5 Cumulative Impacts

The CEQA Guidelines (Section 15355) define a cumulative impact as "two or more individual effects which, when considered together, are considerable or which compound or increase other environmental impacts." The CEQA Guidelines [Section 15130(a)(1)] further states that "an EIR should not discuss impacts which do not result in part from the project."

Section 15130(a) of the CEQA Guidelines provides that "[A]n EIR shall discuss cumulative impacts of a project when the project's incremental effect is cumulatively considerable..." Cumulatively considerable, as defined in Section 15065(a)(3), "means that the incremental effects of an individual project 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."

An adequate discussion of significant cumulative impacts requires either: (1) "a list of past, present, and probable future projects producing related or cumulative impacts, including, if necessary, those projects outside the control of the agency; or (2) "a summary of projections contained in an adopted general plan or related planning document, or in a prior environmental document which has been adopted or certified, which described or evaluated regional or area-wide conditions contributing to the cumulative impact."

The CEQA Guidelines recognize that cumulative impacts may require mitigation, such as new rules and regulations that go beyond project-by-project measures. An EIR may also determine that a project's contribution to a significant cumulative impact will be rendered less than cumulatively considerable and thus is not significant. A project's contribution is less than cumulatively considerable if the project is required to implement or fund its fair share of a mitigation measure or measures designed to alleviate the cumulative impact. The Lead Agency must identify facts and analysis supporting its conclusion that the contribution will be rendered less than cumulatively considerable (CEQA Guidelines Section 15130(a)(3)).

This EIR evaluates the cumulative impacts of the projects for each resource area, using the following steps:

1. Define the geographic and temporal scope of cumulative impact analysis for each cumulative effects issue, based on the project's reasonably foreseeable direct and indirect effects.
2. Evaluate the cumulative effects of the project in combination with past and present (existing) and reasonably foreseeable future projects and, in the larger context of the Imperial Valley.
3. Evaluate the projects' incremental contribution to the cumulative effects on each resource considered in Chapter 3, Environmental Analysis. When the projects' incremental contribution to a significant cumulative impact is considerable, mitigation measures to reduce the projects' "fair share" contribution to the cumulative effect are discussed, where required.

5.1 Geographic Scope and Timeframe of the Cumulative Effects Analysis

The geographic area of cumulative effects varies by each resource area considered in Chapter 3. For example, air quality impacts tend to disperse over a large area, while traffic impacts are typically more

localized. Similarly, impacts on the habitats of special-status wildlife species need to be considered within its range of movement and associated habitat needs.

The analysis of cumulative effects in this EIR considers a number of variables including geographic (spatial) limits, time (temporal) limits, and the characteristics of the resource being evaluated. The geographic scope of each analysis is based on the topography surrounding the project sites and the natural boundaries of the resource affected, rather than jurisdictional boundaries. The geographic scope of cumulative effects will often extend beyond the scope of the direct effects of a project, but not beyond the scope of the direct and indirect effects of that project.

The cumulative development scenario includes projects that extend through year (2030), which is the planning horizon of the County of Imperial General Plan. Because of uncertain development patterns that are far in the future, it is too speculative to accurately determine the type and quantity of cumulative projects beyond the planning horizon of the County's adopted County General Plan. Evaluating the proposed projects' cumulative impacts when future facility decommissioning occurs is highly speculative because decommissioning is expected to occur in 20 to 25 years' time. Therefore, cumulative impacts during decommissioning are speculative for detailed consideration in this analysis.

5.2 Projects Contributing to Potential Cumulative Impacts

The CEQA Guidelines identify two basic methods for establishing the cumulative environment in which the projects are to be considered: the use of a list of past, present, and probable future projects (the "list approach") or the use of adopted projections from a general plan, other regional planning document, or certified EIR for such a planning document (the "plan approach").

For this EIR, the list approach has been utilized to generate the most reliable future projections of possible cumulative impacts. When the impacts of the projects are considered in combination with other past, present, and future projects to identify cumulative impacts, the other projects considered may also vary depending on the type of environmental impacts being assessed. As described above, the general geographic area associated with different environmental impacts of the projects defines the boundaries of the area used for compiling the list of projects considered in the cumulative impact analysis. Figure 5-1 provides the general location for each of these projects in relation to the project sites.

5.3 Cumulative Impact Analysis

This cumulative impact analysis utilizes an expanded list method (as defined under CEQA) and considers environmental effects associated with those projects identified in Table 5-1 in conjunction with the impacts identified for the proposed project in Chapter 3 of this EIR. Table 5-1 includes projects known at the time of release of the NOP of the Draft EIR, as well as additional projects that have been proposed since the NOP date. Figure 5-1 provides the general location for each of these projects in relation to the project site.

Table 5-1. Projects Considered in the Cumulative Impact Analysis

Map Label[1]	Project Name	Project Type	Distance from Project Site (miles)	Size (acres)	Capacity (MW)	Status[2]
1	Campo Verde	PV Solar Facility	15.6	1.990	140	Operational
2	Laurel 1	PV Solar Facility	15	171	325	Approved – Not Built
3	Laurel 2	PV Solar Facility	15.4	280	325	Approved – Not Built
4	Laurel 3	PV Solar Facility	18	587	325	Approved – Not Built
5	Laurel 4	PV Solar Facility	14.3	342	325	Approved – Not Built
6	CED Westside Canal Battery Storage	Battery Storage	15.9	148	2,000	Pending Entitlement
7	Vega SES Solar	PV Solar Facility	13.1	574	100	Approved – Not Built
8	Centinela Solar*	PV Solar Facility	10.5	2,067	275	Approved – Not Built
9	Drew Solar	PV Solar Facility	9.6	762.8	100	Approved - Under Construction
10	Le Conte Battery Storage	Battery Storage	10.3	5	125	Pending Entitlement
11	Imperial Solar South	PV Solar Facility	10	838.6	200	Operational
12	Centinela Solar*	PV Solar Facility	10.5	2,067	275	Operational
13	Calexico I-B	PV Solar Facility	9	4,228	600	Approved - Under Construction
14	Wistaria Ranch Solar**	PV Solar Facility	7.5	2,793	250	Approved – Not Built
15	Wistaria Ranch Solar**	PV Solar Facility	7.5	2,793	250	Approved - Under Construction
16	Calexico I-A	PV Solar Facility	9	4,228	600	Approved - Under Construction

