALITY:

The project site shall comply with the Imperial County APCD (ICAPCD) Rule VIII regulations for compliance with the following measures:

Obtain Authority to Construct (ATC) and Permit to Operate (PTO):

The Project shall submit, in a timely manner, an application for an Authority to Construct (ATC) and an application for a Permit to Operate (PTO) to the ICAPCD prior to any construction and operation of the Project as required by Rule 207, New and Modified Source Review. The Project shall comply with all review design conditions contained in the ATC/PTO including but not limited to plant design, which shall include a system that controls emissions assuring compliance with Federal and State standards, testing and verification requirements. All harmful and noxious odors shall be controlled according to the ATC/PTO conditions to ensure that quantities released because of plant operations do not exceed Federal or State standards.

The Project will be required to comply with all offset requirements in the event that potential emissions exceed Rule 207 thresholds.

Permittee shall submit two dust control plans. The first dust control plan shall be the "Construction" Dust Control Plan and shall be submitted to and approved by the ICAPCD prior to issuance of any construction permit. The second dust control plan shall be an "Operational" Dust Control Plan and shall be submitted to and approved by the ICAPCD prior to the start of operations. Both Dust Control Plans shall identify existing and potential sources of fugitive PM 10 and shall identify the mitigation measures, which shall be applied to maintain visible dust emissions below 20% opacity and where applicable, provide evidence that the area is stabilized.

NOx Controls, the project shall comply with all applicable standard mitigation measures for construction combustion equipment for the reduction of excess NOx emissions:

- a. Utilize all Tier 3 or Tier 4 construction equipment; as practicable and available.
- b. Prohibit idling of equipment not in use; for equipment in use reduce idling time to a maximum of 5 minutes;
- c. Where feasible replace fossil fuel burning equipment with electrically driven equivalents provided they are not powered via a portable generator;
- d. Register all portable engines 50 horse power or greater with the ICAPCD;

- e. Submit to the ICAPCD prior to any earthmoving activity a complete list of all construction equipment to be utilized during the construction phase identifying Make, Model, Year, Horsepower, estimated hours of usage per equipment and total number of each piece of equipment.

The project shall also apply enhanced dust control plan with measures to assure reduced levels of NOx are maintained during the construction phase of the project: In the event, NOx emissions are calculated to exceed ICAPCD thresholds for construction; the Permittee shall provide for "offsite" mitigation or comply with Policy number 5. Policy number 5 allows a project to pay in-lieu impact fees utilizing the most current Carl Moyer Cost Effective methodology to reduce excess NOx emissions.

- a. A construction Equipment List in Excel format detailing the equipment type, make, model, year horsepower, hours of daily operation, date arrived onsite, and date removed from site must be submitted to the Air District on a regular basis.
- b. Formal written notification must be given to the Air District 10 days prior to the start of construction.
- c. Any generator greater than 50 brake horsepower must be permitted through the Permitting and Engineering.
- d. Watering must be performed continuously at all times on all roadways with record keeping to document such.
- e. Reduced speed for all vehicle types not to exceed 40 mph on paved surfaces/roadways and no more than 15 mph on unpaved surfaces/roadways.

S-5 BIOLOGICAL RESOURCES:

In order to minimize potential impacts to burrowing owl, the following shall be implemented prior to and during construction activities:

BIO-1: The Applicant shall ensure that prior to and during construction, onsite occupied burrows shall be avoided during nesting season (February 1 through August 31).

BIO-2: The Applicant shall conduct a preconstruction survey within 30 days of ground-breaking activities to identify any burrowing owls on site.

BIO-3: If burrowing owls are found within the Project site, a Burrowing Owl Mitigation Plan must be prepared by a qualified biologist and approved by CDFW prior to any ground-disturbing activities.

BIO-4: The construction or site manager shall ensure that no construction occurs within 250 feet of the artificial burrows or other active or occupied burrows unless active or occupied burrows are sheltered with hay bales and monitored by a qualified biologist; if this is done, work may occur within 20 feet of active or occupied burrows. If qualified biologists observe burrowing owls' agitation, work in the vicinity will stop. Additional shelter materials can be added until burrowing owls remain calm during construction activities.

BIO-5: If passive relocation is required, it shall be done by a qualified biologist from September 1 to January 31 and will follow the CDFW Staff Report on Burrowing Owl Mitigation Guidelines (CDFW 2012).

S-6 CONSTRUCTION STANDARDS:

The mineral extraction plant and other structures shall be built in accordance with the County Building Code requirements applicable to "Seismic Category D". All structures and facilities shall be designed in accordance with the publication entitled "Recommended Lateral Force Requirements and Commentary by the Structural Engineers Association of California". The structural components of the permitted facilities shall be reviewed by the County Building Official/Planning Director. Building permits shall be procured for all non-electric utility facilities from the County prior to commencement of any construction.

