

CHAPTER 5: CUMULATIVE IMPACTS

THIS PAGE
INTENTIONALLY
LEFT BLANK

CHAPTER 5: CUMULATIVE IMPACTS

CEQA Guidelines Section 15130 requires that an Environmental Impact Report (EIR) discuss cumulative impacts of a project and determine whether the project's incremental effect is "cumulatively considerable." The definition of cumulatively considerable is provided in Section 15065(a)(3):

"Cumulatively considerable" 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. According to Section 15130(b) of the CEQA Guidelines:

[t]he discussion of cumulative impacts shall reflect the severity of the impacts and their likelihood of occurrence, but the discussion need not provide as great detail as is provided for the effects attributable to the project alone. The discussion should be guided by standards of practicality and reasonableness, and should focus on the cumulative impact to which the identified other projects contribute rather than the attributes of other projects which do not contribute to the cumulative impact.

For purposes of this Subsequent EIR (SEIR), the project would have a significant cumulative effect if:

- the cumulative effects of other past, current, and probable future projects without the project are not significant and the project's incremental impact is substantial enough, when added to the cumulative effects, to result in a significant impact; or
- the cumulative effects of other past, current, and probable future projects without the project are already significant and the project contributes measurably to the effect. The standards used herein to determine measurability are that either the impact must be noticeable or must exceed an established threshold of significance.

This SEIR identifies potentially significant environmental impacts associated with implementation of the proposed project, which are addressed by resource topic in Chapter 4, "Environmental Analysis." These issues, and others that could be cumulatively considerable significant effects, are discussed below in the context of cumulative development.

5.1 GEOGRAPHIC SCOPE AND TEMPORAL SCOPE

The geographic area that could be affected by the proposed project varies depending on the type of environmental resource being considered. When the effects of the project are considered in combination with those other past, present, and reasonably foreseeable future projects to identify cumulative impacts, the other projects that are considered may also vary depending on the type of environmental effects being assessed. The general geographic area associated with different environmental effects of the project defines the boundaries of the area used for compiling the list of projects considered in the cumulative impact analysis. For example, the analysis of some air quality impacts is based on regional-scale growth; thus, a regional perspective must be used to assess cumulative air quality impacts. In the case of land use impacts, given the localized impact area of concern, a smaller more localized area surrounding the immediate project area, would be appropriate for consideration. Table 5-1, "Geographic Scope of

Cumulative Impacts,” presents the geographic scales associated with the different resources addressed in this SEIR analysis.

**Table 5-1
 Geographic Scope of Cumulative Impacts**

Resource Issue	Geographic Scale of Impacts
Air Quality	Local (carbon monoxide, particulate matter, air toxics) Air basin/regional (ozone, particulate matter, and other criteria pollutants)
Biological Resources	Local and areas within the same watershed
Cultural Resources	Local
Greenhouse Gas Emissions	Global (greenhouse gases)
Geology, Soils and Paleontological Resources	Local
Hydrology and Water Quality	Local, upstream, and downstream areas within the same watershed and aquifer
Land Use and Planning	Local
Tribal Cultural Resources	Local

Source: Data compiled by Benchmark Resources in 2022

5.2 RELATED PROJECTS

5.2.1 Analysis Method

The CEQA Guidelines allow for the use of two methods to determine the scope of related projects for the cumulative impact analysis (CEQA Guidelines Section 15130):