Table 5-1. Projects Considered in the Cumulative Impact Analysis

Map Label[1]	Project Name	Project Type	Distance from Project Site (miles)	Size (acres)	Capacity (MW)	Status[2]
17	Iris Cluster - Rockwood	PV Solar Facility	7.5	1,422	360	Operational
18	Wistaria Ranch Solar**	PV Solar Facility	7.5	2,793	250	Operational
19	Iris Cluster - Ferrell	PV Solar Facility	6.6	1,422	360	Approved - Under Construction
20	Calexico II-B	PV Solar Facility	6.4	4,228	600	Operational
21	Mount Signal Solar	PV Solar Facility	8.9	4,237	594	Operational
22	Iris Cluster - Iris	PV Solar Facility	5.9	1,422	360	Approved - Under Construction
23	Calexico II-A	PV Solar Facility	3.5	4,228	600	Operational
24	Imperial Solar 1	Geothermal	0	1,130	250	Operational
25	Heber 2 Geothermal Energy Complex	Geothermal	0	40	33	Operational
26	Heber 1 Parasitic Solar	Parasitic Solar Facility	0	106	20	Pending Entitlement

1 – See Figure 5-1 for cumulative project location.

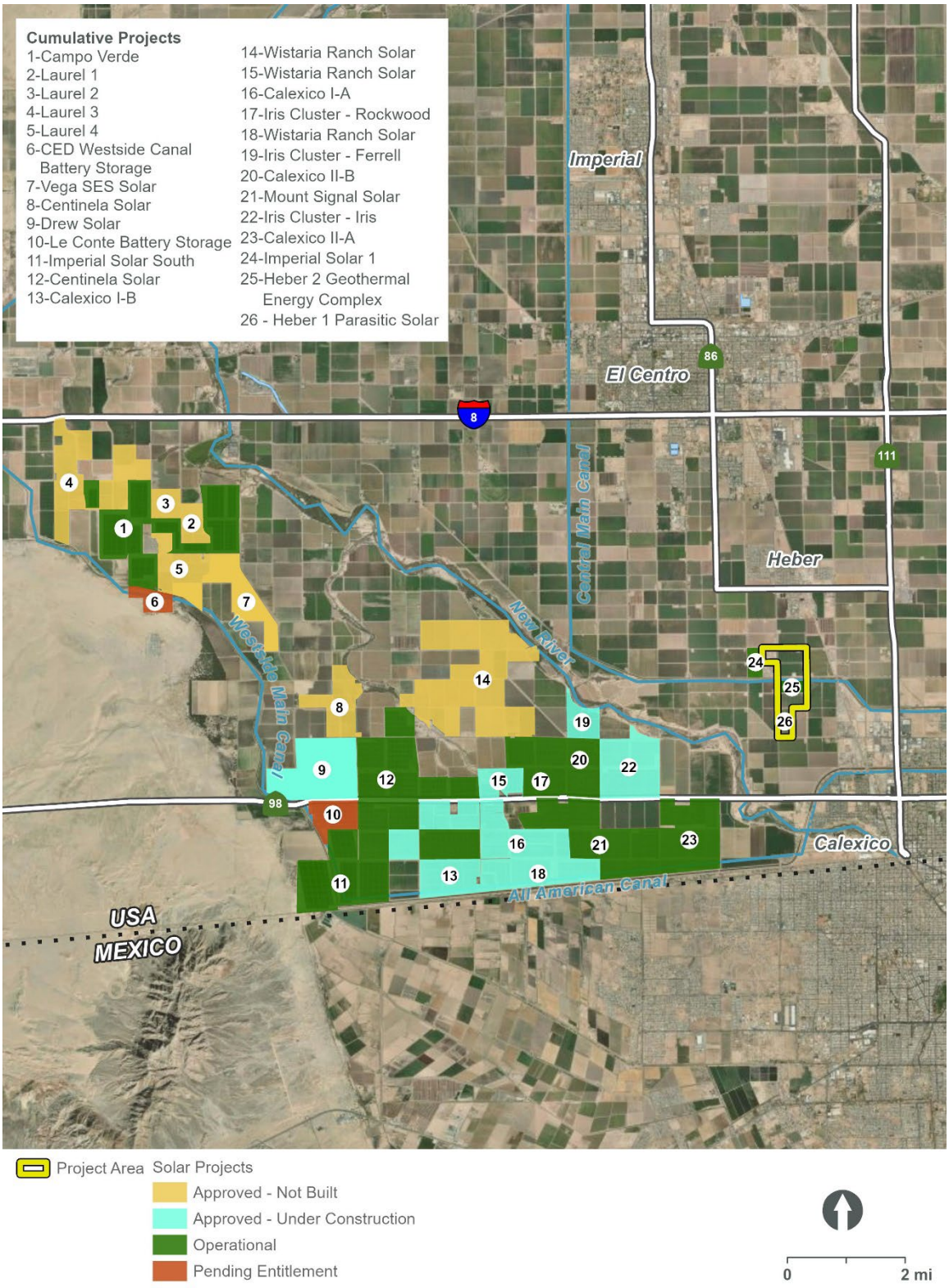
2 – Project status based on information provided by County staff and on Imperial County Planning & Development Service's RE Geographic Information System Mapping Application (https://icpds.maps.arcgis.com/apps/webappviewer/index.html?id=0d869c18d11645cc918391fdcac24b80). Accessed on April 4, 2024.

