

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 project 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 project’s incremental contribution to the cumulative effects on each resource considered in Chapter 3, Environmental Analysis. When the project’s incremental contribution to a significant cumulative impact is considerable, mitigation measures to reduce the project’s “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 site 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 project's 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

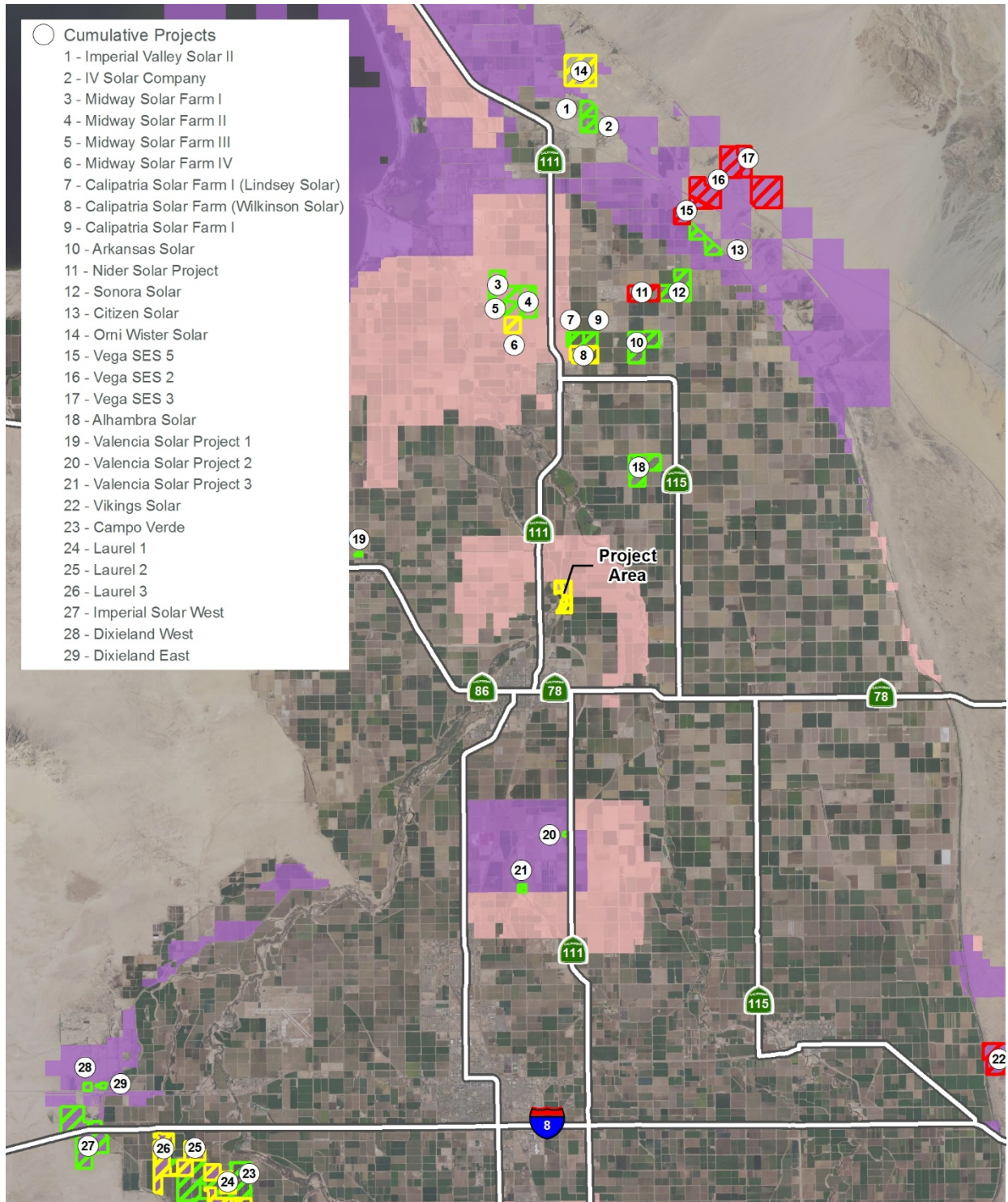
The CEQA Guidelines identify two basic methods for establishing the cumulative environment in which the projects are to be considered: the use of a list of past, present, and probable future projects (the "list approach") or the use of adopted projections from a general plan, other regional planning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

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 project in Chapter 3 of this EIR. Table 5-1 includes solar 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.