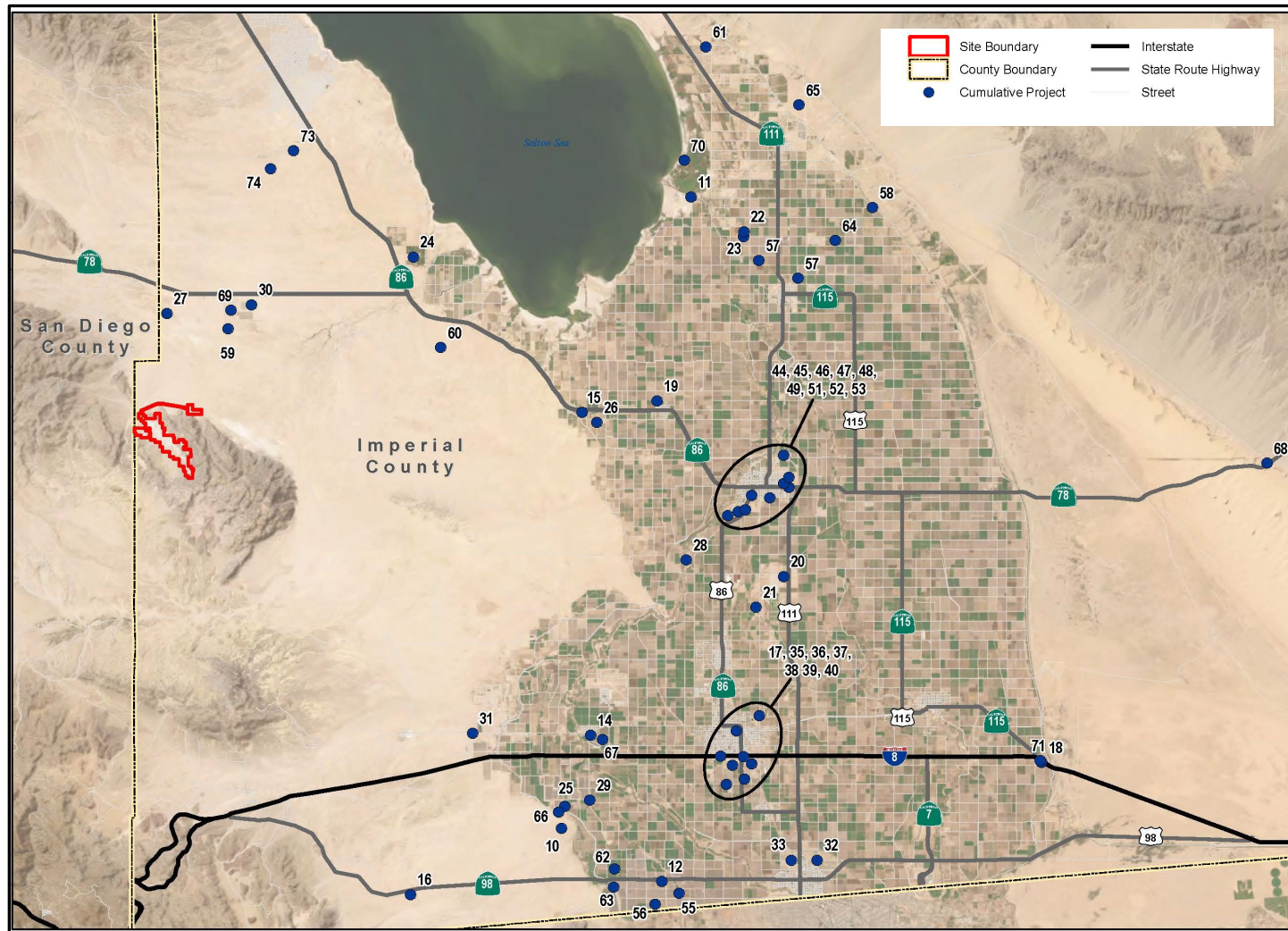
List Method: A list of past, present, and reasonably anticipated future projects producing related or cumulative impacts, including those projects outside the control of the agency.

Regional Growth Projections Method: A summary of projections contained in an adopted general plan or related planning document that is designed to evaluate regional or areawide conditions.

For the purpose of this SEIR, the list approach is used because of the localized nature and specific land use of the proposed project. This method allows for a project-based cumulative analysis within the defined geographic area of the proposed project.

5.2.2 List of Nearby Projects

Table 5-2 below provides a comprehensive list of all present and foreseeable projects that could contribute to a cumulative impact on the environment. Projects listed include those located on both public and private land and those identified by the BLM, Imperial County, and the cities of El Centro, Imperial, and Brawley. Table 5-2 presents the project name, location, type, status, total acres, and a brief description of each project, to the extent available. Most of the projects listed in Table 5-2 have been, are being, or would be required to undergo their own independent environmental review under NEPA and/or CEQA, as applicable. Figure 5-1, “Approximate Location of Cumulative Projects,” shows the location of each of the projects listed in Table 5-2 using a corresponding identification number. Also shown on this figure, are regulatory boundaries applicable to the preceding analysis such as the critical habitat for Peninsular bighorn sheep (PBS).



SOURCE: Aerial—Maxar (dated 2-10-2022); ESRI World Shaded Relief accessed May 2023, ESRI World Topographic Map accessed 2023; ESRI World Streetmap, 2009; Adapted by Benchmark Resources in 2023

NOTE: Image has been altered by Benchmark Resources and is not printed to scale.

Figure 5-1
Approximate Location of Cumulative Projects

THIS PAGE
INTENTIONALLY
LEFT BLANK

5.3 CUMULATIVE IMPACTS EVALUATION

Each resource section below provides a summary listing the impacts identified in each resource section (Sections 4.1 through 4.8) and is followed by a discussion of the potential for these project impacts to contribute to cumulative impacts.

5.3.1 Air Quality

Project impacts pertaining to air quality, as described in Section 4.1, are as follows:

- Impact 4.1-1: Conflict with or obstruct implementation of the applicable air quality plan (Less than Significant).
- Impact 4.1-2: Result in a cumulatively considerable net increase of any criteria pollutant for which the project region is non-attainment under an applicable federal or state ambient air quality standard (Less than Significant).
- Impact 4.1-3: Expose sensitive receptors to substantial pollutant concentrations (Less than Significant).
- Impact 4.1-4: Result in other emissions (such as those leading to odors) adversely affecting a substantial number of people (Less than Significant).

Cumulative effects on air quality would occur if the proposed project, combined with the reasonably foreseeable projects identified in Table 5-2, would affect the resource even where the proposed project alone would not. Section 4.1 of this SEIR discussed cumulative air quality impacts from the proposed project and other development activities in the area affected by the proposed project.