MW – megawatts; PV – photovoltaic

** Centinela Solar Project is listed as Cumulative Project No. 8 and 12 in Table 5-1. This is due to portions of the project site being constructed in different phases.*

** Wistaria Ranch Solar Project is listed as Cumulative Project No. 14, 15 and 18 in Table 5-1. This is due to portions of the project site being constructed in different phases.*

Figure 5-1. Cumulative Projects



** Centinela Solar Project is identified as Cumulative Project No. 8 and 12 in Figure 5-1. This is due to portions of the project site being constructed in different phases.*

** Wistaria Ranch Solar Project is identified as Cumulative Project No. 14, 15 and 18 in Figure 5-1. This is due to portions of the project site being constructed in different phases.*

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5.3.1 Aesthetics and Visual Resources

The cumulative study area for projects considered in the visual resources cumulative impact analysis considers a 5-mile radius from the project site. Views beyond 5 miles are obstructed by a combination of the flat topography coupled with the Earth's curvature. The short-term visual impacts of the project would be in the form of general construction activities including grading and use of construction machinery. Longer-term visual impacts of the project would be in the form of the presence of isopentane storage tanks, solar array grids, substation, medium voltage distribution cable, and drilling equipment.

As discussed in Section 3.2, Aesthetics, the proposed facilities would be located near the existing HGEC, which is comprised of three stand-alone geothermal power plants: Heber 2, Heber South, and Goulds 2, and is completely devoted to geothermal energy generation. Surrounding land uses in the project vicinity are primarily for industrial facilities, energy facilities, and agricultural cultivation. The Imperial County General/Zoning Plan allows for Major Geothermal Projects on the project site and, taking into account the existing geothermal power plants, the proposed project would not substantially impact the visual character of the site or its surroundings. Therefore, impacts associated with degrading the existing visual character or quality of the project site are considered less than significant.

Development of the proposed project in conjunction with the cumulative projects identified in Table 5-1 will gradually change the visual character of this portion of the Imperial Valley. Projects located within private lands and/or under the jurisdiction of the County of Imperial are being designed in accordance with the County of Imperial's General Plan and Land Use Ordinance, which includes policies to protect visual resources in the County. Cumulative projects including the Imperial Solar Energy Center South, Centinela Solar, Wistaria Ranch, Campo Verde, and others south of I-8 would not have a cumulative effect on a scenic vista because they are located in an area that is not identified as a designated scenic resource and would not affect a scenic vista. All cumulative projects would not impact scenic resources within a state scenic highway as no designated state scenic highway is located within 5 miles of these cumulative projects.

Finally, all projects listed in Table 5-1 would not produce a substantial amount of light and glare, as no significant source of light or glare is proposed, or the project will otherwise comply with the County lighting ordinance, as would all other related projects. Based on these considerations, there would be no significant cumulatively considerable aesthetic impact, and cumulative aesthetic impacts would be less than significant.

5.3.2 Agricultural Resources

Cumulative impacts on agricultural resources take into account the proposed project's temporary impacts as well as those likely to occur as a result of other existing, proposed and reasonably foreseeable projects. To determine cumulative impacts on agricultural resources, an assessment is made of the temporal nature of the impacts on individual resources (e.g., temporary such as in solar projects versus permanent as in industrial or residential developments) as well as the inventory of agricultural resources within the cumulative setting.

As discussed in Section 3.3, Agricultural Resources, the project would result in the temporary conversion of approximately 106.88 acres of Important Farmland (22.94 acres of Prime Farmland and 83.94 acres of Farmland of Statewide Importance). Thus, the proposed project would incrementally add to the temporary conversion of agricultural land in Imperial County. According to the California Department of Conservation, in 2020, approximately 519,891 acres out of a total of 1,028,522 acres

in Imperial County is classified as Important Farmland (California DOC n.d.). Table 5-2 summarizes the percentage of each type of farmland in the County that would be converted by the proposed project.

Table 5-2. Percentage Conversion of Farmland by Proposed Project

Agriculture Classification	Total Acreage in Imperial County (2020)	Approximate Acreage Converted on Project Site	Project Percentage of County Acreages
Prime Farmland	188,365	22.94	0.01
Farmland of Statewide Importance	289,002	83.94	0.03
Unique Farmland	1,767	0.0	0.0
Farmland of Local Importance	40,757	0.0	0.0
Total	**519,891**	**106.88**	**0.02**

Source: California DOC n.d.

As shown in Table 5-2, the Prime Farmland and Farmland of Statewide Importance within the project site comprises approximately 0.04 percent (0.01 + 0.03) of the total Important Farmland in the County. Thus, the proposed project would temporarily convert a very small fraction of the total Important Farmlands in the County and have a minimal effect on agricultural land on a cumulative scale. Furthermore, the conversion would be temporary and last for the duration of the project's useful life which is expected to be up to 30 years.

The project would be constructed on land currently zoned A-2-G-SPA and A-2-G-U. Pursuant to Title 9, Division 5, Chapter 8, the following uses are permitted in the A-2 zone:

> *n) Oil, gas and geothermal exploration meeting requirements specified in Division 17*
>
> *s) Solar energy extraction generation provided that is for on-site consumption only*

Pursuant to Title 9, Division 5, Chapter 8, the following uses are permitted in the A-2 zone subject to approval of a CUP from Imperial County:

> *y) Electrical generation plants (less than 50 MW) excluding nuclear or coal fired and meeting requirements in Division 17*
>
> *z) Electrical substations in an electrical transmission system (500 kv/230 kv/161 kv)*
>
> *bb) Facilities for the transmission of electrical energy (100-200 kv)*
>
> *ii) Geothermal test facilities, Intermediate projects, and major exploratory wells, meeting requirements in Division 17*
>
> *rr) Major Geothermal projects per Division 17*
>
> *ww) Resource extraction and energy development as per Division 17*
>
> *aaa) Solar energy electrical generator*

Upon approval of a CUPs, the project's uses would be consistent with the Imperial County Land Use Ordinance and thus, is also consistent with the General Plan land use designations of the site. Additionally, as a condition of project approval, the project applicant or its successor in interest will be

responsible for implementing a reclamation plan when the project is decommissioned at the end of its lifespan.