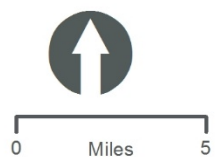
Figure 5-1. Cumulative Projects



- Cumulative Projects
- 1 - Imperial Valley Solar II
 - 2 - IV Solar Company
 - 3 - Midway Solar Farm I
 - 4 - Midway Solar Farm II
 - 5 - Midway Solar Farm III
 - 6 - Midway Solar Farm IV
 - 7 - Calipatria Solar Farm I (Lindsey Solar)
 - 8 - Calipatria Solar Farm (Wilkinson Solar)
 - 9 - Calipatria Solar Farm I
 - 10 - Arkansas Solar
 - 11 - Nider Solar Project
 - 12 - Sonora Solar
 - 13 - Citizen Solar
 - 14 - Orni Wister Solar
 - 15 - Vega SES 5
 - 16 - Vega SES 2
 - 17 - Vega SES 3
 - 18 - Alhambra Solar
 - 19 - Valencia Solar Project 1
 - 20 - Valencia Solar Project 2
 - 21 - Valencia Solar Project 3
 - 22 - Vikings Solar
 - 23 - Campo Verde
 - 24 - Laurel 1
 - 25 - Laurel 2
 - 26 - Laurel 3
 - 27 - Imperial Solar West
 - 28 - Dixieland West
 - 29 - Dixieland East

Legend

- | | | | |
|------------------|-------------------------------|-----------------------------|---------------------------------|
| Project Location | Solar Projects | Geothermal | Renewable Energy Overlay |
| | Operational | Renewable Energy/Geothermal | |
| | Approved - Under Construction | | |
| | Approved - Not Built | | |
| | Pending Entitlement | | |



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

| Map Label ¹ | Project Name | Project Type | Distance from Brawley Project Site | Size (acres) | Capacity (MW) | Status ² |
|------------------------|---|-------------------|-------------------------------------|--------------|---------------|----------------------|
| 1 | Imperial Valley Solar II | PV Solar Facility | Approximately 16.30 miles north | 146 | 20 | Operational |
| 2 | IV Solar Company | PV Solar Facility | Approximately 15.80 miles north | 123 | 23 | Operational |
| 3 | Midway Solar Farm I | PV Solar Facility | Approximately 10.30 miles northwest | 480 | 50 | Operational |
| 4 | Midway Solar Farm II | PV Solar Facility | Approximately 10.30 miles northwest | 803 | 155 | Operational |
| 5 | Midway Solar Farm III | PV Solar Facility | Approximately 10.20 miles northwest | 160 | 20 | Operational |
| 6 | Midway Solar Farm IV | PV Solar Facility | Approximately 9.29 miles northwest | 160 | 15 | Approved – Not Built |
| 7 | Calipatria Solar Farm I (Lindsey Solar) | PV Solar Facility | Approximately 8.60 miles north | 148 | 20 | Operational |
| 8 | Calipatria Solar Farm (Wilkinson Solar) | PV Solar Facility | Approximately 8.60 miles north | 302 | 30 | Approved – Not Built |
| 9 | Calipatria Solar Farm I | PV Solar Facility | Approximately 8.10 miles north | 159 | 20 | Operational |
| 10 | Arkansas Solar | PV Solar Facility | Approximately 8.50 miles northeast | 481 | 50 | Operational |
| 11 | Nider Solar Project | PV Solar Facility | Approximately 10.50 miles northeast | 320 | 100 | Pending Entitlement |
| 12 | Sonora Solar | PV Solar Facility | Approximately 10.90 miles northeast | 488 | 50 | Operational |
| 13 | Citizens Solar | PV Solar Facility | Approximately 13.00 miles northeast | 159 | 30 | Operational |
| 14 | Ormat Wister Solar | PV Solar Facility | Approximately 17.30 miles north | 160 | 20 | Approved – Not Built |
| 15 | VEGA SES 5 | PV Solar Facility | Approximately 13.30 miles northeast | | | Pending Entitlement |

