

# **USG PLASTER CITY QUARRY EXPANSION AND WELL NO. 3 PROJECT**

CUP APPLICATION 20-0016

INITIAL STUDY IS 22-0021

## ***DRAFT SUBSEQUENT ENVIRONMENTAL IMPACT REPORT VOLUME I***



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- D-2: 2016 Jurisdictional Delineation
- D-3: Biological Opinion
- D-4: Draft Habitat Mitigation and Monitoring Plan

### **Appendix E: Cultural Resources Reports**

### **Appendix F: Paleontological Technical Study**

### **Appendix G: Hydrology and Water Quality**

- G-1: 2018 Hydrologic and Water Quality Study
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# EXECUTIVE SUMMARY

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# EXECUTIVE SUMMARY

## INTRODUCTION

United States Gypsum Company (US Gypsum; USG; the Applicant) has applied to Imperial County (County) for a Conditional Use Permit (CUP) to develop a groundwater well (Well No. 3) and associated pipeline to support the expansion of mining operations at its Plaster City Quarry (Quarry) see Figure ES-1, “Regional Location,” for details. In addition, this Subsequent Environmental Impact Report (SEIR) evaluates mining operations at the Quarry under the 2008 Quarry Expansion and restoration and preservation of two off-site properties: the Viking Ranch restoration site and, the Old Kane Springs Road preservation site. Together these components make up the proposed project. A detailed description of the proposed project can be found in Chapter 2, “Project Description.”

The Plaster City Quarry and proposed site of Well No. 3 were evaluated in the United States Gypsum Company Expansion/Modernization Project Final Environmental Impact Report/Environmental Impact Statement (2008 EIR/EIS), which was certified by the County in 2008. The 2008 EIR/EIS contains information still relevant to the current CEQA review. The proposed project contains revisions to the project and new information that were not analyzed in the 2008 EIR. The County has, therefore, determined that it will prepare a SEIR. The SEIR will review and update some portions of the 2008 EIR/EIS because of project revisions, changed circumstances, and availability of new information that was not available in 2008. As a result, the relevant 2008 EIR/EIS sections will be reevaluated and expanded considering project revisions, new information, and changed circumstances, as required by CEQA.

Pertinent mitigation measures to the project site from the 2008 EIR/EIS are provided in their relevant topical sections, as outlined in Table ES-1, “2008 EIR/EIS Mitigation Measure Locations,” below.

**Table ES-1  
2008 EIR/EIS Mitigation Measure Locations**

<b>Mitigation Topic</b>	<b>2008 EIR/EIS Location</b>	<b>SEIR Location</b>
Air Quality	Section 3.6	Section 4.1
Biological Resources	Sections 3.4 and 3.5	Section 4.2
Cultural Resources	Section 3.8	Section 4.3
Geology, Soils and Paleontological Resources	Section 3.2	Section 4.4
Greenhouse Gas Emissions	Section 4.3.12	Section 4.5
Hydrology and Water Quality	Section 3.3	Section 4.6
Land Use and Planning	Section 3.9	Section 4.7
Tribal Cultural Resources	N/A	Section 4.8

This Executive Summary provides an overview of the proposed project, describes alternatives to the proposed project, and presents a summary of the environmental impacts and related mitigation identified in the SEIR.

## PUBLIC REVIEW

This SEIR is available for public review and comment during the 45-day period identified on the notice of availability/notice of completion (NOA/NOC) of an SEIR, which accompanies this document. This SEIR and all supporting technical documents and reference documents are available for public review at the Imperial County Planning and Development Services Department located at 801 Main Street in El Centro, California 92243 and on the Imperial County website at:

<http://icpds.com/planning/environmental-impact-reports/draft-eirs/>

During the 45-day public comment period, written comments on the SEIR may be submitted to the Planning and Development Services Department at the following address:

Attn.: Ms. Diana Robinson, Planning Division Manager  
Imperial County Planning and Development Services Department  
801 Main Street  
El Centro, California 92243

Written comments on the SEIR may alternately be submitted via e-mail with the subject line “USG Plaster City Quarry Expansion and Well No. 3 Project SEIR” to [DianaRobinson@co.imperial.ca.us](mailto:DianaRobinson@co.imperial.ca.us).

Oral comments on the SEIR are welcome and may be stated at a public meeting, which shall be held as indicated on the NOA/NOC.