As discussed in Section 3.3, Agricultural Resources, Mitigation Measure AG-1a (Payment of Agricultural and Other Benefit Fees), AG-1b (Site Reclamation Plan), and AG-2 (Pest Management Plan) would be implemented to reduce potential impacts on agricultural resources to a level less than significant. Each individual cumulative project would be or would have been required to provide mitigation for any impacts on agricultural resources in accordance with the County's policies directed at mitigating the impact associated with the conversion of important farmlands. Therefore, the project's contribution to this impact would be less than cumulatively considerable.

5.3.3 Air Quality

Imperial County is used as the geographic scope for analysis of cumulative air quality impacts. As shown in Table 5-1, many of the cumulative projects are renewable energy generation projects, where the main source of air emissions would be generated during the construction phases of these projects; however, there would also be limited operational emissions associated with operations and maintenance activities for these facilities.

Additionally, the following cumulative projects (listed in Table 5-1) are already constructed and operational:

- Campo Verde
- Imperial Solar South
- Centinela Solar (portion of project site already operational)
- Iris Cluster - Rockwood
- Wistaria Ranch Solar (portion of project site already operational)
- Calexico II-B
- Mount Signal Solar
- Calexico II-A
- Imperial Solar 1
- Heber 2 Geothermal Energy Complex

The remaining cumulative projects are either pending entitlement or approved and not constructed, and not anticipated to involve overlapping construction activities with the proposed project. Therefore, the potential for a cumulative, short-term air quality impact as a result of construction activities is anticipated to be less than significant.

Currently, the SSAB is either in attainment or unclassified for all federal and state air pollutant standards with the exception of 8-Hour O_3 and $PM_{2.5}$. On November 13, 2009, EPA published Air Quality Designations for the 2006 24-Hour Fine Particle ($PM_{2.5}$) NAAQS wherein Imperial County was listed as designated nonattainment for the 2006 24-hour $PM_{2.5}$ NAAQS. However, the nonattainment designation for Imperial County is only for the urban area within the County and it has been determined that the proposed project is not located within the nonattainment boundaries for $PM_{2.5}$.

The AQAP for the SSAB, through the implementation of the AQMP and SIP for PM_{10}, sets forth a comprehensive program that will lead the SSAB into compliance with all federal and state air quality standards. With respect to PM_{10}, the ICAPCD implements Regulation VIII – Fugitive Dust Rules, to control these emissions and ultimately lead the basin into compliance with air standards, consistent with the AQAP. Within Regulation VIII are Rules 800 through 806, which address construction and earthmoving activities, bulk materials, carry-out and track-out, open areas, paved and unpaved roads, and conservation management practices. 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; and
- Use of a track-out control device or wash down system at access points to paved roads.

Compliance with Regulation VIII is mandatory on all construction sites, regardless of size. However, compliance with Regulation VIII does not constitute mitigation under the reductions attributed to environmental impacts. In addition, compliance for a project includes: (1) the development of a dust control plan for the construction and operational phase; and (2) notification to the air district is required 10 days prior to the commencement of any construction activity.

Construction

The proposed project would emit criteria pollutants from the use of combustion sources such as diesel off-road equipment (e.g., tractors, cranes, generators, etc.), and on-road mobile sources associated with construction-related vehicle travel. The proposed project would also generate air emissions during construction as a result of soil disturbance and fugitive dust emissions. Likewise, the other cumulative projects that are approved, but not yet built or pending entitlement identified in Table 5-1 would result in the generation of air emissions during construction activities.

With respect to the proposed project, during construction, the project would generate PM_{10}, $PM_{2.5}$, ROG, CO, SO_2, and NO_X emissions during each active day of construction. As discussed in Section 3.4, Air Quality, the proposed project's daily construction emissions would exceed the ICAPCD thresholds for NO_X and PM_{10}. However, implementation of Mitigation Measures AQ-1 through AQ-4 and Mitigation Measure AQ-6, the project would not exceed the ICAPCD's thresholds of significance during construction and would reduce potential impacts to a level less than significant. However, the proposed project's impact could be cumulatively considerable because the Imperial County portion of the SSAB is nonattainment already for O_3 and PM_{10} under state standards and for O_3 and $PM_{2.5}$ federal standards. Thus, existing O_3 and PM_{10} levels in the SSAB are at unhealthy levels during certain periods. Additionally, the cumulative construction effects could again be experienced in the future during decommissioning and site restoration activities.

Several of the projects listed in Table 5-1 are already constructed and in operation. In the event the proposed project is constructed in conjunction with those pending entitlement or approved for construction, each project would be subject to mitigation pursuant to ICAPCD's Regulations. Therefore, the cumulative impact would be reduced to a level less than significant through compliance with these measures. Further, because the proposed project will be required to implement measures consistent with ICAPCD regulations designed to alleviate the cumulative impact associated with fugitive dust (PM_{10}) and NO_X, the project's contribution would be rendered less than cumulatively considerable and is therefore, less than significant.

Operation

Project-generated increases in emissions would be predominately associated with isopentane emissions and emissions related to landscape equipment use for routine maintenance work. The proposed project's combined operational emissions would not exceed the ICAPCD thresholds for CO, ROG, NO_X, PM_{10}, $PM_{2.5}$, and SO_2; therefore, the impact would be less than significant. Operational impacts of other renewable energy facilities identified in Table 5-1 would also be similar. Although these cumulative projects generally involve large areas, their operational requirements are very

minimal, requiring minimal staff or use of machinery or equipment that generate emissions. Further, alternative energy projects, such as the project, would assist attainment of regional air quality standards and improvement of regional air quality by providing clean, renewable energy sources. Consequently, the projects would provide a positive contribution to the implementation of applicable air quality plan policies and compliance with EO S-3-05, which establishes a GHG emissions reduction target for the State to reduce GHG emissions to 80 percent below 1990 levels by 2050.