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

| Map Label ¹ | Project Name | Project Type | Distance from Brawley Project Site | Size (acres) | Capacity (MW) | Status ² |
|------------------------|--------------------------|-------------------|-------------------------------------|---|---|----------------------|
| 16 | VEGA SES 2 | PV Solar Facility | Approximately 15.20 miles northeast | 1,963 (combined total for VEGA 2, 3, and 5) | 350 (combined total for VEGA 2, 3, and 5) | Pending Entitlement |
| 17 | VEGA SES 3 | PV Solar Facility | Approximately 14.90 miles northeast | | | Pending Entitlement |
| 18 | Alhambra Solar | PV Solar Facility | Approximately 5.00 miles northeast | 482 | 50 | Operational |
| 19 | Valencia Solar Project 1 | PV Solar Facility | Approximately 7.00 miles west | 17 | 3 | Operational |
| 20 | Valencia Solar Project 2 | PV Solar Facility | Approximately 7.30 miles south | 17 | 3 | Operational |
| 21 | Valencia Solar Project 3 | PV Solar Facility | Approximately 9.20 miles southwest | 19 | 3 | Operational |
| 22 | Vikings Solar | PV Solar Facility | Approximately 20.00 miles southeast | 604 | 150 | Pending Entitlement |
| 23 | Campo Verde | PV Solar Facility | Approximately 20.10 miles southwest | 1,400 | 139 | Operational |
| 24 | Laurel 1 | PV Solar Facility | Approximately 21.60 miles southwest | 1,396 (combined total for Laurel 1, 2, and 3) | 325 (combined total for Laurel 1, 2, and 3) | Approved – Not Built |
| 25 | Laurel 2 | PV Solar Facility | Approximately 22 miles southwest | | | Approved – Not Built |
| 26 | Laurel 3 | PV Solar Facility | Approximately 22 miles southwest | | | Approved – Not Built |
| 27 | Imperial Solar West | PV Solar Facility | Approximately 22 miles southwest | 1,145 | 150 | Operational |
| 28 | Dixieland West | PV Solar Facility | Approximately 22 miles southwest | 32 | 3 | Operational |
| 29 | Dixieland East | PV Solar Facility | Approximately 22 miles southwest | 31 | 2 | Operational |

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 (<http://icpds.maps.arcgis.com/apps/Viewer/index.html?appid=c6fd31272e3d42e1b736ce8542b994ae>). Accessed on October 5, 2021.

IID – Imperial Irrigation District; MW – megawatts; PV – photovoltaic

5.3.1 Aesthetics

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, use of construction machinery, and installation of the transmission poles and stringing of transmission lines, but would only be available to a very limited amount of people and would have to be in relatively close proximity to the project site. Longer-term visual impacts of the project would be in the form of the presence of solar array grids, an electrical distribution and transmission system, and substation.

As provided in Section 3.2, Aesthetics, the existing visual character of the project site and the quality of views in terms of visibility beyond the site would not be substantially altered. The visual changes associated with the project would not be located in proximity to any designated scenic vistas or scenic highways. The proposed project would be absorbed into the broader landscape that already includes agricultural development, electricity transmission, geothermal power plants, and the City of Brawley Wastewater Treatment Plant. Further, the project site would be restored to its existing condition following the decommissioning of the solar uses. As a result, although the visual character of the project site would change from undeveloped to one with developed characteristics, a less than significant impact associated with the proposed project has been identified.

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. However, 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.

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 majority of the project site is designated as Farmland of Statewide Importance, with a pocket of Prime Farmland and Farmland of Local Importance¹ located in the southern portion of the project site. Approximately 1 acre of Unique Farmland occurs along the western boundary of the project site. Therefore, the proposed project would

¹ It should be noted that analysis of Other Land and Farmland of Local Importance is not required under CEQA significance criteria, as these designations are not considered an "agricultural land" per CEQA Statute Section 21060.1(a).

convert land designated as Prime Farmland, Farmland of Statewide Importance, and Unique Farmland to non-agricultural uses, and, as such, incrementally add to the conversion of agricultural land in Imperial County. However, the project site is located on land designated for agricultural uses. The project would be constructed on land currently zoned A-2-G (General Agricultural with a Geothermal Overlay). 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: solar energy electrical generator, battery storage facility, electrical substations, communication towers, and facilities for the transmission of electrical energy. Upon approval of a CUP and Zone Change into the RE Overlay Zone designation, 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 designation 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 large-scale 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, a majority of the projects listed in Table 5-1 are already constructed and operational. 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 O₃, PM₁₀, and PM_{2.5}. Imperial County is classified as a "serious" nonattainment area for PM₁₀ for the NAAQS.