S-7 EMERGENCY RESPONSE PLAN (ERP):

An Emergency Response Plan shall be prepared covering possible emergencies, e.g. blow-outs, major fluid spills, earthquakes, fires, floods and other foreseeable accidents and emergencies. At all times, there shall be at least one employee either on the facility premises or on call (i.e., available

to respond to an emergency by reaching the facility within a short period of time) with the responsibility of coordinating all emergency response measures. This Emergency Coordinator shall be thoroughly familiar with all aspects of the facility's Emergency Response Plan, all operations and activities at the facility, location of all records within the facility and the facility layout. This person shall have the authority to commit the resources needed to carry out the contingency plan to include appropriate first aid provisions during project construction and operation with appropriate first aid training for Project employees. Adequate personnel and equipment shall be available to respond to emergencies and to insure compliance with the conditions of the permit.

(a) The Emergency Response Plan shall be prepared in consultation with, but not be limited to, the Regional Water Quality Control Board (RWQCB), Imperial County Office of Emergency Services, and local emergency service agencies, and other appropriate state and county agencies and shall include information useful in combating the emergency. The Plan shall be available on-site, and provided to agencies responsible for preparing for and addressing emergencies, on request. The plan shall include a notification list of response agencies which shall be notified immediately upon the discovery of a reportable unauthorized discharge and the list shall include: Imperial Fire/Office of Emergency Services, Planning & Development Services Department, Environmental Health Services/Health Department, RWQCB, Imperial Irrigation District (IID), Department of Public Works (DPW), Sheriff's office, as applicable.

(b) A Hazardous Materials Business Plan shall be prepared and be submitted to the Certified Unified Program Agency, Imperial County Hazardous Materials/Waste Unit and shall be maintained by the Permittee. The Permittee shall provide adequate safety devices against the hazard of fire and explosion for activities that involve the use and storage of flammable, explosive or highly corrosive or reactive materials as well as adequate fire-fighting and fire suppression equipment and devices standard in the industry with compliance with applicable state and local laws as determined by the Imperial County Fire Chief.

(c) The Permittee shall meet all NFPA requirements, and also submit an Engineer-certified (California-licensed Engineer) fire suppression/protection plan to the Imperial County Fire/OES Department, prior to issuance of a building permit.

All designated employees shall be provided with communication devices, cell phones or walkie-talkies, in the event of an emergency situation on-site.

S-8 FIRST AID:

Appropriate first aid provisions for facility operations shall be made for emergency response during project construction and operation with appropriate first aid training for project employees. During construction, a member of each working crew shall be trained in basic first aid and supplied with necessary medical equipment to respond to emergencies as provided for in the Emergency Response Plan required hereinabove.

S-9 GEOTECHNICAL:

The Permittee shall conduct applicable on-site geotechnical investigations of soil characteristics affecting the permitted facilities by qualified persons at the Permittee's expense and any soil reports shall be made available to the County.

S-10 GEOLOGY & SOILS & GEOLOGIC HAZARDS:

All grading operations and construction shall be conducted in conformance with the recommendations included in the Preliminary Geotechnical Report on the Project site that has been

prepared by Land-Mark Geo-Engineers and Geologists (Land-Mark) in August 2020. Design, grading, and construction shall be performed in accordance with the recommendations of the project geotechnical consultant as summarized in a final written report, subject to review by the County, prior to commencement of grading activities.

S-11 HAZARDS & HAZARDOUS MATERIALS:

A comprehensive Hazardous Materials Business Plan shall be prepared for the project in accordance with the California Accidental Release Prevention Program. The Hazardous Materials Management Plan (HMMP) shall include (1) an Inventory and Site Map, (2) an Emergency Response Plan (ERP) and Owner/Operator Identification, and (3) employee training.

The HMMP will be prepared and submitted to the California Department of Toxic Substances Control (DTSC), as the Certified Unified Program Agency (CUPA) for Imperial County. The HMMP will be maintained and revised as necessary.

California Health and Safety Code, Chapter 6.95, Section 25500 requires you to establish an implement Hazardous Materials Release Response Plan and Inventory (Business Plan) for emergency response to any hazardous material mishap, if at any one time your facility handles a hazardous waste in quantities equal to or greater than 55 gallons for liquids, 500 pounds for solids, and 200 cubic feet for compressed gases. With the passage of Assembly Bill (AB) 408 on October 8, 2011, the inventory reporting quantities were changed as follows:

For a solid or liquid hazardous material that is classified as a hazard solely as an irritant or sensitizer, the new reporting quantity is 5,000 pounds;

For a hazardous material that is a gas, at standard temperature or pressure, and for which the only health and physical hazards are simple asphyxiation and the release of pressure, the new reporting quantity is 1,000 cubic feet (Reporting of gases in a cryogenic state remains unchanged);

For oil-filled electrical equipment that is not contiguous to an electrical facility, the new reporting quantity for the oil is 1,320 gallons. Moreover, if you generate, store or handle any amount of hazardous waste at any one time must report to DTSC ICUPA and register for hazardous waste generator program.

S-12 LAND USE:

The Permittee shall prepare an appropriate parking plan for the permitted facilities and any signs shall require compliance with the Land Use Ordinance provisions and provide the necessary laydown/staging areas for permitted facilities.