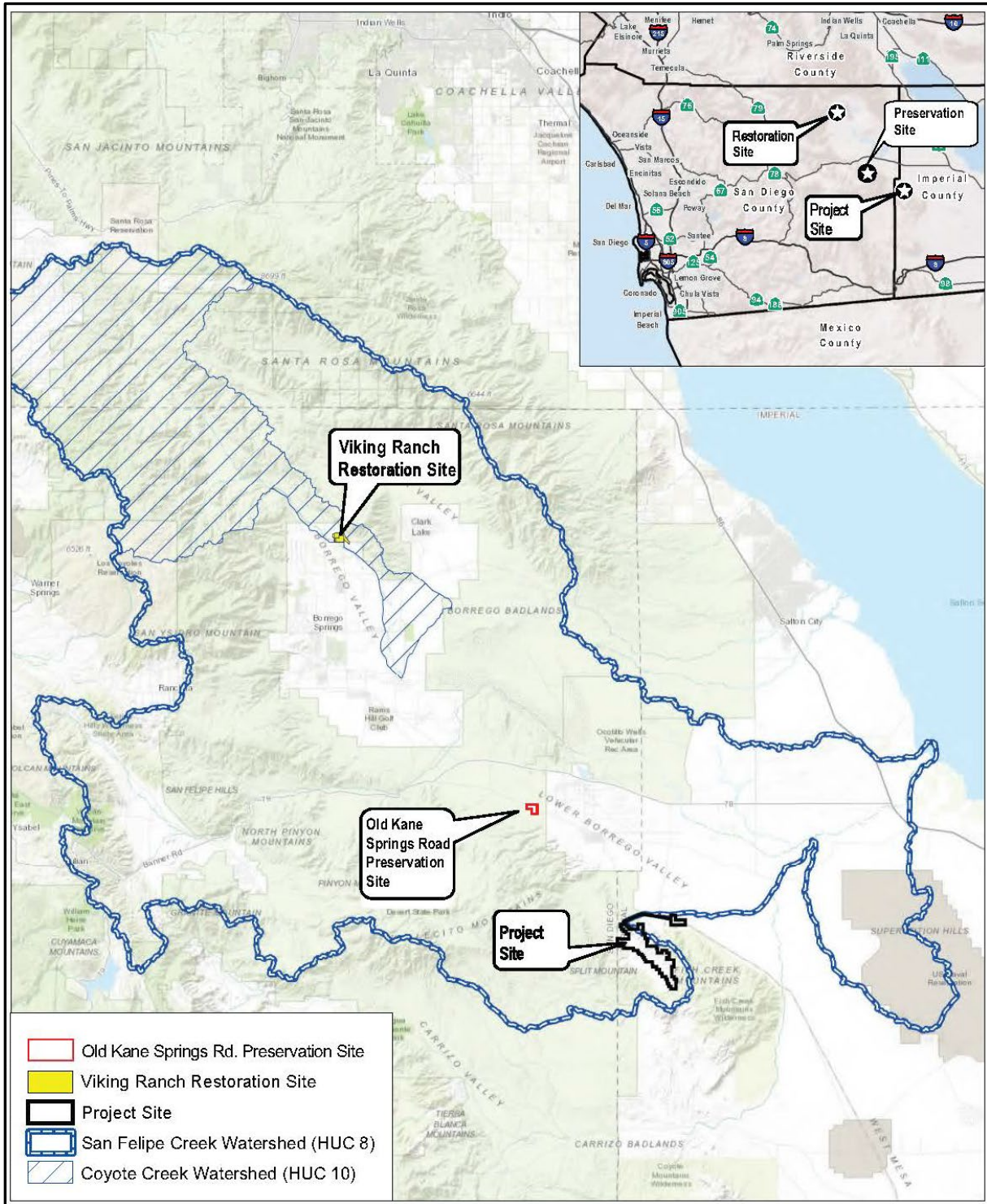
Following the public review and comment period, the County will respond to all written and oral comments received on the environmental analysis in this Draft SEIR. The responses and any other revisions to the SEIR will be prepared as a response-to-comments document. The SEIR and its appendices, together with the response-to-comments document will constitute the Final SEIR for the proposed project.

## OVERVIEW OF THE PROPOSED PROJECT

### Site Location

The USG Plaster City Quarry holdings consists of 2,048 acres and is in the northwestern portion of Imperial County adjacent to the Imperial County/San Diego County line. Well No. 3 would be located east of the existing Quarry on a USG-owned parcel (Assessor’s Parcel Number [APN] 033-020-009). The proposed pipeline would be approximately 3.5 miles in length and would be developed within an existing right-of-way over an additional 12.7 acres (30 foot wide by 3.5 miles) of land, most of which (7.25 acres) is managed by the BLM. A portion of the right-of-way (3.75 acres) is located within the Anza-Borrego Desert State Park. The proposed pipeline would be developed within the existing narrow-gauge railroad right-of-way that is already disturbed by an existing unpaved access road. The approximately 207-acre Viking Ranch restoration site is located 26 miles northwest of the USG Quarry in San Diego County (APNs 140-030-05-00, -07-00, -09-00, -10-00, and -11-00). The 121-acre Old Kane Springs Road preservation site is located 7 miles northwest of the USG Quarry in San Diego County (APN 253-150-34-00).