However, from a cumulative air quality standpoint, the potential cumulative impact associated with the generation of O_3, $PM_{2.5}$ and PM_{10} emissions during operation of the cumulative projects is a consideration because existing O_3 and PM_{10} levels in the SSAB are at unhealthy levels during certain periods. Imperial County is classified as non-attainment for $PM_{2.5}$ for the urban areas of Imperial County. However, the project's operational contribution to O_3, $PM_{2.5}$ and PM_{10} would be below a level of significance. As with the construction phases, the cumulative projects would be required to comply with ICAPCD's Regulation VIII for dust control (Regulation VIII applies to both the construction and operational phases of projects). As a result, the ICAPCD would be required to comply with the various dust control measures and to prepare and implement operational dust control plans as approved by the ICAPCD, which is a component of ICAPCD's overall framework of the AQAP that sets forth a comprehensive program for SSAB's compliance with all federal and state air quality standards. Therefore, the project would not contribute to long-term cumulatively considerable air quality impacts and the projects would not result in cumulatively significant air quality impacts, and cumulative impacts would be less than significant.

5.3.4 Biological Resources

The geographic scope for considering cumulative impacts on biological resources includes the Imperial Valley and related biological habitats. Table 5-1 lists the projects considered for the biological resources cumulative impact analysis.

In general terms, in instances where a potential impact could occur, CDFW and USFWS have promulgated a regulatory scheme that limits impacts on these species. The effects of the project would be rendered less than significant through mitigation requiring compliance with all applicable regulations that protect plant, fish, and animal species, as well as waters of the U.S. and state. Other cumulative projects would also be required to avoid impacts on special-status species and/or mitigate to the satisfaction of the CDFW and USFWS for the potential loss of habitat. As described in Section 3.5, Biological Resources, the project has the potential to result in impacts on biological resources. These impacts are generally associated with the potential construction-related effects to burrowing owl and bird species.

Burrowing Owls are protected by the CDFW mitigation guidelines for burrowing owl (CDFW 2012) and Consortium guidance (1993), which require a suite of mitigation measures to ensure direct effects to burrowing owls during construction activities are avoided and indirect effects through burrow destruction and loss of foraging habitat are mitigated at prescribed ratios. Mitigation measures identified in Section 3.5, Biological Resources, contain these requirements thereby minimizing potential impacts on these species to a less than significant level. Additionally, as provided in Section 3.5, Biological Resources, special-status bird species have a potential to be present. As a result of project-related construction activities, one or more of these species could be impacted. However, with the implementation of mitigation as identified in Section 3.5, Biological Resources, these impacts would be reduced to a level of less than significant, primarily through avoidance of direct and indirect impacts to these species via pre-construction surveys and monitoring requirements during construction. Similarly, the cumulative projects within the geographic scope of the project would be

required to comply with the legal framework as described above, and similar avoidance and minimization measures. Based on these considerations, impacts on biological resources would not be cumulatively considerable.

As with the proposed project, each of the cumulative projects would be required to provide mitigation for impacts on biological resources. The analysis below is conducted qualitatively and in the context that the cumulative projects would be subject to a variety of statutes and administrative frameworks that require mitigation for impacts on biological resources.

Birds listed at 50 CFR 10.3 are protected by the MBTA (16 USC 703 et seq.), a Federal statute that implements treaties with several countries on the conservation and protection of Birds listed at 50 CFR 10.3 are protected by the MBTA (16 USC 703 et seq.), a Federal statute that implements treaties with several countries on the conservation and protection of migratory birds. The MBTA is enforced by USFWS. This act prohibits the killing of any migratory birds without a valid permit. Any activity which contributes to unnatural migratory bird mortality could be prosecuted under this act. With few exceptions, most birds are considered migratory under this act. Raptors and active raptor nests are protected under California FGCs 3503.5, 3503, and 3513.

The CWA and California's Porter-Cologne Water Quality Control Act provide protection for water-related biological resources by controlling pollution, setting water quality standards, and preventing jurisdictional streams, lakes, and rivers from being filled without a federal permit. No state or federally protected wetlands exist within the project's jurisdictional survey area. The IID irrigation canals and drains meet the requirements for jurisdictional waters, however none of the jurisdictional features are within the project footprint except for the proposed medium voltage distribution cable. The medium voltage distribution cable would cross S Dogwood Road and be attached via trays to the existing pipeline that runs west before turning north to cross the Beech Drain and Central Main Canal at the existing above-ground pipeline span. The entire span of the medium voltage distribution cable would sit above the canal. Therefore, the proposed project would have no substantial adverse effect on state or federally protected wetlands, and impacts would be less than significant. Further, the proposed project would result in a net decrease in water demand, which would provide a benefit to IID's water budget and available supply for the Salton Sea. Implementation of the project would result in fallowing of currently irrigated agricultural fields. The IID's "Imperial Valley Natural Community Conservation Plan and Habitat Conservation Plan Planning Agreement No. 2810-2004-001-06 (February 2006) covers water conservation and irrigation and drainage of land to which IID delivers water to which the environmental impacts and various approaches to mitigate potential impacts to the Salton Sea include fallowing agricultural lands as identified in the HCP Final EIR/EIR. EIR Section 3.17.2 discusses the IID's Interim Water Supply Policy (IWSP) for Non-Agricultural Projects and Temporary Land Conversion Fallowing Policy (TLCFP) adopted by the IID and according to the TLCFP "This fallowing program satisfies multiple district objectives and service to reduce the conservation and water use demands on other IID water uses and thus provide district-wide benefits."

The proposed project would comply with these and other laws, regulations and guidelines and therefore would not contribute substantially to a cumulative biological resources impact. Similarly, the cumulative projects within the geographic scope of the proposed project will be required to comply with the legal frameworks set forth above, as well as others, and will be required to mitigate their impacts to a less than significant level. Therefore, the project would not contribute to a cumulatively considerable impact to biological resources, and cumulative impacts would be less than significant.

5.3.5 Cultural Resources

As described in Section 3.6, Cultural Resources, the proposed project will not result in any adverse change to the significance of the Central Main Canal as a historical resource under CEQA and no impact would occur. Although unlikely, the potential for unearthing a previously-undiscovered archaeological resource during construction does exist. This potential impact is considered significant. However, implementation of Mitigation Measure CUL-1 would reduce the potential impact associated with the inadvertent discovery of archaeological resources to a level less than significant. Implementation of Mitigation Measure CUL-2 would reduce potential impacts on human remains to a level less than significant.