Impact 4.1-2 determined that air quality emissions would not exceed the applicable significance thresholds of either the Imperial County Air Pollution Control District (ICAPCD), San Diego Air Pollution Control District (SDAPCD), or the CEQA Guidelines. Impact 4.1-1 further determined that the project would be consistent with all applicable air quality plans. If a project's emissions are below adopted significant thresholds and the project is consistent with the air quality plans it is assumed that it would not directly or cumulatively cause, contribute, or worsen violations to the region's air quality standards. Thus, the project's contribution to cumulative air quality impacts would be less than significant and less than cumulatively considerable.

**Table 5-2
 List of Nearby Projects**

Figure 5-1 Map Key	Project Name	Description of Project	Size or Extent	Jurisdiction/Landowner	Status
1	SDG&E Switchyard from Ocotillo Express Modification	Security improvement modifications for Ocotillo Switchyard	N/A	BLM	Completed
2	Ocotillo Wind Energy Facility	Operating and maintaining a 265.44-megawatt (MW) wind generation facility	12,406 acres	BLM	Notice of Availability of the Record of Decision published in the Federal Register 5/11/12
3	Granite/IVA ROW Assignment	Assignment of 3 rights-of-way from Granite Construction Inc. to Imperial Valley Aggregates, LLC	12.9 acres	BLM	Completed
4	Imperial Solar Energy Center (CSolar) West	30 kV line will cross BLM land and interconnect with the Imperial Valley Substation	1,130 acres	BLM	Approved on August 23, 2011
5	Campo Verde Solar Gen-tie	230 kV line crossing 1 mile of BLM land and interconnecting with the Imperial Valley Substation	17 acres	BLM	Secretary Salazar approved transmission line on 9/26/2012
6	Ormesa, LLC	Geothermal sundry notice for installation of a metal shade at Ormesa II	N/A	BLM	Preparation and planning
7	Centinela Solar Energy	230 kV line will cross BLM land and interconnect with the Imperial Valley Substation	N/A	BLM	BLM approval on December 29, 2011
8	Imperial Solar Energy Center (CSolar) South Gen-tie	230 kV line crossed BLM land and interconnected with the Imperial Valley Substation	947 acres	BLM	Approved on July 14, 2011
9	Proposed RV Park Acquisition	CDPR evaluating effects of acquiring 57-acre RV park adjacent to Ocotillo Wells SVRA	57 acres	California Department of Parks and Recreation	Notice of Determination filed December 2107
10	Sunrise Powerlink Project	500 kV transmission line from Imperial Valley Substation to new substation southeast of Alpine, continuing to Sycamore Canyon Substation	2,83 acres	California Public Utilities Commission	Notice of Determination filed November 2016
11	Red Hill Bay Wetland Restoration Project	A series of constructed ow earthen berms to create water impoundments in two large cells	37,660 acres	Imperial Irrigation District	Notice of Determination filed February 2018
12	Wistaria Ranch Solar Energy Center	250 MW solar project separated into 16 individual farms/projects producing approximately 20 MW each	2,661 acres	Imperial County	Final EIR completed December 2014
13	Iris Cluster Solar Farm	Four proposed solar farms, Ferrell, Rockwood, Iris and Lyons Solar Farm located in Imperial County	1,400 acres	Imperial County	Final EIR completed January 2015

Figure 5-1 Map Key	Project Name	Description of Project	Size or Extent	Jurisdiction/ Landowner	Status
14	Verizon Wireless Cell Tower	Installation of 100-foot wireless telecommunication facility with equipment shed and generator	N/A	Imperial County	Notice of Determination filed March 2015
16	Vista Verizon Tower	Installation of 110-foot wireless telecommunication facility with equipment shed and generator	N/A	Imperial County	Notice of Determination filed November 2015
17	ClearTalk Tower	Installation of 160-foot wireless telecommunication facility	N/A	Imperial County	Mitigated Negative Declaration
18	American Tower	Renewal of land use entitlements for cell tower. No physical alterations to occur.	N/A	Imperial County	Notice of Determination filed December 2015
19	Valencia 1 Solar Project	3 MW solar project	A portion of a 17-acre site	Imperial County	Notice of Determination file December 2015
20	Valencia 2 Solar Project	3 MW solar project	17 acres	Imperial County	Notice of Determination filed December 2015
21	Valencia 3 Solar Project	3 MW solar project	19 acres of a 40-acre parcel	Imperial County	Notice of Determination filed December 2015
22	Weist John and Theresa Solar 50 MW	N/A	N/A	Imperial County	N/A
23	Weist John and Theresa Solar 50 MW	N/A	N/A	Imperial County	N/A
24	Cell Tower Three Flags Citrus-American Tower	Renew entitlements of previously approved CUP for existing 300-foot Rohn Tower	N/A	Imperial County	Notice of Exemption filed in January 2016
25	Big Rock Solar	325 MW cluster solar project made up of Big Rock, Laurel 1, Laurel 2 and Laurel 3 solar farms	1,380 acres	Imperial County	Notice of Availability filed April 2018
26	Elmore Stephen (Cell Tower)	N/A	N/A	Imperial County	N/A
27	Solano Energy Farms	Reactivation of 3 existing groundwater wells totaling 3,200 acre-feet of water for irrigation of agricultural crops	N/A	Imperial County	Approved by Planning Commission February 2017
28	G2 BIO, LCC Picacho Gold Recovery	Leach approximately 90,000 ounces of gold and/or silver from Heap 5 of reclaimed Picacho Gold Mine	N/A	Imperial County	Notice of Determination filed September 2014
29	Vega SES Solar Project	100-MW photovoltaic solar energy facility with an integrated 100 MW battery storage system	574 acres	Imperial County	Notice of Determination filed September 2017
30	Seville 4 Solar Project	20 MW solar project and construction of 12.5 kV or 34.5 kV gen-tie line	175 acres	Imperial County	Notice of Preparation August 2017