**SOURCE:** Dudek, 2021; Basemap USGS

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

**Figure ES-1**  
**Regional Location**

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## **Project Objectives**

The proposed project includes the following objectives:

- 1) Secure permits and approvals to continue and fully develop quarrying gypsum reserves;
- 2) Maximize the recovery of known gypsum reserves needed for the Plant to fulfill its estimated operational design life;
- 3) Meet market demands for gypsum products;
- 4) Develop and maintain a replacement Quarry water supply designed to meet dust suppression requirements;
- 5) Concurrently reclaim Quarry site for post-mining uses as Open Space;
- 6) Secure permits and approvals to develop a water source to support the mining of gypsum reserves at the Quarry; and
- 7) Provide compensatory mitigation for potential impacts to waters of the state as a result of project implementation in compliance with State of California Fish & Game Code Section 1600 and the Port Cologne Act.

## **Project Features**

As stated previously, the proposed project consists of a CUP for development of a groundwater well and associated pipelines as well as restoration and preservation of two off-site properties. The applicant proposes no change to any fundamental elements of the existing operation (e.g., mining methods, processing operations, production levels, truck traffic, hours of operation).

## **Required Approvals**

As the local land use authority, Imperial County is the public agency with the greatest responsibility for approving the project as a whole and is therefore the lead agency for purposes of environmental review under CEQA. Other agencies may have permitting or approval authority over various aspects of the project. These agencies include the following:

- County of San Diego (Major Grading Permit)
- California Department of Fish and Wildlife (Lake and Streambed Alteration Agreement)
- Colorado River Regional Water Quality Control Board (Construction General Permit Notice of Intent [NOI], Industrial General Permit NOI, Waste Discharge Requirements)

The following public agency approvals have already been obtained:

- U.S. Bureau of Land Management (Right-of-Way Grants [Case file numbers CACA-056908 and CACA-044014])

## DRAFT SEIR SCOPE AND ISSUES EVALUATED

### Issues Evaluated and Issues Eliminated from Further Consideration

While CEQA does not require preparation of an Initial Study when the lead agency elects to prepare an EIR or SEIR (CEQA Guidelines Section 15060[d]), the County has prepared an Environmental Checklist Form / CEQA Initial Study to substantiate its scoping process in evaluating the potential significance of the project regarding the Appendix G criteria discussed above. The evaluation regarding the significance of those issues that are not discussed in detail in the SEIR is provided in the Initial Study (included as Appendix A-1, “Initial Study,” of the SEIR) and discussed further in Chapter 1, “Introduction,” of the SEIR.

As an initial step in the environmental review process, issues identified in the Environmental Checklist of Appendix G of the CEQA Guidelines were considered to determine whether the project would have the potential to result in significant impacts associated with each issue. The initial review determined that the project may result in potentially significant adverse impacts associated with the following Appendix G Environmental Checklist resource topics:

- Air Quality
- Biological Resources
- Cultural Resources
- Geology, Soils, and Paleontological Resources
- Greenhouse Gas Emissions
- Hydrology and Water Quality
- Land Use and Planning
- Tribal Cultural Resources
- Mandatory Findings of Significance

The initial review determined that the project would not result in significant adverse impacts associated with the following resource topics and eliminated these issues from further consideration in the SEIR:

- Aesthetics
- Agricultural and Forestry Resources
- Energy
- Hazards and Hazardous Materials
- Mineral Resources
- Noise
- Population and Housing
- Public Services
- Recreation
- Transportation
- Utilities and Services Systems
- Wildfire

### Alternatives

The CEQA Guidelines specify that an SEIR must describe a reasonable range of alternatives to the project, or to the location of the project, which could feasibly attain the basic project objectives (Guidelines Section 15126.6). The “no project” alternative, which considers what impacts would occur if conditions continued, must be considered (Guidelines Section 15126.6[e]), and the SEIR must also identify the environmentally superior alternative. If the “no project” alternative is the environmentally superior alternative, the SEIR must identify an environmentally superior alternative from among the other alternatives (Guidelines Section 15126.6[e][2]).