S-13 HYDROLOGY AND WATER QUALITY:

The Permittee shall furnish a Drainage and Grading Plan/Study to provide for property grading and drainage control, which shall also include prevention of sedimentation of damage to off-site properties. The Study/Plan shall be submitted to the Department of Public Works for review and approval. The Permittee shall implement the approved plan. Employment of the appropriate Best Management Practices (BMP's) shall be included.

Implementation of a SWPPP:

The project could violate water quality standards or waste discharge requirements unless mitigated as follows:

1. Prior to the issuance of grading permits, Permittee shall obtain coverage under the SWRCB's General Permit for Stormwater Discharges Associated with Construction Activity. Permittee shall prepare a SWPPP to be administered during grading and Project construction. The SWPPP must contain BMPs and construction techniques accepted by the County for use in the Project area at the time of construction that meet the technical standards of the General Construction Permit to ensure: That potential water quality impacts (including on- and off-site erosion) during construction phases are minimized, that shall reduce the potential for runoff, and the release, mobilization, and exposure of pollutants from the construction area, and that no water quality standards are violated.
2. The SWPPP must address spill prevention and include a countermeasure plan describing measures to ensure proper collection and disposal of all pollutants handled or produced on the site during construction, including sanitary wastes, cement, and petroleum products. Countermeasures may include measures to prevent or clean up spills of hazardous waste and of hazardous materials used for equipment operation, and emergency procedures for responding to spills. BMPs included in the SWPPP must be consistent with the California Stormwater Best Management Practices Handbook for Construction.
3. The SWPPP must be submitted to California RWQCB CRB and Imperial County for review prior to the issuance of grading permits.
4. The SWPPP shall identify and specify the pollutants that are likely to be used during construction that could be present in stormwater drainage and non-stormwater discharges, including fuels, lubricants, and other types of materials used for equipment operation and the means of waste disposal.
5. The SWPPP shall specify personnel training requirements and procedures that shall be used to ensure that workers are aware of permit requirements and proper installation methods for BMPs specified in the SWPPP.
6. The SWPPP shall also specify the appropriate personnel responsible for supervisory duties related to implementation of the SWPPP.
7. Permittee shall file a Notice of Intent with the SWQCB to comply with the NPDES General Stormwater Permit and prepare a SWPPP that meets the Linear/Underground Overhead provisions in Attachment A of the General Permit.
8. A copy of the approved SWPPP(s) shall be maintained and available at all times on the construction site(s).

S-14 POTABLE WATER TREATMENT PLANT:

Permittee shall provide potable water meeting California state standards. At a minimum this includes obtaining a State Domestic Water Supply Permit for a non-transient non-community public water system through the Imperial County Public Health Department (ICPHD). Permittee under CUP #21-0021 may provide potable water under one of the following options:

- (a) If necessary, the Hell's Kitchen Power Plant would expand its water system, located within the footprint of this property, to provide water for both facilities;
- (b) Hell's Kitchen PowerCo 1 and LithiumCo 1 facilities would form a separate corporate entity to provide potable water to both plants. Under this option, the water treatment system would be expanded to provide potable water to both facilities,

- (c) Hell's Kitchen PowerCo 1 and LithiumCo 1 would form a special district, which then can provide potable water to anyone within that district. Formation of the "special district" would require approval from the Imperial County Local Agency Formation Commission (LAFCO)
- (d) Hells Kitchen LithiumCo 1 would build a water treatment facility for the facility on the Permittee property.

S-15 ODOR CONTROL:

The Permittee shall control hydrogen sulfide and other non-condensable emissions to insure that quantities released do not exceed the mandatory standards. The Permittee shall control all harmful or noxious emissions and the odors shall be controlled to insure that quantities or air contaminants released as a result of the permitted facilities do not exceed State or Federal standards.

S-16 OPERATIONS:

Permittee shall have a responsible agent on-site whose name, title, e-mail address and telephone number (office & cell #'s) shall be provided to the CUPA (Imperial County Hazardous Materials/Waste Unit), Department of Toxic Substances Control, County Department of Public Works, County Fire/OES Department, County Environmental Health Services/Health Department, Sheriff's Department and the County Planning & Development Services Department.

S-17 PERMITS:

Except as specifically authorized in this permit, separate permits shall be required for any supplemental activities required to operate the mineral extraction facilities.

S-18 PROJECT DESIGN:

The following shall be the Project design:

(a) Construction and maintenance activities relating to the brine pipelines to and from the geothermal resource shall be coordinated.

(b) All facility access on public rights-of-way and visitor parking areas within the plant site shall be constructed to standards approved by the ICPDSD and/or DPW.

(c) Shrubs, trees and ground cover shall be planted and maintained to compliment the appearance of permitted facilities, in accordance with any landscaping plan approved by the County Planning and Development Services Department. The exterior finish of building materials shall be painted an earth tone color to blend into the background. Exterior finishes shall be limited to non-reflective materials such as concrete, masonry, or stucco, though metal or synthetic wall panels with similar appearance to the aforementioned materials may also be acceptable as determined by the Planning and Development Services Department.