Figure 5-1 Map Key	Project Name	Description of Project	Size or Extent	Jurisdiction/ Landowner	Status
31	SEPV Dixieland East and West Solar Project	Development of a 3 MW photovoltaic solar energy generating facility	32 acres	Imperial County	Notice of Determination September 2015
32	El Portal Subdivision	Subdivision including 627 single-family homes and two parks	156.38 acres	City of Calexico	Notice of Preparation January 2018
33	Trinity Cultivation and Manufacturing Facility	Construction of three buildings for cultivation and manufacturing	8.23	City of Calexico	Notice of Preparation December 2017
34	No. 11-18 Southern Sewer Pump Station	Construction of approximately 18,865 lineal feet of sewer pipeline and a new sewer pump station	0.25 acres	City of Calexico	Mitigated Negative Declaration
35	Lotus Ranch	609 single-family homes, 10.8-acre park, 16.5 acres of detention basin, and an 8-acre school site	213 acres	City of El Centro	Pending establishment of Lighting Landscaping Maintenance District
36	Citrus Grove Estates	120 single family lots & 2.23-acre park	47 acres	City of El Centro	Pending on the applicant to select a consultant
38	Imperial County Office of Education	Annexation and subdivision to create four parcels	80 acres	City of El Centro	Environmental study in progress
39	PI Tower Development	Construction of a 90-foot wireless communications tower facility	N/A	City of El Centro	Pending submittal of photo simulations
40	Numa Incorporated	Two restaurants and banquet rooms	N/A	City of El Centro	Scheduled for Planning Commission
41	Adams Park	Subdivision of 20.21 acres for 240 apartments	21.21 acres	City of Brawley	Final map submitted
42	Florentine (Springhouse)	160 condominiums	17.67 acres	City of Brawley	Construction underway; extension for south part of project
43	Latigo Ranch	Construction of 267 single-family lots	83.42 acres	City of Brawley	Partially completed; on hold by developer
44	Luckey Ranch Planned Development	Construction of 803 units	146 acres	City of Brawley	Partial construction completed
45	Malan Park	Construction of 223 single-family lots	63.34 acres	City of Brawley	Partial construction completed
46	Rancho Porter	Planned development of 1,266 residential units, commercial units, and open spaces	210.43 acres	City of Brawley	Annexation completed
47	Silver Oaks	Planned development of 256 condominiums	14.71 acres	City of Brawley	On hold by developer
48	Tangerine Gardens South	Construction of 140 condominiums	N/A	City of Brawley	On hold by developer
49	Brawley Elementary School District	Construction of 84,400 square-foot middle school	20 acres	City of Brawley	On hold by developer
53	Gateway Planned Development	Planned development of 124 single family and 240 multi-family units	107.97 acres	City of Brawley	Partial construction completed

Figure 5-1 Map Key	Project Name	Description of Project	Size or Extent	Jurisdiction/Landowner	Status
54	La Paloma Planned Development	Planned development of 1,430 single-family units	70 acres	City of Brawley	Partial construction completed
55	Calexico I-A	100 MW PV solar facility and supporting structures	666 acres	Imperial County	Under construction
56	Calexico I-B	100 MW PV solar facility and supporting structures	666 acres	Imperial County	Under construction
57	Cluster I Solar (Calipatria, Wilkinsonm Lindsey, Midway I, Midway II, Midway III, Midway IV)	Three (3) PV solar farms generating up to 255 MW	1,731 acres	Imperial County	Portions are operational, portions are pending construction, and portions are under construction
58	Citizens Imperial Solar Project	A 30 MW PV solar facility and supporting structures	223 acres	Imperial County	Operational
59	Seville Solar Farm Complex (I, II, III, 4, and 5)	Five (5) PV solar projects generating 135 MW	1,238 acres	Imperial County	Portions are operational, portions are under construction
60	Desert Valley Company Monofill – Cell 3 Closure	Installation of Cell 3 Final Cover; continued leachate monitoring and collection; continued sampling of groundwater monitoring wells; installation and monitoring of vents for radon gas; inspections of the final cover, dikes, drainage systems, leachate system, leak detection, access road, landfill structures are site security; and implementation of corrective actions, as necessary.		Imperial County	Anticipated to commence 2025
61	Chocolate Mountain Solar Farm	50 MW PV solar facility and supporting structures on approximately 320 acres		Imperial County	Pending Construction
62	Drew Solar, Inc.	100 MW PV solar facility and supporting structures	808 acres	Imperial County	Under construction
63	Le Conte Energy Storage System	Battery energy storage system with up to 125 MW of electric storage capacity		Imperial County	Pending construction
64	Nider Solar Project	100 MW PV solar facility and supporting structures.	320 acres	Imperial County	Pending entitlement (on hold)
65	Ormat Wister Solar	A 20 MW PV solar facility	100 acres	Imperial County	Under construction
66	CED Westside Canal Battery Storage	Battery energy storage system with up to 2,025 MW of electric storage capacity.		Imperial County	Pending entitlement
67	Coyne Ranch Specific Pan	Residential project with up to 5,446 residential units		Imperial County	In process