## Summary of Alternatives

The alternatives evaluation considered several potential alternatives. Some were eliminated as they were determined to either not have the potential to feasibly achieve the basic project objectives and/or reduce significant project impacts. The following alternatives were selected and analyzed/compared to the project and are evaluated in the SEIR:

### ***Alternative 1: No Project Alternative***

Under the No Project Alternative, a new Conditional Use Permit (CUP) would not be granted, and the proposed Well No. 3 and associated pipeline would not be constructed. As a result, the Quarry operation would continue to utilize Well No. 2 to produce water for dust suppression. As described in Section 2.2 of this SEIR, Well No. 2 is not a reliable water source and fails to produce sufficient supply to meet demand. In addition, restoration and preservation of the Viking Ranch and Old Kane Springs Road sites would not occur. As a result, impacts to Waters of the US resulting from Quarry expansion could not be fully mitigated as required and mining activities would be curtailed. Thus, Alternative 1 would involve an overall reduction in mining footprint, volume, and duration as well as elimination of construction activities associated with the well, pipeline, and restoration site.

### ***Alternative 2: Lower Quarry Watershed Reduced Mining Footprint “A” Alternative***

Alternative 2 is the same as the proposed project except that Phase 10 would not be mined to its full capacity and Phase 10P would be eliminated entirely from the proposed mining plan in order to reduce losses of waters of the United States. USG would reduce the mining depth in Phase 10, grading north to the base grade of Fish Creek (Figure 6-1). Phase 10P is considered for elimination given its position in the northernmost end of the Quarry watershed, its close proximity to Fish Creek, and the relatively low quantity of gypsum ore that would be extracted from this phase compared to other phases in the mining plan.

Under this alternative, the stormwater berm would be eliminated south of Phase 2. Instead, the natural topography of the upper Quarry watershed would direct surface water away from Phases 6 through 9. Using natural landforms would reduce the length of the berm by one mile compared with the proposed project and would eliminate the need for a complex system of transverse levees with anchored berms in the upper Quarry watershed. The stormwater berm would begin west of Phase 2, where only one transverse levee would be required, and would extend northward through Phase 10.

Phase 10 mining would occur as proposed to a reduced depth connecting with Phase 10P and progressing at an angle suitable to maintain gravity flow. A conveyance channel roughly 200 feet wide would result at the northernmost boundary of Phase 5, extending north through Phase 10 and 10P until its confluence with Fish Creek. Approximately 5.4 million tons less gypsum ore would be mined under this alternative than under the proposed project. Compared with the maximum permitted production of 1.92 million tons per year, this alternative would reduce the projected mine life by 2.81 years.

This alternative would include construction and operation of Well No. 3 and the associated pipeline similar to the proposed project. The Viking Ranch site and Old Kane Springs site would still be restored and preserved as wildlife habitat to offset impacts to Waters of the US within the project site.

***Alternative 3: Lower Quarry Watershed Reduced Mining Footprint “B” Alternative***

Alternative 3 is the same as the proposed project except that the mining footprint along the western boundaries of Phases 4 and 5, where Annex Mill Site #4 encroaches into an unnamed ephemeral wash, would be reconfigured to reduce losses of waters of the United States (Figure 6-2). Phases 4 and 5 were selected for reconfiguration because of their close proximity to existing administrative/office facilities where blasting is not ideal due to noise and the depth of overburden needing to be stripped in order to mine the gypsum ore. The stormwater berm would be configured as described for Alternative 2 except that it would be modified to exclude the eliminated portions of Phases 4 and 5, include Phases 10 and 10P, and extend northward from Phase 2 through the northern limit of Phase 10P. This alternative would reduce the amount of gypsum ore mined by approximately 11.87 million tons. Compared with the maximum permitted production of 1.92 million tons per year, this alternative would reduce the projected mine life by 6.18 years.

This alternative would include construction and operation of Well No. 3 and the associated pipeline similar to the proposed project. The Viking Ranch site and Old Kane Springs site would still be restored and preserved as wildlife habitat to offset impacts to Waters of the US within the project site.

***Alternative 4: Middle Quarry Watershed Reduced Mining Footprint Alternative***

Alternative 4 is the same as the proposed project except that Phases 2P, 3P (North) and 3P (South) would be eliminated from the proposed mining plan to reduce losses of waters of the United States. As shown in Figure 6-3, the proposed stormwater berm would be modified to exclude the eliminated phases, including Phases 10 and 10P, and extend through the northern limit of Phase 10P.

As a result of this reduced mining footprint, approximately 2.33 million tons less gypsum would be mined. At a maximum permitted production of 1.92 million tons per year, this alternative would reduce projected mine life by 1.21 years compared with the proposed project.

This alternative would include construction and operation of Well No. 3 and the associated pipeline similar to the proposed project. The Viking Ranch site and Old Kane Springs site would still be restored and preserved as wildlife habitat to offset impacts to Waters of the US within the project site.

***Alternative 5: Middle Quarry Watershed Reduced Mining Footprint Alternative***

Alternative 5 is the same as the proposed project except that the mining footprint in Phases 7 and 8 would be reconfigured to reduce losses of waters of the United States (Figure 6-4). Under this alternative, the mining boundaries of Phases 7 and 8 would be moved east parallel with the main drainage channel. The stormwater berm would be as described for Alternative 2 but would include all of Phases 10 and 10P.