(d) All equipment, pipes, tanks and lines used at the mineral production facilities to handle, transfer or pump geothermal fluids and on-site hazardous materials shall be maintained in a manner that prevents leaking and spilling, e.g. effective performance, adequate funding, operator staffing and training, and adequate laboratory and process controls, including appropriate quality assurance procedures, with the operation of back-up or auxiliary facilities when necessary to achieve compliance with the permit conditions.

(e) The facility shall be designed not interfere with the irrigation and drainage pattern, and shall comply with the requirements and regulations of the Imperial Irrigation District.

(f) All permanent sumps, brine ponds, waste holding ponds, and any other pond, shall be designed and constructed to meet sound engineering standards and the regulations and requirements of the RWQCB under the supervision of a California-licensed Civil Engineer.

(g) Prior to site restoration and abandonment, it shall be the Permittee's responsibility to comply with all regulations of the County and state, including the purging of on-site brine ponds when the project ceases, salts removed from the dikes and bottoms and the berms then leveled to the satisfaction of the landowners and the County Planning and Development Services Department.

(h) Permittee shall utilize and comply with applicable California Building Code requirements for the mineral extraction plant and related power distribution lines.

S-19 RETURN OF SPENT BRINE:

Any processed brine that is not used by Hell's Kitchen LithiumCo 1 shall be sent back to the Hells' Kitchen PowerCo 1 Geothermal Plant.

S-20 SPILLS AND RUNOFF:

The Permittee shall design and construct the permitted facilities to prevent spills from endangering adjacent properties and waterways, and to prevent runoff from any source being channeled or directed in an unnatural way so as to cause erosion, siltation, or other detriments. The plant site shall be graded and constructed so that all spills shall drain into the on-site ponding areas.

S-21 SYSTEM CLOSURE AND SITE RESTORATION:

The Permittee shall comply with all closure requirements and site restoration, when operation of the permitted facilities herein authorized has ceased. All plant facilities shall be dismantled, all brine pipelines and related facilities shall be demolished and the site restored as required by the County and the land involved be made compatible with the surrounding uses or as requested by the landowner and as agreed to by the County Planning Director. In the event that some structures are still viable for a permitted use on-site, such as the manufacturing facilities, office, warehouse, and maintenance shop or other potentially usable structures, the structures may remain on-site if the Permittee and landowner so request and Planning Director so approves.

S-22 TRANSPORTATION AND CIRCULATION:

In

A Commute Trip Reduction (CTR) program shall be implemented to discourage single-occupancy vehicle trips and encourage alternative modes of transportation such as carpooling, taking transit, walking, and biking. The CTR program could include features such as carpooling encouragement, ride-matching assistance, preferential carpool parking, half-time transportation coordinator, vanpool assistance, and bicycle end-trip facilities (parking, showers, and lockers) and provide employees with assistance in using alternative modes of travel.

S-23 WATER CONSERVATION:

The Permittee shall consult with the Imperial Irrigation District and comply with the approved water contract. If the IID does not receive its annual 3.1 maf water apportionment according to the QSA obligations of Colorado River water during the Project's 30-year lifespan, the Applicant shall work with IID to ensure any reduction in water availability can be managed by the Project.

S-24 WATER FACILITIES:

The Permittee shall obtain and comply with applicable General NPDES Permit for Discharges of Water Associated with Construction and Waste Discharge Requirements for permitted facilities as well as developing and implementing an applicable Storm Water Pollution Prevention Plan for the facilities. The Permittee shall prepare and implement a Drainage, Erosion and Sedimentation Control Plan relating to the permitted facilities.

S-25 WASTE DISPOSAL:

The Permittee shall insure that all wastes, liquid or solid, shall be disposed in compliance with appropriate local, state, and federal regulations, in effect or subsequently duly and legally enacted.

(a) Any discharge of wastes into surface water shall meet all requirements of the Regional Water Quality Control Board, e.g. National Pollution Discharge Elimination System permit restrictions to include a water quality monitoring program as approved by applicable law.

(b) All solid wastes shall be disposed of in any approved solid waste disposal site in accordance with County, State and Federal regulations. However, nothing herein is intended to define any portion of the geothermal brine resource as a waste or to prohibit the extraction of resources from spent geothermal brine or materials for useful purposes as either allowed herein or later applied for and approved.

S-26 SALES TAXES BENEFIT

SALES TAX ALLOCATION REQUIREMENT.