Future projects with potentially significant impacts on cultural resources would be required to comply with federal, state, and local regulations and ordinances protecting cultural resources through implementation of similar project-specific mitigation measures during construction. Therefore, through compliance with regulatory requirements, standard conditions of approval, and Mitigation Measures CUL-1 and CUL-2, the proposed project would have a less than cumulatively considerable contribution to impacts on cultural resources.

During operations and decommissioning of the project, no additional impacts on archeological resources would be anticipated because the soil disturbance would have already occurred and been mitigated during construction.

5.3.6 Energy

Cumulative projects listed in Table 5-1 largely consist of utility-scale solar power generation facilities. The nature of these projects is such that, like the project, they would be consistent with the strategies of the CARB Climate Change Scoping Plan. In order to meet the SB 32 GHG emissions reduction mandate, the 2017 Scoping Plan relies on achievement of the RPS target of 60 percent of California's energy coming from renewable sources by 2030 and 100 percent renewable sources by 2045. The project and other similar projects are essential to achieving the RPS.

The main contribution of energy consumption from the project would be from construction equipment usage, haul truck trips, and employee trips during the construction phase and maintenance trips, and employee trips during project operation of the project. The project's emissions would, therefore, contribute to the increase in emissions in the transportation sector. Construction emissions would be finite and temporary and would cease at the end of construction activities. Electricity required during operations would be greatly offset by the electricity produced by the geothermal and solar facilities. Specifically, operation of renewable energy facilities would offset greenhouse gas emissions by replacing energy generated by fossil fuel power plants. The project would generate up to 47 MW of renewable energy, 25 MW of which would be net of energy that would be added to the power grid and be used in place of electricity generated by fossil fuel sources.

Although the project would result in a contribution to cumulative energy consumption in California, operation of the project could offset emissions from the electricity generation sector. Electricity required during operations would be greatly offset by the electricity produced by the geothermal and solar facilities. Specifically, operation of renewable energy facilities would offset greenhouse gas emissions by replacing energy generated by fossil fuel power plants. The project would generate up to 47 MW of energy that would be added to the power grid and be used in place of electricity generated by fossil fuel sources. Overall, the project would not contribute to cumulative energy consumption in California because operation of the project would provide electric power with negligible operational energy consumption over the long term when compared to traditional fossil-fueled generation

technologies. Thus, the project would not have a cumulatively considerable impact on energy consumption, would not conflict with any renewable energy plans, and cumulative impacts would be less than significant.

5.3.7 Geology and Soils

The Imperial Valley portion of the Salton Trough physiographic province of Southern California is used as the geographic scope for the analysis of cumulative impacts on geology/soils. Cumulative development would result in an increase in population and development that could be exposed to hazardous geological conditions, depending on the location of proposed developments. Geologic and soil conditions are typically site specific and can be addressed through appropriate engineering practices. Cumulative impacts on geologic resources would be considered significant if the project would be impacted by geologic hazard(s) and if the impact could combine with off-site geologic hazards to be cumulatively considerable.

Although the project site is not located within a mapped area of known land subsidence, a study published in collaboration with the California Energy Commission in 2019 found surface deformation at the Heber Geothermal Field (HGF) connected to geothermal production and injection. The HGF is the area containing and surrounding the HGEC. Subsidence was occurring at the HGF up to -45 mm/year (-1.77 in/year). Furthermore, it was reported that an increase in injection resulted in ground uplift in the northwestern portion of the HGF; however, over time this uplift transitioned to subsidence with an increase in geothermal production (Eneva et al 2019). This potential impact is considered significant. However, implementation of Mitigation Measure GEO-1 would reduce the potential impact associated with the potential for land subsidence by requiring the preparation of a design-level geotechnical report to reduce impacts to a level less than significant.

None of the projects identified within the geographic scope of potential cumulative impacts would intersect or be additive to the project's site-specific geology and soils impacts; therefore, no cumulatively considerable effects are identified for geology/soils, and cumulative impacts would be less than significant.

Development of the proposed project, in combination with other projects in the area, has the potential to contribute to a cumulatively significant paleontological resources impact due to the potential loss of paleontological resources unique to the region. However, mitigation is included in this EIR to reduce potentially significant project impacts to paleontological resources during construction of the proposed project. Implementation of Mitigation Measure GEO-2 would ensure that the potential impacts on paleontological resources do not rise to the level of significance. Future projects with potentially significant impacts on paleontological resources would be required to comply with federal, state, and local regulations and ordinances protecting paleontological resources through implementation of similar project-specific mitigation measures during construction. Therefore, through compliance with regulatory requirements, standard conditions of approval, and Mitigation Measure GEO-2, the proposed project would have a less than cumulatively considerable contribution to impacts on paleontological resources.

5.3.8 Greenhouse Gas Emissions

Emissions of GHGs have the potential to adversely affect the environment because such emissions contribute, on a cumulative basis, to global climate change. Although the emissions of the projects alone would not cause global climate change, GHG emissions from multiple projects throughout the world could result in a cumulative impact with respect to global climate change. In turn, global climate

change has the potential to result in rising sea levels, which can inundate low-lying areas; affect rainfall and snowfall, leading to changes in water supply; and affect habitat, leading to adverse effects on biological resources. The ICAPCD has not adopted a GHG significance threshold. SCAQMD has a screening threshold of 10,000 metric tons of CO_2e per year, which was applied to the project's analysis as provided in Section 3.9, Greenhouse Gas Emissions.

As discussed in Section 3.9, Greenhouse Gas Emissions, the proposed project's CO_2 emissions would not exceed SCAQMD's screening threshold of 10,000 metric tons of CO_2e per year. As the project's emissions do not exceed the SCAQMD's threshold, the proposed project would not result in a cumulatively considerable impact to GHG emissions and would not conflict with the State GHG reduction targets. Other cumulative projects identified in Table 5-1 largely consist of utility-scale solar facilities. The nature of these projects is such that they would be consistent with the strategies of the 2022 Climate Change Scoping Plan. In order to meet the AB 32 and SB 32 GHG emissions reduction mandate, the Scoping Plan relies on achievement of the RPS target of 33 percent of California's energy coming from renewable sources by 2020 and 50 percent by 2030. SB 32 codified the targets established by EO B-30-15 for 2030, which set the next interim step in the State's continuing efforts to pursue the long-term target expressed in EOs S-3-05 and B-30-15 of 80 percent below 1990 emissions levels by 2050. The RPS target was updated in September 2018 under SB 100 to 60 percent by 2030. The project and other similar projects are essential to achieving the RPS.