The overall mining footprint would be reduced by 34 acres, thereby decreasing potential mining beneath the valley alluvium where gypsum ore has been determined to be most abundant. The amount of gypsum ore mined under this alternative would be approximately 13.04 million tons less than under the proposed project. Compared with the maximum permitted production of 1.92 million tons per year, this alternative would reduce the projected mine life by 6.79 years.

This alternative would include construction and operation of Well No. 3 and the associated pipeline similar to the proposed project. The Viking Ranch site and Old Kane Springs site would still be restored and preserved as wildlife habitat to offset impacts to Waters of the US within the project site.

### ***Environmentally Superior Alternative***

CEQA §15126.6(e)(2) requires that an EIR identify the environmentally superior alternative. CEQA also requires that if the environmentally superior alternative is the No Project Alternative, the EIR must also identify an environmentally superior alternative from the remaining alternatives. In consideration of the alternatives evaluation presented above, Alternative 1: No Project Alternative would result in fewer impacts as compared to the project and the other alternatives considered. This is due to the fact that Well No. 3 would not be constructed, and additional groundwater would not be pumped from the aquifer that underlies the project site. As such, the County must identify the environmentally superior alternative from the remaining alternatives.

Based on the analysis above and excluding the No Project Alternative, the County concludes that Alternative 5, Upper Quarry Watershed Reduced Mining Footprint Alternative, is the environmentally superior alternative as it would result in the greatest reduction of mining volume and duration and would reduce impacts to Waters of the US by 11.28 acres.

The alternatives analysis and conclusions reached regarding the environmentally superior alternative do not determine the ability of Alternative 5 to be an economically viable option for the Applicant.

### **Summary of Impacts and Mitigation Measures**

Table ES-2, “Summary of Project Impacts and Mitigation Measures,” provides a summary of the project impacts identified and evaluated in the SEIR, presents mitigation measures identified in the SEIR, and lists the impact significance both without and with mitigation applied. As shown in the table, several impacts are found to be less than significant and do not require mitigation. All remaining impacts would be significant or potentially significant prior to the implementation of mitigation measures but would be reduced to less than significant with mitigation applied. The project would not result in any impacts that would remain significant and unavoidable after mitigation.

In addition to evaluating project-specific impacts, an SEIR must also evaluate cumulative impacts (see Chapter 5, “Cumulative Impacts”). Cumulative impacts are those that would result from project impacts when combined with impacts of other past, present, or reasonably foreseeable projects. The analysis determined that the project would not result in any significant and unavoidable cumulative impacts.

**Table ES-2**  
**Summary of Project Impacts and Mitigation Measures**

Impact	Significance Before Mitigation	Mitigation Measures	Significance After Mitigation
<b>AIR QUALITY</b>			
Impact 4.1-1: Conflict with or Obstruct Implementation of the Applicable Air Quality Plan	LTS	None required.	LTS
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	LTS	Implement the following existing mitigation measures from the 2008 EIR/EIS:  <i><b>Mitigation Measure 3.6-1a:</b> USG shall ensure all equipment is maintained and tuned according to manufacturer's specifications.</i>  <i><b>Mitigation Measure 3.6-1b:</b> USG shall schedule production activities to minimize daily equipment operations and idling trucks.</i>  <i><b>Mitigation Measure 3.6-1c:</b> USG shall comply with all existing and future California Air Resources Board (CARB) and ICAPCD regulations related to diesel-fueled trucks and equipment, which may include: (1) meeting more stringent engine emission standards; (2) retrofitting existing engines with particulate traps; (3) use of low or ultra-low sulfur diesel fuel; and (4) use of alternative fuels or equipment.</i>  Implement the following <u>newly</u> proposed mitigation measure:  <i><b>Mitigation Measure 4.1-1a:</b> The following standard mitigation measures for fugitive PM<sub>10</sub> control shall be implemented throughout project construction activities:</i>  a. All disturbed areas, including Bulk Material storage which is not being actively utilized, shall be effectively stabilized and visible emissions shall be limited to no greater than 20 percent opacity for dust emissions by using water, chemical stabilizers, dust suppressants, tarps or other suitable material such as vegetative ground cover.  b. All on site and off-site unpaved roads will be effectively stabilized and visible emissions shall be limited to no greater than 20 percent opacity for dust emissions by paving, chemical stabilizers, dust	LTS

LTS = Less than Significant; PS = Potentially Significant; S = Significant; SU = Significant and Unavoidable