Figure 5-1 Map Key	Project Name	Description of Project	Size or Extent	Jurisdiction/Landowner	Status
68	Glamis Specific Plan	General Plan Amendment and Specific Plan for the Glamis Specific Plan Area		Imperial County	Application submitted; EIR in progress
69	Desert Highway Farms	Cannabis cultivation	320 acres	Imperial County	Approved; EIR in progress
70	Hell's Kitchen Geothermal Exploration Project	Construction, operations and testing of geothermal exploration wells.		Imperial County	In process
71	Strategic Transmission Expansion Plan	A multi-regional strategic transmission expansion plan which includes: <ul style="list-style-type: none"> • New double circuit 230 kV collector system, connecting six substations; • Two new substations; • New 1,500-kV AC line to connect Arizona Public Service's North Gila substation to IID's Highline substation; and, • A new 500 kV DC transmission line from the Salton Sea area to the San Onofre Nuclear Generating Station substation. 		Imperial County	Plan approved
72	ALTiS Plant	Construction and operation of plant using brine from Hudson Ranch Power I Geothermal Plant to produce lithium hydroxide, zinc and manganese products. Facilities		Imperial Irrigation District	Pending entitlement
73	Truckhaven Exploratory Well Drilling	Drilling of four geothermal exploratory wells within Truckhaven Geothermal Leasing Area.		BLM	Approved
74	Truckhaven Seismic Exploration	Orni 5, LLC proposes to conduct a three dimensional (3D) seismic survey to evaluate the geology of the Truckhaven Geothermal Leasing area.		BLM	Approved

Source: BLM 2019

5.3.2 Biological Resources

Project Impacts

Project impacts pertaining to biological resources, as described in Section 4.2, are as follows:

- Impact 4.2-1: The project could have substantial adverse effects on special-status plant species or plant communities (Less than significant with mitigation).
- Impact 4.2-2: The project could have substantial adverse effects on special-status wildlife species (Less than significant with mitigation).
- Impact 4.2-3: The project could have substantial adverse effects on state or federally protected wetlands (Less than significant with mitigation).
- Impact 4.2-4: The project would not interfere substantially with native wildlife movement or impede nursery site use (Less than significant with mitigation).
- Impact 4.2-5: The project would not conflict with any local policies or ordinances protecting biological resources or with any adopted habitat conservation plan or natural community conservation plan (Less than significant with mitigation).

Geographic Scope

The geographic scope of the cumulative effects analysis is based on the vegetation, habitat, and land uses at the project site, the surrounding geography, and the characteristics of potential affected biological resources. The project site is located within and adjacent to federal, state, and county lands that are largely undeveloped, except in the Imperial Valley where agriculture is dominant. These undeveloped lands support native vegetation and habitat primarily of desert shrublands, and desert transitional montane habitats such as semi-desert chaparral and conifer woodlands at higher elevations.

The geographic extent for the analysis of cumulative effects to biological resources is as follows:

- Vegetation, wildlife habitat, special-status plants, common wildlife, and wide-ranging special status wildlife: a 20-mile radius surrounding the project site.
- *Peninsular bighorn sheep*: The designated critical habitat and recovery regions within San Diego and Imperial counties, as identified by USFWS.
- *Desert pupfish*: The watershed supporting the USFWS-designated critical habitat within Imperial County, as identified by USFWS.
- *Flat-tailed horned lizard*: Western population as identified by USFWS.
- *Burrowing owl*: The geographic extent of burrowing owls in western Imperial County (including the lands west of the Salton Sea and the Imperial Valley)

Cumulative Impact Analysis

Vegetation and Habitat

The proposed project, combined with the past, present and reasonably foreseeable actions identified in Table 5-2, would cause permanent or long-term loss of desert vegetation and habitat in the region. These effects would be mitigated through reclamation measures and through critical habitat conservation as identified in this SEIR.

The cumulative projects identified in Table 5-2 are located in desert valley areas. They would not add to the effects of the proposed Quarry expansion, which would occur in the lower mountain slopes and adjacent alluvial wash because vegetation and habitat in the two areas are distinctly different from one another.