The AQAP for the SSAB, through the implementation of the AQMP and SIP for PM₁₀, sets forth a comprehensive program that will lead the SSAB into compliance with all federal and state air quality standards. With respect to PM₁₀, 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 generate air emissions due to vehicle and dust emissions associated with construction activities. Similar effects would also be realized upon site decommissioning, which would be carried out in conjunction with the project's restoration plan, and subject to applicable ICAPCD standards. Likewise, the other cumulative projects that are approved, but not yet built (Midway Solar Farm I, Omi Wister Solar, Calipatria Solar Farm [Wilkinson Solar], Laurel I, Laurel II, and Laurel III), or pending entitlement (Nider Solar Project, Vega SES 2, 3, and 5, and Viking Solar) identified in Table 5-1 would result in the generation of air emissions during construction activities.

With respect to the proposed project, during the construction and decommissioning phases, the project would generate PM₁₀, PM_{2.5}, ROG, CO, and NO_x emissions during each active day of construction. However, as discussed in Section 3.4, Air Quality, the project would not result in a significant increase in CO, ROG, and NO_x that would exceed ICAPCD thresholds.

However, the project's impact could be cumulatively considerable because: (1) portions of the SSAB are nonattainment already (PM₁₀ and PM_{2.5}), although mitigated by ICAPCD Regulations; and, (2) project construction would occur on most days, including days when O₃ already in excess of state standards. Additionally, the effects could again be experienced in the future during decommissioning in conjunction with site restoration.

The proposed project, in conjunction with the construction of other cumulative projects as identified in Table 5-1 (Midway Solar Farm I, Omi Wister Solar, Calipatria Solar Farm [Wilkinson Solar], Laurel I, Laurel II, Laurel III, Nider Solar Project, Vega SES 2, 3, and 5, and Viking Solar), could result in a cumulatively considerable increase in the generation of PM₁₀ and NO_x; however, like the proposed project, cumulative projects would be subject to mitigation pursuant to County ICAPCD's Regulations and Rules, and the cumulative impact would be reduced to a level less than significant through compliance with these measures. Because the project will be required to implement measures consistent with ICAPCD regulations designed to alleviate the cumulative impact associated with PM₁₀, the proposed project's contribution is rendered less than cumulatively considerable and is therefore, less than significant.

Operation

As the proposed project would have no major stationary emission sources and would require minimal vehicular trips, operation of the proposed solar facility would result in substantially lower emissions than project construction. The project's operational emissions would not exceed the Tier I thresholds; 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.

However, from a cumulative air quality standpoint, the potential cumulative impact associated with the generation of PM₁₀ and PM_{2.5} emissions during operation of the cumulative projects is a consideration because of the fact that Imperial County is classified as a "serious" non-attainment area for PM₁₀ and a "moderate" non-attainment area for 8-hour O₃ and PM_{2.5} for the NAAQS. However, 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 require compliance with the various dust control measures and, in addition be required 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 for the SSAB, which sets forth a comprehensive program that will lead the SSAB into 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 project 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, one plant species, Abram's spurge, has a low potential to occur due to the limited suitable habitat within the project site. Three wildlife species have a low potential to occur (flat-tailed horned lizard, short-eared owl, and western yellow bat) on the project site, two wildlife species have a high potential to occur (BUOW and mountain plover) on the project site, and one wildlife species (loggerhead shrikes) was observed onsite during site reconnaissance. As such, the project has the potential to result in direct impacts on biological resources. Additionally, project construction has the potential to result in direct and indirect impacts on nesting birds.

Mitigation measures identified in Section 3.5, Biological Resources, would ensure that all regulations required to protect these species are implemented, thereby minimizing potential impacts on these species to a less than significant level. Similarly, the cumulative projects within the geographic scope of the project would be required to comply with the legal framework as described above. 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. Several jurisdictional features were observed within the project site. The New River, a NWI mapped blueline, flows approximately .2 miles to the west of the project site. In addition, several NWI mapped blueline canals, drains, and ditches owned by IID flow along the borders of the project site. However, the project has been located, and consequently designed, to avoid impacts to waters of the State and waters of the U.S.

Given the above, the project 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 discussed in Section 3.6, Cultural Resources, 6 newly recorded cultural resources were identified within the project site during field surveys. Newly identified cultural resources comprise both historic-period and two multi-component sites. Resource 21267-001 is recommended not eligible for listing and the other five resources have not been formally evaluated for potential eligibility for listing in the CRHR. The project applicant will avoid ground-disturbing activities within and in close proximity to these resources. However, if-ground disturbing activities must occur within and in close proximity to these resources, a significant impact may potentially occur. Implementation of Mitigation Measures CUL-1 through CUL-6 would reduce potential impacts associated to cultural historic resources to a level less than significant. Therefore, the proposed project would not cause a substantial adverse change in the significant of a historical resource as defined in Section 15064.5 of the CEQA Guidelines and no impact would occur.