Impact	Significance Before Mitigation	Mitigation Measures	Significance After Mitigation
		<p><i>suppressants and/or watering.</i></p> <ul style="list-style-type: none"> <li><i>c. All unpaved traffic areas one (1) acre or more with 75 or more average vehicle trips per day will be effectively stabilized and visible emissions shall be limited to no greater than 20 percent opacity for dust emissions by paving, chemical stabilizers, dust suppressants and/or watering.</i></li> <li><i>d. The transport of Bulk Materials shall be completely covered unless six inches of freeboard space from the top of the container is maintained with no spillage and loss of Bulk Material. In addition, the cargo compartment of all Haul trucks is to be cleaned and/or washed at delivery site after removal of Bulk Material.</i></li> <li><i>e. All track-Out or Carry-Out will be cleaned at the end of each workday or immediately when mud or dirt extends a cumulative distance of 50 linear feet or more onto a paved road within an urban area.</i></li> <li><i>f. Movement of Bulk Material handling or transfer shall be stabilized prior to handling or at point of transfer with application of sufficient water, chemical stabilizers or by sheltering or enclosing the operation and transfer line.</i></li> <li><i>g. The construction of any new unpaved road is prohibited within any area with a population of 500 or more unless the road meets the definition of a Temporary Unpaved Road. Any temporary unpaved road shall be effectively stabilized, and visible emissions shall be limited to no greater than 20 percent opacity for dust emission by paving, chemical stabilizers, dust suppressants and/or watering.</i></li> </ul> <p><b>Mitigation Measure 4.1-1b:</b> <i>The following standard mitigation measures for construction combustion equipment shall be implemented throughout project construction activities:</i></p> <ul style="list-style-type: none"> <li><i>a. Use of alternative fueled or catalyst equipped diesel construction equipment, including all off-road and portable diesel-powered equipment.</i></li> <li><i>b. Minimize idling time either by shuttling equipment off when not in use or reducing the time of idling to 5 minutes as a maximum.</i></li> </ul>	

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Impact	Significance Before Mitigation	Mitigation Measures	Significance After Mitigation
		c. Limit, to the extent feasible, the hours of operation of heavy-duty equipment and/or the amount of equipment in use. d. Replace fossil fueled equipment with electrically driven equivalents (provided they are not run via a portable generator set).	
Impact 4.1-3: Expose Sensitive Receptors to Substantial Pollutant Concentrations	LTS	None required.	LTS
Impact 4.1-4: Result in Other Emissions (Such as Those Leading to Odors) Adversely Affecting a Substantial Number of People	LTS	None required.	LTS
<b>BIOLOGICAL RESOURCES</b>			
Impact 4.2-1: The Project Could Have Substantial Adverse Effects on Special-Status Plant Species or Plant Communities	PS	Implement the following existing mitigation measures from the 2008 EIR/EIS:  <i><b>Mitigation Measure 3.5-1a:</b> Revegetation: Consistent with the California Surface Mining and Reclamation Act (SMARA), USG shall implement the revegetation plan. In general, revegetation should be designed to restore habitat and cover for wildlife use in conformance with SMARA. Revegetation should be concurrent with closure of individual Quarry areas; wherever ongoing Quarry operation may eliminate access to closed upper Quarry benches, those benches should be revegetated while access is still available.</i>  <i><b>Mitigation Measure 3.5-1b:</b> Phasing of Quarry development and closure: Wherever possible, USG shall begin revegetation of Quarry areas to restore native habitat values concurrently or in advance of opening new Quarry areas.</i>  Implement the following existing mitigation measures from the 2019 EIS:  <i><b>Mitigation Measure 3.4-5:</b> Integrated Weed Management Plan. USG will prepare and implement an integrated weed management plan to control invasive weeds including tamarisk (Tamarix) and fountain grass (Pennisetum) in cooperation with the BLM and County of Imperial. The plan will include procedures to help minimize the introduction of new weed species, an assessment of the invasive weed species known within</i>	LTS