The temporary effects on vegetation and habitat from construction of proposed Well No. 3 and associated pipeline, in combination with the cumulative projects, would impact the desert valley, where the cumulative projects are also located. The past, present, and reasonably foreseeable future projects are subject to their own project-specific mitigation requirements. The effects of pipeline construction on valley floor vegetation and habitat would be minimal, and temporary, limited to the duration of construction, with longer-term habitat impacts mitigated through measures identified in Section 4.2. With implementation of these mitigation measures, the cumulative contribution to impacts on vegetation and habitat from the proposed project would not be substantial.

Peninsular Bighorn Sheep and Critical Habitat

The critical habitat of PBS in the vicinity of the project site is defined in USFWS’ final rule revising its 2001 designation (Federal Register 74(70):17288-17365. April 14, 2009). Four projects identified in Table 5-1 are located within or near the PBS recovery units identified in the USFWS 2000 Recovery Plan for PBS (the SDG&E Switchyard from Ocotillo Express Modification, Sunrise Powerlink Transmission Project, Ocotillo Wind Energy Facility, and the Granite/IVA ROW Assignment). The Sunrise Powerlink project is partially located within designated critical habitat for PBS.

The proposed project would avoid take and minimize effects on PBS through a series of avoidance and monitoring measures provided in Section 4.2. Over time, Quarry reclamation would rectify the direct effects to both suitable habitat and critical habitat. Consultation with the USFWS may also result in minimization of adverse effects to designated critical habitat. By incorporating the proposed mitigation measures, the net effect of the proposed project on PBS and its critical habitat would be minimized. Similarly, the cumulative projects listed above each included mitigation to minimize its net effect on biological resources. Therefore, with incorporation of the mitigation measures in Section 4.1, the contribution of the proposed project to cumulative effects on PBS and its critical habitat would be negligible.

Desert Pupfish

The proposed project would not affect desert pupfish (see Impact 4.2-2) and therefore, would not contribute to any cumulative effects of the past, present and reasonably foreseeable actions identified in Table 5-2.

Sensitive Reptiles

The pipeline component of the proposed project could affect the flat-tailed horned lizard or (less likely) Colorado desert fringe-toed lizard by causing displacement, injury, or mortality to individual animals, or by causing temporary disturbance to its dune and sand field habitat. These potential effects would be minimized and mitigated through measures identified in Section 4.1, including measures required under the Flat-tailed Horned Lizard Rangelwide Management Strategy. By incorporating these mitigation measures, the net effect of the proposed project on flat-tailed horned lizard, Colorado Desert fringe-toed lizard, and both species’ habitat would be minor. Additionally, the USFWS (2011b, cited in Aspen 2019) determined that flat-tailed horned lizard populations within Management Area are not low or declining and that most populations, with the exception of occurrences in the Coachella Valley, are not likely to become endangered in the foreseeable future. The Rangelwide Management Strategy reduces threats and promotes actions that benefit the flat-tailed horned lizard throughout its range, and “there is no information

to suggest that the flat-tailed horned lizard population is declining or is in danger of becoming an endangered species in the foreseeable future.” Measures to conserve and mitigate flat-tailed horned lizard habitat would also benefit Colorado Desert fringe-toed lizard.

The cumulative projects listed in Table 5-2 could affect both lizard species. The proposed project as well as the cumulative projects, are subject to avoidance and mitigation requirements of the flat-tailed horned lizard management strategy (Flat-tailed Horned Lizard Interagency Management Committee 2003). The contribution of the proposed project, as mitigated, to cumulative effects on the flat-tailed horned lizard would be minimal and less than cumulatively considerable. The combined effects of the proposed and cumulative projects, with required mitigation, would be less than significant.

Burrowing Owl

One burrowing owl was observed outside the breeding season in the proposed Quarry expansion area. Burrowing owls could occur elsewhere on the project site, although no other sign was observed. Mitigation measures identified in Section 4.2 would avoid take or other direct effects to burrowing owls. In addition, the effects of the proposed project on burrowing owl habitat would be mitigated through the proposed reclamation measures. Burrowing owls in the agricultural regions of Imperial valley appear to be declining in numbers, largely due to land use conversions and fallowing of formerly irrigated croplands, which provided highly productive foraging habitat for burrowing owls. These effects are cumulatively important to burrowing owls in the region but are distant from the area of the project site. The effects of the proposed project, as mitigated, would contribute negligibly to the cumulative decline in regional burrowing owl numbers.

Wide-ranging Special-status Wildlife

Wide-ranging species such as golden eagle, desert kit fox, and American badger have not been observed on the project site, but these species could use the sites for foraging, breeding, or as a travel route. The effects on wildlife of the proposed project, combined with the past, present and reasonably foreseeable actions, could include permanent or long-term loss of habitat or displacement of individuals from disturbed areas. Mortality or injury is unlikely because these species would disperse away from vehicles and equipment. The five projects identified previously could result in similar effects. However, the combined effect of these projects on wide-ranging, special-status wildlife is limited because extensive undisturbed habitat areas remain throughout the region (e.g., in Anza-Borrego Desert State Park and BLM Wilderness Areas). With the incorporation of the mitigation measures identified herein, the contribution of the proposed project or its alternatives to cumulative, wide-ranging effects on special status wildlife would be minimal.