To the extent permitted by applicable law, Developer will require that all qualifying contractors and subcontractors exercise their option to obtain a California Department of Tax and Fee Administration ("CDTFA") subpermit for the jobsite and allocate all eligible sales and use tax payments to County and the Local Transit Authority ("LTA"). Prior to commencement of any construction activity on-site, Developer shall require that the contractor or subcontractor provide County with a copy of their CDTFA account number and sub-permit. Developer shall either cause its construction contractor to treat the Project in accordance with California Sales and Use Tax Regulation 1521(b)(2)(B), California Sales and Use Tax Regulation 1521(c)(13)(B), and California Sales and Use Tax Regulation 1826(b) for sales and use tax purposes, or form a "Buying Company" as defined in the California Sales and Use Tax Regulation 1699(h). Developer may adopt an alternate methodology to accomplish this goal if such methodology is approved by the County's Executive Officer prior to issuance of any building permit. No later than forty-five (45) days after the due date for filing sales and use tax returns for each calendar quarter, occurring after the commencement of any construction activity on-site through including the first anniversary of commercial operating date ("COD"), developer shall report, or cause its general contractor to report to County, the total amount of sales and use taxes related to the Project that are allocated to the County, and reported on Developer's, general contractor's and subcontractors' applicable California sales and use tax returns.

Should Developer become aware of a change in circumstances that would materially affect the sales/use tax allocation requirement, then Developer shall, within forty-five (45) days of learning of such change in circumstances, inform the County in writing of the change in circumstances. If the County determines that such change in circumstances warrants an adjustment to the sales/use tax allocation requirement, then County shall negotiate in good faith with Developer in revising the sales/use tax allocation requirement. If the Parties are unable to agree upon a revised allocation, then the dispute shall be referred to an independent accountant mutually acceptable to both Parties. The costs for such nonbinding mediation shall be borne by Developer. Failure of the Developer to inform the County of the change in circumstances shall constitute a waiver of Developer's ability to seek any adjustment to the sales/use tax allocation based on such change in circumstances

The complete sales / use tax allocation amount due to County and LTA for the Project must be received within one (1) year after COD for this Project, or such later date as any applicable sales / use tax is due or is transmitted from the CDTFA, unless it is delayed due to causes beyond Developer's control or for which Developer is not responsible. If, within one (1) year after issuance of the final certificate of occupancy, or such later date as any applicable sales / use tax is due or is transmitted from the CDTFA, the sales / use taxes received by the County are less than the sales / use tax allocation amounts mandated under paragraph B, then Developer shall pay the difference to the County.

Payments to County and LTA as a result of a shortfall shall be due within forty-five (45) calendar days of Developer's receipt of written notice of shortfall from the County.

Failure to make such payment within the forty-five (45) day timeframe shall be considered a default pursuant to section VI paragraph Q. of this Agreement, and may lead to termination of this Agreement. Developer hereby agrees to pay interest at the rate of six percent (6%) per annum of the payment due for any payment received by County beyond the forty-five (45) day due date. The obligation to pay interest shall survive the termination of this Agreement. The obligation to pay interest shall be stayed for up to thirty (30) calendar days when such amounts are disputed in good faith, so long as Developer submits the payments "under written protest" with a complete explanation of the reasons for the protest. Upon resolution of the protested payment, such late charges may be assessed if it is determined by County that the dispute was not made in good faith. Repeated protests of the same point rejected in a prior protest shall be considered a protest in bad faith. Any such payments later found not to be due by Developer shall be refunded by County promptly, and in all events within thirty (30) calendar days after the determination of the amounts owing is made.

In the event that Developer repowers or replaces the equipment onsite, to the extent permitted under then applicable law, each site shall be designated as the "point of sale" so as to create an additional local tax-funding source for the County of Imperial.

1. Hell's Kitchen LithiumCo 1, LLC shall be the master developer and shall be responsible as for all improvements, septic, water plant, roads and other improvements, Conditional Use Permit Application and Conditions, EIR, and MM&RP.
2. If Hell's Kitchen LithiumCo 1, LLC sells all or part of this project, an approved agreement shall be in place for new owner to build and maintain as agreed to by the previous conditions. The Planning and Development Services Director shall approve of any agreement between permittee and a new master developer.

S-27 DURATION OF THIS PERMIT:

The time limit under condition G–10 shall allow for the plant to be constructed and the 30 years shall commence upon issuance of the Certificate of Occupancy and/or the official starting date of commercial operations, whichever is later.

S-28 JOINT USE FACILITIES:

Permittee may construct and/or operate certain facilities within the project area of both the Hell’s Kitchen PowerCo 1 LLC and Hell’s Kitchen LithiumCo 1 LLC projects that are of a common use, including but not limited to the storm-water retention basin, the wastewater treatment system, and/or the potable water treatment system. Additionally, Permittee may construct connection, interconnection and/or return lines, including communication, power and control systems, between the projects, which may be necessary and incidental to the operation of the facilities.

S-29 EXTRACTION OF MINERALS

Nothing in this CUP shall be construed as limiting or prohibiting the extraction of commercially viable minerals from geothermal resource brine either before or after having been processed for generation of steam.

In order to minimize potential impacts to paleontological resources, the following mitigation measures shall be implemented:

PALEO-1: The Applicant shall retain the services of a Qualified Paleontologist and require that all initial ground- disturbing work be monitored by someone trained in fossil identification in monitoring contexts. The Qualified Paleontologist shall prepare a Paleontological Resource Mitigation Plan to be implemented during ground- disturbing activity for the proposed Project. This program should outline the procedures for paleontological monitoring, including extent and duration; protocols for salvage and preparation of fossils; and the requirements for a final mitigation and monitoring report. The Qualified Paleontologist and a paleontological monitor shall be present at the Project construction-phase kickoff meeting.