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Impact	Significance Before Mitigation	Mitigation Measures	Significance After Mitigation
		<p><i>the area associated with the Proposed Action, and procedures to control their spread on site and to adjacent offsite areas. This plan will be submitted to the BLM and County of Imperial for review and approval prior to the start of construction and will be implemented for the life of the Proposed Action.</i></p> <p><b>Mitigation Measure 3.4-10: Critical Habitat.</b> To minimize impacts to PBS designated critical habitat, USG will conduct 1:1 on-site reclamation as specified in the Mining and Reclamation Plan for all project disturbance areas. Additionally, USG will acquire or set aside an area of designated critical habitat away from the Quarry’s operations for long-term wildlife habitat conservation, to minimize the loss of designated critical habitat within the Quarry. The habitat acquisition measure will be applicable for public lands directly affected by the Proposed Action. The acquired lands will consist of native desert vegetation within designated PBS critical habitat. Acquisition lands may include claim areas that are not disturbed by the mining project. Any lands proposed for acquisition to minimize the loss of critical habitat will be subject to review and approval by the BLM and Wildlife Agencies.</p>	
<p>Impact 4.2-2:                      The Project Could Have Substantial Adverse Effects on Special-Status Wildlife Species</p>	<p>PS</p>	<p>Implement the following existing mitigation measures from the 2008 EIR/EIS:</p> <p><b>Mitigation Measure 3.5-1c: Migratory birds:</b> In order to avoid potentially fatal impacts on birds protected under the Migratory Bird Treaty Act and the California Fish and Game Code, USG shall survey the area prior to grading and brush removal of previously undisturbed habitat.</p> <p><b>Mitigation Measure 3.5-1d: Peninsular bighorn sheep:</b> USG, in coordination with the BLM, shall initiate formal consultation with the US Fish and Wildlife Service under Section 7 of the Federal Endangered Species Act and implement the terms and conditions of the incidental take statement authorizing the project. The consultation process will result in the development of a Biological Opinion by the U.S. Fish and Wildlife Service (USFWS) that will: (1) provide a statement about whether the proposed project is “likely or not likely to jeopardize” the continued existence of the species, or result in the adverse modification of critical</p>	<p>LTS</p>

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Impact	Significance Before Mitigation	Mitigation Measures	Significance After Mitigation
		<p><i>habitat; (2) provide an incidental take statement that authorizes the project; and (3) identifies mandatory reasonable and prudent measures to minimize incidental take, along with terms and conditions that implement them.</i></p> <p><i>Mining shall be conducted only as approved in the Plan of Operation and the Mine Reclamation Plan. Reclamation shall be conducted concurrently with mining and it shall be initiated within each phase as soon as is feasible. Reclamation shall include slope contouring and revegetation with native plant species as specified in the Reclamation Plan. USG shall instruct its employees and other visitors to the mine to avoid peninsular bighorn sheep. Access to undisturbed lands by humans on foot shall be restricted, and usually would include only biologists and mining personnel. USG shall establish a training program, including new-employee orientation and annual refresher, to educate employees regarding bighorn sheep and the importance of avoidance. USG shall not allow domestic animals (cattle, sheep, donkeys, dogs, etc.) onto the mine site or any lands under USG control. Training for mine employees shall include instructions to report observations of domestic animals to the quarry’s environmental manager. Upon receiving any such reports, the environmental manager shall contact the appropriate authorities for removal of domestic animals.</i></p> <p><b>Mitigation Measure 3.5-1e:</b> Barefoot banded gecko: Suitable habitat occurs throughout much of the Quarry area. Prior to expanding existing quarries or developing new quarries, focused barefoot banded gecko surveys shall be conducted to determine whether the species is present or absent from any proposed new disturbance areas. Surveys would be carried out in cooperation with the CDFG and field biologists would be required to hold Memoranda of Understanding with the CDFG to search for this species. If the species is present, then consultation with CDFG under Section 2081 of CESA to “take” barefoot banded gecko must be completed prior to land disturbance.</p> <p><i>Regarding the development of Well No. 3 and the association pipeline, the 2008 EIR/EIS found that, with the exception of the flat-tailed horned</i></p>	

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Impact	Significance Before Mitigation	Mitigation Measures	Significance After Mitigation
		<p><i>lizard, impacts to all other special-status wildlife species were found to be less than significant; the flat-tailed horned lizard was observed basking on the rails of the narrow-gauge line. The BLM and other cooperating agencies have implemented a Flat-tailed Horned Lizard Rangeland Management Strategy (2003 Revision) that would minimize adverse impacts and mitigate for residual impacts throughout the flat-tailed horned lizard's geographic range. The 2008 EIR/EIS includes the following mitigation measure to address potential impacts to the Flat Tailed Horned Lizard:</i></p> <p>Implement the following existing mitigation measures from the 2019 SEIS:</p> <p><b>Mitigation Measure 3.4-5:</b> (See full text under Impact 4.2-1)</p> <p><b>Mitigation Measure 3.4-6:</b> <i>Mining Activity Monitoring and Reporting. Prior to the beginning of any Quarry expansion activities, USG will identify a Designated Biologist and may additionally identify one or more Biological Monitors to support the Designated Biologist. The Designated Biologist and Biological Monitors will be subject to the approval of the BLM and USFWS. The Designated Biologist will be in direct contact with BLM and USFWS.</i></p> <p><i>The Designated Biologist or Biological Monitor will have the authority and responsibility to halt any project activities that are in violation of the conservation and mitigation measures. To avoid and minimize effects to biological resources, the Designated Biologist and/or Biological Monitor will be responsible for the following:</i></p> <ul style="list-style-type: none"> <li>• <i>The Designated Biologist will notify BLM's Authorized Officer and USFWS at least 14 calendar days before the initiation of Quarry expansion of new ground-disturbing activities.</i></li> <li>• <i>The Designated Biologist or Biological Monitor will conduct pre-construction clearance surveys and will be on-site during any Quarry expansion activities or other new ground-disturbing activities (e.g., clearing spoils stockpile areas) and will be responsible for ensuring that no Quarry expansion activities are conducted while PBS are within a 0.25-mile radius of the activity.</i></li> </ul>	