Migratory Birds

The proposed project could cause injury or mortality to migratory birds, their nests, eggs, or nestlings. Mitigation measures identified in Section 4.2 would avoid these potential effects by requiring pre-construction surveys in work areas, nest buffers, and other measures. The proposed project would not present a collision or electrocution hazards for migratory birds. With the incorporation of mitigation identified in Section 4.2, the contribution of the proposed project would avoid take of birds, eggs, and nestlings, and therefore, the contribution to cumulative effects on migratory birds is minimal.

5.3.3 Cultural Resources and Tribal Cultural Resources

Project Impacts

Project impacts pertaining to cultural resources, as described in Sections 4.3 and 4.8, are as follows:

- Impact 4.3-1: The project could cause a substantial adverse change in the significance of a historical resource pursuant to §15064.5.
- Impact 4.3-2: The project could cause a substantial adverse change in the significance of an archaeological resource pursuant to §15064.5.
- Impact 4.3-3: The project could disturb any human remains, including those interred outside of dedicated cemeteries.
- Impact 4.8-1: Would the project adversely affect the significance of a tribal cultural resources, as defined in PRC §21074.

Geographic Scope

The area of analysis for cultural resources generally corresponds to the Class I archival and records search area, which was defined as a 0.25-mile radius surrounding the project APE. This area included the northern Fish Creek Mountains and the lower Salton Trough and, according to the Class I results, included many of the same types of archaeological and historic-period built-environment resources as were found within the project APE.

The cumulative effects analysis in the 2008 EIR/EIS found that new projects or other activities were not proposed at that time within the areas affected by the project that could result in a significant cumulative effect. Pacific Legacy (2018) again reviewed cumulative projects to support the analysis of the 2019 SEIS and again no new projects or other activities were identified within the project APE.

Cumulative Impact Analysis

As shown on Figure 5-1, there are no projects proposed within several miles of the project site. Most of the projects for which data are available are concentrated to the east near the towns of El Centro and Brawley and are located outside the area of analysis for cultural and tribal cultural resources. It was determined that only one project listed in Table 5-2, the Ocotillo Wind Energy Facility Project, had an adverse effect on resources that are spiritually and culturally significant to local Native American tribes even after the implementation of mitigation measures outlined in a Memorandum of Agreement. Cumulative effects to cultural resources under that project, located far to the southeast of the Quarry remained significant.

The mitigation measures described in Section 4.3 would be implemented during the project's ground disturbing activities to avoid, minimize, and/or mitigate direct effects to cultural and tribal cultural resources accidentally discovered during construction, operation, or reclamation of the project site. With mitigation, the project is not expected to have a significant impact on cultural or tribal cultural resources.

Projects identified in Table 5-2 would be subject to laws that provide various protections for cultural and tribal cultural resources. Mitigation to protect previously unknown cultural resources would reduce the severity of such impacts by requiring construction monitoring, the evaluation of inadvertent discoveries, and

the avoidance or mitigation of significant cultural resources. Therefore, this cumulative impact would be less than significant.

5.3.4 Geology, Soils and Paleontological Resources

Project Impacts

Project impacts pertaining to geology, soils, and paleontological resources, as described in Section 4.4, are as follows:

- Impact 4.4-1: Directly or indirectly destroy a unique paleontological resource or site or unique geological feature.

Geographic Scope

The geographic scope for the analysis of geological and slope stability impacts would include other nearby projects related to quarrying, mass grading, or other operations that would impact slope stability. The geographic scope for the analysis of paleontological resources includes the study area of the Paleontological Technical Study (Paleo Solutions 2018; Appendix F) prepared for the proposed project which consists of the project site and a one-half mile buffer around the project site. As shown on Figure 5-1, there are no foreseen projects within one-half mile of the project site.

Cumulative Impact Analysis

Geology/Slope Stability

There are two mining projects within the vicinity of the project site. One is a gold mine; the area of its disturbance is unknown. The other is a right of way serving an existing aggregate mine affecting approximately 13 acres. No other past, present, or reasonably foreseeable mining or other applicable projects were found that could affect slope stability or other geologic features within the geographic scope of this analysis. The proposed project is the only gypsum mine in Imperial County and the region. There would be no contribution to cumulative extraction of gypsum to the area of effect.

The proposed project would not contribute to a cumulative loss of geologic resources within the study area or a cumulative loss of slope stability outside the project area.

Paleontological Resources

The proposed project, as discussed in Section 4.4 of this SEIR, has the potential to directly affect paleontological resources. Cumulative impacts to paleontological resources involve the loss of non-renewable scientifically important fossils and associated data, and the incremental loss to science and society of these resources over time. Land development projects have resulted in cumulative conditions affecting paleontological resources in the Imperial Valley. The implementation of paleontological resource mitigation measures during surface disturbing projects has resulted in the salvage and permanent preservation of large numbers of scientifically significant paleontological resources that would otherwise have been destroyed. This has greatly reduced the cumulative effects of such projects on paleontological resources and has resulted in the beneficial cumulative effect of making these fossils available for scientific research and education by placing them in museum collections.