The potential of finding a buried archaeological site during construction is considered low. However, like all construction projects in the state, the possibility exists. This potential impact is considered significant. Implementation of Mitigation Measures CUL-1 through CUL-6 would reduce potential impacts associated with the unanticipated discovery of unknown buried archaeological resources. Implementation of Mitigation Measure CUL-7 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 through CUL-7 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 archaeological resources would be anticipated because the soil disturbance would have already occurred and been mitigated during construction.

5.3.6 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 and mineral resources. 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. 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 Measures GEO-2 through GEO-7 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 Measures GEO-2 through GEO-7, the proposed project would have a less than cumulatively considerable contribution to impacts on paleontological resources.

5.3.7 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.

CAPCOA considers projects that generate more than 900 metric tons of CO₂e per year to be significant. This 900 metric tons per year threshold was developed to ensure at least 90 percent of new GHG emissions would be reviewed and assessed for mitigation, thereby contributing to the statewide GHG emissions reduction goals that had been established for the year 2030 under SB 32. Thus, both cumulatively and individually, projects that generate less than 900 metric tons CO₂e per year have a negligible contribution to overall emissions. As discussed in Section 3.8, Greenhouse Gas Emissions, the project would result in the generation of approximately 46 MTCO₂e annualized over the lifetime of the project. Therefore, the construction emissions are less than the CAPCOA's screening threshold of 900 MTCO₂e per year. As the project's emissions do not exceed the CAPCOA'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 are utility-scale solar facilities. The nature of these projects is such that, like the project, they would be consistent with the strategies of the Climate Change Scoping Plan. In order to meet the AB 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. 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.

Given that the project is characterized as a renewable energy project and places emphasis on solar power generation, project operations would be almost carbon-neutral with the majority of the operational GHG emissions associated with vehicle trips. Based on these considerations, no significant long-term operational GHG impacts would occur and, therefore, project-related GHG impacts would not be cumulatively considerable.

5.3.8 Hazards and 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 sites. 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 related 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.

5.3.9 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) 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, as outlined in Mitigation Measures HYD-1 and HYD-2. 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 FIRM, the proposed project site is located in Zone X (unshaded). The FEMA Zone X (unshaded) designation is an area determined to be outside the 0.2 percent annual chance floodplain. 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.

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.

5.3.10 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 3.11, 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 3.11, Land Use/Planning, the project would not conflict with the goals and objectives of the County of Imperial General Plan if all entitlements (General Plan amendment, Conditional Use Permit, and Zone Change) are approved by the County Board of Supervisors. 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, similar to the projects, 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, that project would also 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.

5.3.11 Public Services

The project would result in increased demand for public services (fire protection service and law enforcement services) (Section 3.12, 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., 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.

5.3.12 Transportation

As stated in Section 3.13, Transportation, during the construction phase of the project, the maximum number of trips generated on a daily basis would be approximately 540 trips. Based on the low amount of construction trips generated and low existing traffic volumes on area roadways, no substantial transportation impacts are anticipated. A majority of the projects listed in Table 5-1 are already constructed. As shown on Table 5-1, there are cumulative projects that are approved, but not yet built (Midway Solar Farm I, Ormat Wister Solar, Calipatria Solar Farm [Wilkinson Solar], Laurel I, Laurel II, and Laurel III), or pending entitlement (Nider Solar Project, Vega SES 2, 3, and 5, and Viking Solar). The construction phasing of these projects is not anticipated to overlap with the proposed project. Furthermore, with exception of SR-111, the cumulative projects are not anticipated to use the same construction haul route as the proposed project. Future operations and maintenance would be conducted remotely, with minimal trips to the project site for panel washing and other solar maintenance. Based on these findings, the project would not result in cumulatively considerable roadway or intersection impacts, and this impact would be less than significant.

5.3.13 Tribal Cultural Resources

As discussed in Section 3.14, Tribal Cultural Resources, no tribes have responded that indicate the potential for traditional cultural properties or sacred sites. Therefore, the proposed project is not anticipated to cause a substantial adverse change in the significance of a tribal cultural resource, and impacts on tribal cultural resources would be less than significant. 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 tribal cultural resources.

5.3.14 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. 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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