The short-term minor generation of GHG emissions during construction, which is necessary to create new, low-GHG emitting power-generating facilities, as well as the negligible amount generated during ongoing maintenance operations, would be more than offset by GHG emission reductions associated with solar-generated energy during operation. Based on these considerations, no significant long-term operational GHG impacts would occur and, therefore, project-related GHG impacts would not be cumulatively considerable.

5.3.9 Hazards/Hazardous Materials

The geographic scope considered for cumulative impacts from health, safety, and hazardous materials is the area within 1 mile of the boundary of the project site. One mile is the standard American Society of Testing and Materials (ASTM) standard search distance for hazardous materials.

Under cumulative conditions, implementation of the project in conjunction with the projects listed in Table 5-1 is not anticipated to present a public health and safety hazard to residents. Additionally, the project and related projects would all involve the storage, use, disposal, and transport of hazardous materials to varying degrees during construction, operation, and decommissioning. Impacts from these activities are less than significant for the project because the storage, use, disposal, and transport of hazardous materials are extensively regulated by various Federal, state, and local laws, regulations, and policies. It is foreseeable that the project and related projects would implement and comply with these existing hazardous materials laws, regulations, and policies. Therefore, the other cumulative projects would not cause a cumulative impact, and the project would not result in a cumulatively considerable incremental contribution to a cumulative impact related to use or routine transport of hazardous materials.

5.3.10 Hydrology and Water Quality

Table 5-1 lists the projects considered for the hydrology and water quality cumulative impact analysis. The geographic scope for considering cumulative hydrology and water quality impacts is the Imperial Valley Hydrologic Unit as defined by the Colorado Basin RWQCB Basin Plan.

The construction of the project is expected to result in short-term water quality impacts. Compliance with the SWRCB's NPDES general permit for activities associated with construction (2009-0009-DWQ) per Mitigation Measure HYD-1 would reduce water quality impacts. As with the proposed project, each of the cumulative projects would be required to comply with the Construction General Permit. The SWRCB has determined that the Construction General Permit protects water quality, is consistent with the CWA, and addresses the cumulative impacts of numerous construction activities throughout the state. This determination in conjunction with the implementation of mitigation would ensure short-term water quality impacts are not cumulatively considerable.

The project is not expected to result in long-term operations-related impacts related to water quality. The project would mitigate potential water quality impacts by implementing site design, source control, and treatment control BMPs. Some cumulative projects would require compliance with the SWRCB's NPDES general permit for industrial activities, as well as rules found in the CWA, Section 402(p)(1) and 40 CFR 122.26, and implemented Order No. 90-42 of the RWQCB. With implementation of SWRCB, Colorado River RWQCB, and County policies, plans, and ordinances governing land use activities that may degrade or contribute to the violation of water quality standards, cumulatively considerable impacts on water quality would be minimized to a less than significant level.

Based on a review of the FEMA Flood Insurance Rate Map, the project site is located within Zone X. The FEMA Zone X designation is an area determined to be outside the 0.2 percent annual chance floodplain. Therefore, the proposed project would not 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 impede or redirect flood flows, and impacts would be less than significant. As such, the project would not result in a significant cumulatively considerable impact on floodplains by constructing new facilities within an identified flood hazard zone.

Surface waters in the Imperial Valley ultimately drain into the Salton Sea via the New and Alamo Rivers as well as via irrigation drains and canals. Due to increased demand for water supplies in the region and IID water transfer agreements, increasing amounts of water are being consumed in Imperial Valley. In addition, water is also being transferred out of the Valley to population centers such as San Diego County, thus reducing inflows to the Salton Sea. Project implementation would not substantially alter the existing drainage pattern of the site or area. The majority of the project site would continue to sheet flow through the pervious native soils. The reduction of runoff to the Salton Sea during project construction and operation is not expected to combine with similar impacts of large scale proposed, approved and reasonably foreseeable renewable energy projects identified in Table 5-1. As such, the projects would not result in a significant cumulatively considerable impact on floodplains by constructing new facilities within an identified flood hazard zone. Likewise, cumulative impacts associated with runoff reduction would be less than cumulatively considerable.

Based on these considerations, the project would not contribute to or result in a significant cumulatively considerable impact to hydrology or water quality, and cumulative impacts would be less than significant.

5.3.11 Land Use Planning

The geographic scope for the analysis of cumulative land use and planning impacts is typically defined by government jurisdiction. The geographic scope for considering potential inconsistencies with the General Plan's policies from a cumulative perspective includes all lands within the County's jurisdiction and governed by its currently adopted General Plan. In contrast, the geographic scope for considering

potential land use impacts or incompatibilities include the project site plus a one-mile buffer to ensure a consideration for reasonably anticipated potential direct and indirect effects.

As provided in Section 3.12, Land Use/Planning, the project would not involve any facilities that could otherwise divide an established community. Based on this circumstance, no cumulatively considerable impacts would occur. As discussed in Section 3.12, Land Use/Planning, the project would not conflict with the goals and objectives of the County of Imperial General Plan. In addition, a majority of the cumulative projects identified in Table 5-1 would not result in a conflict with applicable land use plans, policies, or regulations. In the event that incompatibilities or land use conflicts are identified for other projects listed in Table 5-1, the County would require mitigation to avoid or minimize potential land use impacts. Where General Plan Amendments and/or Zone Changes are required to extend the RE Overlay Zone for cumulative projects listed in Table 5-1, that project would be required to demonstrate consistency with the overall goals and policies of the General Plan, and would be required to demonstrate meeting the criteria for extending the RE Overlay onto the project site. Based on these circumstances, no significant cumulatively considerable impact would occur, and cumulative impacts would be less than significant.