Unknown, unrecorded paleontological resources may be found at nearly any present and future development site located within Pleistocene or older sedimentary geologic deposits within Imperial County. When discovered, paleontological resources are treated in accordance with applicable federal and State laws and regulations as well as with the mitigation measures and permit requirements applicable to a project. Generally, as fossil localities are discovered, they are recorded. If the nature of the resource requires it, the resource is either protected (i.e., avoided) or collected for future research or educational use.

It is not known what paleontological resources, if any, would be affected by development of all present and future projects identified in Table 5-2. However, given the density of past development in San Diego and Imperial counties, and the large number of reasonably foreseeable projects listed in Table 5-2, it is reasonable to assume that resources exist and could be uncovered at multiple sites.

Mitigation Measures 3.2-2 and 3.2-3 require that resources discovered during construction of the proposed project be protected, thereby reducing impacts. Surveys conducted of the project area in 2018 indicated few if any additional scientifically significant fossils would remain on the ground surface within the project site. Thus, the project's contribution to cumulative impacts to paleontological resources in the region would be less than cumulative considerable.

5.3.5 Greenhouse Gas Emissions

Project Impacts

Project impacts pertaining to geology, soils, and paleontological resources, as described in Section 4.4, are as follows:

- Impact 4.5-1: Greenhouse gas emissions generated by project activities could have a significant impact on global climate change.
- Impact 4.5-2: Consistency with applicable GHG plans, policies, or regulations.

Geographic Scope

The geographic scope for greenhouse gas emissions is the Salton Sea Air Basin (SSAB).

Cumulative Impact Analysis

Greenhouse gas analysis is inherently cumulative because it relies on regional, state-wide, and national data. As discussed in Section 4.5 of this SEIR, the proposed project would result in emissions of GHGs associated with heavy equipment use during Quarry operation and construction of Well No. 3 and the associated pipeline. However, these emissions would not exceed the established GHG significance thresholds of either the ICAPCD or the SDAPCD. Implementation of the mitigation measures described in Section 4.5, including measures to reduce diesel equipment exhaust emissions, would further reduce the project's GHG emissions and render its contribution to global climate change less than cumulatively considerable.

5.3.6 Hydrology and Water Quality

Project Impacts

Project impacts pertaining to geology, soils, and paleontological resources, as described in Section 4.4, are as follows:

- Impact 4.6-1: The project could violate water quality standards or waste discharge requirements or otherwise substantially degrade surface or ground water quality.
- Impact 4.6-2: The project could substantially decrease groundwater supplies or interfere substantially with groundwater recharge such that the project may impede sustainable groundwater management of the basin.
- Impact 4.6-3: The project could substantially alter the existing drainage pattern of the site resulting in substantial erosion or siltation, flooding on or offsite, the provision of substantial additional sources of polluted runoff, or the impediment or redirection of flood flows.
- Impact 4.6-4: The project could release pollutants in the event of inundation from flood, tsunami, or seiche.
- Impact 4.6-5: The project could conflict with or obstruct implementation of a water quality control plan or sustainable groundwater management plan.

Geographic Scope

The geographic area used for evaluating the cumulative effects of the proposed project on surface water resources is the affected Fish Creek Wash (HUC 181002030602) and San Felipe Creek (HUC 18100203) watersheds. The geographic area is included within the area shown on Figure 5-1.

Cumulative Impact Analysis

As discussed in Section 4.6, the proposed project would result in adverse direct and indirect effects on hydrology and water quality. These impacts include: (1) temporary impacts on a number of ephemeral streambeds along the course of the proposed pipeline limited to effects during construction activities because the existing drainage patterns along the alignment would be preserved; and (2) potential reduction of surface flows and sediment loading to the Fish Creek Wash alluvial fan and San Felipe Creek. The cumulative effects analysis was limited to a review of projects that would also result in adverse effects to the watersheds of Fish Creek and/or San Felipe Creek, of which there were none identified. Therefore, there would be no cumulative impact to hydrology and water quality.

5.3.7 Land Use and Planning

Project Impacts

Project impacts pertaining to land use and planning, as described in Section 4.6, are as follows:

- Impact 4.7-1: Physically divide an established community.
- Impact 4.7-2: Conflict with land use plans, policies, and regulations

Geographic Scope

The geographic scope for analyzing land use impacts is Imperial County.

Cumulative Impact Analysis

These two impacts consider the specific attributes of the proposed project in relation to surrounding uses and to the County General Plan and zoning. Impact 4.7-1 determined that the project would have no potential to result in the physical division of an established community as there are no such communities in the vicinity. Impact 4.7-2 determined that, as an established mining operation, the project would not be in conflict with the Imperial County General Plan, zoning ordinance, or any other land use policies or regulations. There would be no cumulative impact.

5.3.8 Summary of Significant and Unavoidable Cumulative Impacts

As discussed in the preceding sections, the project would not result in any significant cumulative impacts.