PALEO-2: Prior to commencing construction activities and, thus, prior to any ground disturbance in the Proposed Project site, the Qualified Paleontologist and paleontological monitor shall conduct initial Worker Environmental Awareness Program (WEAP) training to all construction personnel, including supervisors, present at the start of the Project construction work phase, for which the Applicant, or their designated Contractor, and all subcontractors shall make their personnel available. This WEAP training will educate construction personnel on how to work with the monitor(s) to identify and minimize impacts to paleontological resources and maintain environmental compliance, and it shall be performed periodically for new personnel coming on to the Project as needed.

PALEO-3: The Applicant, or their designated Contractor, shall provide the Qualified Paleontologist with a schedule of initial potential ground-disturbing activities. A minimum of 48 hours will be provided to the consultant prior to the commencement of any initial ground-disturbing activities, such as vegetation grubbing or clearing, grading, trenching, or mass excavation. As detailed in the schedule provided, a paleontological monitor shall be present on-site at the commencement of ground-disturbing activities related to the Project. The monitor, in consultation with the Qualified Paleontologist, shall observe initial ground-disturbing activities and, as they proceed, make

adjustments to the number of monitors as needed to provide adequate observation and oversight. All monitors will have stop- work authority to allow for recordation and evaluation of finds during construction. The monitor will maintain a daily record of observations as an ongoing reference resource and to provide a resource for final reporting upon completion of the Project.

The Qualified Paleontologist, paleontological monitor, and the Applicant, or their designated Contractor, and subcontractors shall maintain a line of communication regarding schedule and activity such that the monitor is aware of all ground-disturbing activities in advance to provide appropriate oversight.

PALEO-4: If paleontological resources are discovered, construction shall be halted within 50 feet of any paleontological finds and shall not resume until the Qualified Paleontologist can determine the significance of the find and/or the find has been fully investigated, documented, and cleared.

PALEO-5: At the completion of all ground-disturbing activities, the Qualified Paleontologist shall prepare a Paleontological Resources Monitoring Report summarizing all monitoring efforts and observations, as performed, and any and all paleontological finds and shall provide follow-up reports of any finds to the preferred paleontological repository, as required.

(The remainder of this page is intentionally left blank)

NOW THEREFORE, County hereby issues the Conditional Use Permit CUP #21-0021 and Permittee hereby accepts permit upon the terms and conditions set forth herein.

IN WITNESS THEREOF, the parties hereto have executed this Agreement the day and year first written.

PERMITTEE

Jim Turner, President

Date

COUNTY OF IMPERIAL, a political subdivision of the STATE OF CALIFORNIA

Jim Minnick, Director
Planning & Development Services

Date

PERMITTEE NOTARIZATION

Dated _____

STATE OF CALIFORNIA

COUNTY OF _____ } S.S.

On _____ before me,
_____ a Notary Public in and for
said _____ County and _____ State, personally appeared
_____, who proved to on the basis
of satisfactory evidence to be the person(s) whose name(s) is/are subscribed to the within
instrument and acknowledged to me that he/she/they executed the same in his/her/their
authorized capacity(ies), and that by his/her/their signature(s) on the instrument the
person(s), or the entity upon behalf of which the person(s) acted, executed the instrument.

I certify under PENALTY OF PERJURY under the laws of the State of California that the
foregoing paragraph is true and correct.

WITNESS my hand and official seal

Signature _____

ATTENTION NOTARY: Although the information requested below is OPTIONAL, it could
prevent fraudulent attachment of this certificate to unauthorized document.

Title or Type of Document _____

Number of Pages _____ Date of Document _____

Signer(s) Other Than Named Above _____

Dated _____

COUNTY NOTARIZATION

STATE OF CALIFORNIA

COUNTY OF IMPERIAL } S.S.

On _____ before me,
_____ a Notary Public in and for
said _____ County and _____ State, personally appeared
_____, who proved to me on the
basis of satisfactory evidence to be the person(s) whose name(s) is/are subscribed to the
within instrument and acknowledged to me that he/she/they executed the same in
his/her/their authorized capacity(ies), and that by his/her/their signature(s) on the
instrument the person(s), or the entity upon behalf of which the person(s) acted, executed
the instrument.

I certify under PENALTY OF PERJURY under the laws of the State of California that the
foregoing paragraph is true and correct.

WITNESS my hand and official seal

Signature _____

ATTENTION NOTARY: Although the information requested below is OPTIONAL, it could
prevent fraudulent attachment of this certificate to unauthorized document.

Title or Type of Document _____
Number of Pages _____ Date of Document _____
Signer(s) Other Than Named Above _____

ATTACHMENT G
RESOLUTION VARIANCE 21-0004

RESOLUTION NO.