5.3.12 Noise and Vibration

When determining whether the overall noise (and vibration) impacts from related projects would be cumulatively significant and whether the project's incremental contribution to any significant cumulative impacts would be cumulatively considerable, it is important to note that noise and vibration are localized occurrences; as such, they decrease rapidly in magnitude as the distance from the source to the receptor increases. Therefore, only those related projects and identified in Table 5-1 that are in the vicinity of the project site and those that are considered influential in regards to noise and vibration would have the potential to be considered in a cumulative context with the project's incremental contribution.

As shown in Figure 5-1, there are two cumulative projects (Imperial Solar 1 and Heber 2 Geothermal Energy Complex) within close proximity of the proposed project. The proposed project's construction noise is not anticipated to be additive to the noise generated by these two cumulative projects because they are already operational. Similar to the proposed project, other cumulative projects would be required to comply with the County's construction noise standards. Construction activity is limited to the hours of 7 a.m. to 7 p.m. Monday through Friday, and 9 a.m. to 5 p.m. on Saturdays. Adhering to the County's construction hours would reduce the noise and vibration impacts to below a level of significance. Thus, the incremental contribution of the project to a cumulative noise impact would not be cumulatively considerable.

Stationary-source and vehicular noise from the aforementioned related projects would be similar in nature and magnitude to those discussed for the project in Section 3.13, Noise and Vibration. For the proposed project, no noise impacts have been identified. Thus, the incremental contribution of the project to significant cumulative noise impacts would not be cumulatively considerable.

5.3.13 Public Services

The project would result in increased demand for public services (fire protection service and law enforcement services) (Section 3.14, Public Services). Future development in the Imperial Valley, including projects identified in Table 5-1, would also increase the demand for public services. In terms of cumulative impacts, the appropriate service providers are responsible for ensuring adequate provision of public services within their jurisdictional boundaries. In conjunction with the project's

approval, the project applicant would also be conditioned to ensure sufficient funding is available for any fire protection or prevention needs and law enforcement services. Based on the type of projects proposed (e.g., geothermal and solar energy generation), their relatively low demand for public services other than fire and police, it is reasonable to conclude that the project would not increase demands for education, or other public services. Service impacts associated with the project related to fire and police would be addressed through payment of impact fees as part of the project's Conditions of Approval to ensure that the service capabilities of these departments are maintained. Therefore, no cumulatively considerable impacts would occur.

5.3.14 Transportation

During the construction phase of the proposed project, the maximum number of trips generated on a daily basis would be approximately PCE 171 trips. Based on the low amount of construction trips generated and low existing traffic volumes on area roadways, no substantial transportation impacts are anticipated. Implementation of the proposed project would not require any public road widening to accommodate vehicular trips associated with the proposed project (construction phase and operational phase). Once the proposed project is complete, the site will be staffed with 1-2 onsite employees. During operations, the proposed project would generate 11 trips per day.

Since the proposed project is located in a rural portion of the County there are no fixed routes for alternative transportation or non-motorized travel within the general area of the project site that would be impacted by project construction or operation. Although the proposed project would increase VMT during the construction phase, these increases are temporary in nature.

The construction phasing of cumulative projects is not anticipated to overlap with the proposed project. Furthermore, the cumulative projects are not anticipated to use the same construction haul route as the proposed project. During operations, the proposed project would generate minimal trips to the project site. Based on these findings, the project would not result in cumulatively considerable roadway or intersection impacts, and this impact would be less than significant.

5.3.15 Tribal Cultural Resources

As discussed in Section 3.16, Tribal Cultural Resources, the Viejas Band of Kumeyaay Indians ("Viejas") responded via email on March 2, 2023 and determined that the project site has cultural significance or ties to Viejas Implementation of Mitigation Measure TCR-1 would ensure that the proposed project's potential impacts on unidentified tribal cultural resources do not rise to the level of significance. Future cumulative projects would also be required to comply with the requirements of AB 52 to determine the presence/absence of tribal cultural resources and engage in consultation to determine appropriate mitigation measures to minimize or avoid impacts on tribal cultural resources. Based on these considerations, the project would not contribute to or result in a significant cumulatively considerable impact on tribal cultural resources.

5.3.16 Utilities/Service Systems

Future development in Imperial County would increase the demand for utility service in the region. In terms of cumulative impacts, the appropriate service providers are responsible for ensuring adequate provision of public utilities within their jurisdictional boundaries.

As discussed in Section 3.17, Utilities and Service Systems, a total of 1.1 million gallons of water (10.1 acre-feet) will be used for project construction. Water necessary for well drilling would be obtained from local irrigation canals in conformance with IID requirements. Approximately 50,000 gpd (1.53

acre-feet) would be required for drilling activities. In addition to obtaining water from canals, temporary pipelines could be used for water delivery to well sites. All temporary pipelines would be above ground immediately adjacent to access roads. Once the project is operational, the water demand would decline significantly to approximately 325 gpd (0.36 acre-feet per year). The project will not require additional water from the IID for operations and will be covered under the existing contract.

As of February 2023, a balance of 23,800 AFY remains available under the IWSP for new non-agricultural projects. The project's estimated water demand would not affect IID's ability to provide water to other users in IID's water service area.

Additionally, as reported for IID's 2020 Temporary Land Conversion Fallowing Program, solar developments at the end of 2020 converted 12,404 acres of farmland, approximately half the acreage set aside by the County for conversion. These projects had a yield at-river of 65,964 AF of water in 2020 and 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, representing a significant cumulative net benefit to IID's water supply.

As a result, the proposed project would not require or result in the relocation or construction of new or expanded wastewater facilities, storm water facilities, or water facilities. Additionally, the project would be comprised of mostly recyclable materials and would not generate significant volumes of solid waste that could otherwise contribute to significant decreases in landfill capacity. Based on these considerations, the project would result in less than significant impacts on existing utility providers and, therefore, would not result in cumulatively considerable impacts.

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