A RESOLUTION OF THE PLANNING COMMISSION OF THE COUNTY OF IMPERIAL, CALIFORNIA, OF THE VARIANCE #21-0004 FOR THE HELLS KITCHEN POWER CO 1 PROJECT

WHEREAS, Variance #21-0004 for the Hell's Kitchen PowerCo 1 project has been prepared in accordance with the requirements of the State Planning and Zoning Law, California Environmental Quality Act, the State CEQA Guidelines, the County's Rules and Regulations to Implement CEQA, and the County's Land Use Ordinance, Title 9 as amended; and,

WHEREAS, the Planning Commission of the County of Imperial has been delegated with the responsibility for consideration of approval for the Variance #21-0004; and,

WHEREAS, public notice of the public hearing for said application has been given, and the Planning Commission has considered evidence presented by the Imperial County Planning & Development Services Department, the Planning Commission determination at a public hearing on December 13, 2023 and other interested parties at a public hearing held with respect to this item on December 13, 2023; and,

NOW THEREFORE, the Planning Commission of the County of Imperial **DOES HEREBY RESOLVE** as follows:

SECTION 1. The Planning Commission has considered the proposed Variance #21-0004 prior to approve the proposed Variance. The Planning Commission finds and determines that the Variance is adequate and prepared in accordance with the requirements of the State Planning and Zoning Law, the County's Land Use Ordinance, Title 9 as amended, and the California Environmental Quality Act (CEQA) which analyzes environmental effects, based upon the following findings and determinations.

SECTION 2. That in accordance with State Planning and Zoning law; the County's Land Use Ordinance, Title 9 as amended; and the County of Imperial regulations, the following findings for the approval and certification of the Variance #21-0004 and Findings has been made as follows:

1. **That there are special circumstances applicable to the property described in the application filed for such variance, or to its intended use, that do not apply generally to the property or class of use in the same zone or vicinity. (Imperial County Code§ 90202.08 A. (1))**

The 110 feet height of the grain structures and associated facilities are a small, but necessary increase for several reasons considering the uniqueness and special circumstances of the site. The Proposed grain structures will be needed for grain storage due to the function of unloading to and from the train cars. The applicant

Hell's Kitchen PowerCo 1 LLC submitted a Variance application to address these structures that may exceed the S-1 height limitations. This Variance #21-0004 would permit a maximum height of 110 feet for the required structures. In addition, the Project site is large that allows for Geothermal throughout the project site. In sum, the particular location of the Project site, and the uniqueness of use on industrial zoned land presents special circumstances necessitating a height variance for the industrial structures.

- 2. That the granting of such variance will not be materially detrimental to the public welfare or injurious to the property or improvements in such zone or vicinity in which the property is located. County Code § 90202.08 A (2)**

The Initial Study and EIR was completed with mitigation measures that reduced all significant impacts in the project area to a less than significant level of impact. The Project's Specific Plan zoning of S-1 G is required to follow all applicable local, state and federal laws many of which are designed to protect public welfare, safety or impacts to other lands. Moreover, the 110 feet grain elevator structures are not materially detrimental to the public welfare or injurious to the property or improvements in the vicinity because the Project would share use of the variance height throughout the development.

- 3. That because of special circumstances applicable to subject property, including size, shape, topography, location or surroundings, the strict application of the zoning laws is found to deprive subject property of privileges enjoyed by other properties in the vicinity and under identical zone classifications. County Code § 90202.08 A (3)**

The first is size and safety. The Project site is large and generates a number of associated Geothermal type businesses that will benefit the County. The second is location and County regulations. The County has designated the surrounding areas geothermal to encourage geothermal development.

- 4. That the granting of such variance will not adversely affect the comprehensive General Plan.**

The Imperial County General Plan and Land Use Ordinance Division 2: Land Use Permits (Variance) is defined in § 90202.01 as an approval granted upon a legal parcel of land to construct a structure not otherwise directly allowed by the exact interpretation of Title 9, Division 1 through 8. A variance runs with the land and allows for minimal deviation from the standards. Variance #21-0004 will allow for a minimal deviation of height up to 110 feet above ground level. This extension above current S-1 height limits is a minimal and necessary deviation. Additionally, the variance will not adversely affect the comprehensive General Plan because it facilitates the development of a project that is consistent with the General Plan for the reasons identified in the Hells Kitchen CEQA document and the General Plan Consistency finding which are incorporated herein by reference.

NOW, THEREFORE, based on the above findings, the Planning Commission of the County of Imperial **DOES HEREBY RECOMMEND APPROVAL** for Variance #21-0004 regarding the Hell's Kitchen PowerCo 1 Project.

Rudy Schaffner, Chairperson
Imperial County Planning Commission

I hereby certify that the preceding resolution was taken by the Planning Commission at a meeting conducted on December 13, 2023 by the following vote:

AYES:
NOES:
ABSENT:
ABSTAIN:

ATTEST:

Jim Minnick, Director of Planning & Development Services
Secretary to the Planning Commission

S:\APN\020 010 012\hell kithcen power and lithium\PC variance resolution21 0004doc

PC ORIGINAL PKG

ATTACHMENT H
RESOLUTION VARIANCE 21-0005

RESOLUTION NO.

A RESOLUTION OF THE PLANNING COMMISSION OF THE COUNTY OF IMPERIAL, CALIFORNIA, OF THE VARIANCE #21-0005 FOR THE HELL'S KITCHEN LITHIUM CO 1, LLC, PROJECT

WHEREAS, Variance #21-0005 for the Hell's Kitchen LithiumCo 1 project has been prepared in accordance with the requirements of the State Planning and Zoning Law, California Environmental Quality Act, the State CEQA Guidelines, the County's Rules and Regulations to Implement CEQA, and the County's Land Use Ordinance, Title 9 as amended; and,

WHEREAS, the Planning Commission of the County of Imperial has been delegated with the responsibility for consideration of approval for the Variance #21-0005; and,

WHEREAS, public notice of the public hearing for said application has been given, and the Planning Commission has considered evidence presented by the Imperial County Planning & Development Services Department, the Planning Commission determination at a public hearing on December 13, 2023 and other interested parties at a public hearing held with respect to this item on December 13, 2023; and,

NOW THEREFORE, the Planning Commission of the County of Imperial **DOES HEREBY RESOLVE** as follows:

SECTION 1. The Planning Commission has considered the proposed Variance #21-0005 prior to approval. The Planning Commission finds and determines that the Variance is adequate and prepared in accordance with the requirements of the State Planning and Zoning Law, the County's Land Use Ordinance, Title 9 as amended, and the California Environmental Quality Act (CEQA) which analyzes environmental effects, based upon the following findings and determinations.

SECTION 2. That in accordance with State Planning and Zoning law; the County's Land Use Ordinance, Title 9 as amended; and the County of Imperial regulations, the following findings for the approval and certification of the Variance #21-0005 and Findings has been made as follows:

- 1. That there are special circumstances applicable to the property described in the application filed for such variance, or to its intended use, that do not apply generally to the property or class of use in the same zone or vicinity. (Imperial County Code§ 90202.08 A. (1))**

The applicant Hell's Kitchen Lithium Co 1 LLC submitted a Variance application to address these structures that may exceed the S-1 height limitation. This Variance #21-0005 would permit a maximum height of 110 feet for the required structures. In addition, the Project site is large that allows for Geothermal throughout the

project site. In sum, the particular location of the Project site, and the uniqueness of use on industrial zoned land presents special circumstances necessitating a height variance for the industrial structures.

2. **That the granting of such variance will not be materially detrimental to the public welfare or injurious to the property or improvements in such zone or vicinity in which the property is located. County Code§ 90202.08 A (2)**

The Initial Study and EIR were completed with mitigation measures that reduced all significant impacts in the project area to a less than significant level of impact. The Project's Specific Plan zoning of S-1-G is required to follow all applicable local, state and federal laws many of which are designed to protect public welfare, safety or impacts to other lands. Moreover, the 110 feet structures are not materially detrimental to the public welfare or injurious to the property or improvements in the vicinity because the Project would share use of the variance height throughout the development.

3. **That because of special circumstances applicable to subject property, including size, shape, topography, location or surroundings, the strict application of the zoning laws is found to deprive subject property of privileges enjoyed by other properties in the vicinity and under identical zone classifications. County Code§ 90202.08 A (3)**

The first is size and safety. The Project site is large and generates a number of associated Geothermal type businesses that will benefit the County. The second is location and County regulations. The County has designated the surrounding areas geothermal to encourage geothermal development.

4. **That the granting of such variance will not adversely affect the comprehensive General Plan.**

The Imperial County General Plan and Land Use Ordinance Division 2: Land Use Permits (Variance) is defined in § 90202.01 as an approval granted upon a legal parcel of land to construct a structure not otherwise directly allowed by the exact interpretation of Title 9, Division 1 through 8. A variance runs with the land and allows for minimal deviation from the standards. Variance #21-0005 will allow for a height up to 110 feet above ground level. This extension above current S-1 height limit is a necessary deviation. Additionally, the variance will not adversely affect the comprehensive General Plan because it facilitates the development of a project that is consistent with the General Plan for the reasons identified in the Hell's Kitchen CEQA document and the General Plan Consistency finding which are incorporated herein by reference.

NOW, THEREFORE, based on the above findings, the Planning Commission of the County of Imperial **DOES HEREBY APPROVE** for Variance #21-0005 regarding the Hell's Kitchen LithiumCo 1 Project.

Rudy Schaffner, Chairperson
Imperial County Planning Commission

I hereby certify that the preceding resolution was taken by the Planning Commission at a meeting conducted on December 13, 2023, by the following vote:

AYES:
NOES:
ABSENT:
ABSTAIN:

ATTEST:

Jim Minnick, Director of Planning & Development Services
Secretary to the Planning Commission

S:\APN\020 010 012\hell kithcen power and lithium\PC variance resolution21 0005.doc

PC ORIGINAL PKG