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Impact	Significance Before Mitigation	Mitigation Measures	Significance After Mitigation
		<ul style="list-style-type: none"> <li>• <i>The Designated Biologist or Biological Monitor will immediately notify BLM’s Authorized Officer and USFWS in writing if USG does not comply with any conservation measures including, but not limited to, any actual or anticipated failure to implement conservation measures within the periods specified.</i></li> <li>• <i>The Designated Biologist or Biological Monitor will visit the Quarry site periodically (no less than once per month) throughout the life of the project to administer the Worker Education Awareness Program (WEAP) and ensure compliance with the plans and programs listed below.</i> <ul style="list-style-type: none"> <li>– <i>The Designated Biologist will submit an annual compliance report no later than January 31 of each year to BLM’s Authorized Officer throughout the life of the project documenting the implementation of these programs/plans as well as compliance/non-compliance with each conservation measure: (1) Integrated Weed Management Plan; (2) WEAP; (3) Reclamation Plan; (4) Wildlife Mortality Reporting Program; and (5) PBS Monitoring Plan.</i></li> </ul> </li> </ul> <p><b>Mitigation Measure 3.4-7: WEAP.</b> <i>Prior to project approval, USG will develop a WEAP, to be implemented upon final approval by BLM and USFWS. The WEAP will be available in English and Spanish. The WEAP will be presented to all workers on the project site throughout the life of the project. Multiple sessions of the presentation may be given to accommodate training all workers. Wallet-sized cards summarizing the information will be provided to all construction, operations, and maintenance personnel. The WEAP will be approved by the BLM, USFWS, and CDFW, and will include the following: (1) Descriptions of special-status wildlife of the region, including PBS, and including photos and how to identify adult and sub-adult male and female PBS; (2) The biology and status of special-status species of the area, including PBS; (3) A summary of the avoidance and minimization measures and other conservation measures; (4) An explanation of the PBS observation log (see PBS-2), including instruction on correctly filing data; (5) An explanation of the flagging or other marking that designates authorized</i></p>	

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Impact	Significance Before Mitigation	Mitigation Measures	Significance After Mitigation
		<p>work areas; and (6) Actions and reporting procedures to be used if any wildlife, including PBS is encountered.</p> <p><b>Mitigation Measure 3.4-8: Wildlife Impact Avoidance and Minimization Measures.</b> USG will implement the following measures throughout the life of the project (e.g., Plant and Quarry operations).</p> <ul style="list-style-type: none"> <li>To the extent feasible, initial site clearing for Quarry expansion, pipeline construction, or other activities (e.g., clearing spoils stockpile areas) will be conducted outside the nesting season (January 1 through August 31) to avoid potential take of nesting birds or eggs.</li> <li>The Designated Biologist or Biological Monitor will conduct pre-construction clearance surveys no more than seven days prior to initial site clearing for Quarry expansion or pipeline construction. To the extent feasible, special-status wildlife (e.g., reptiles) will be removed from “harm’s way” prior to site clearing. If an active bird nest, including active burrowing owl burrows are present, the biologist in consultation with CDFW will mark a suitable buffer area around the nest and project activities will not proceed within the buffer area until the nest is no longer active.</li> <li>For project activities in windblown sand habitats on pipeline routes, the Designated Biologist or Biological Monitor shall be present in each area of active surface disturbance throughout the work day. The Designated Biologist or Biological Monitor will survey work areas immediately prior to ground-disturbing activities and will examine areas of active surface disturbance periodically (at least hourly when surface temperatures exceed 85°F) for the presence of flat-tailed horned lizard or Colorado Desert fringe-toed lizard. In addition, all potential wildlife hazards (e.g., open pipeline trenches, holes, or other deep excavations) shall be inspected for the presence of any wildlife, particularly including the flat-tailed horned lizard or Colorado Desert fringe-toed lizard, prior to backfilling.</li> <li>The Designated Biologist or Biological Monitor will be on-site during any Quarry expansion activities or other new ground-disturbing</li> </ul>	

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Impact	Significance Before Mitigation	Mitigation Measures	Significance After Mitigation
		<p>activities (e.g., clearing spoils stockpile areas) and will be responsible for ensuring that no Quarry expansion activities are conducted while PBS are within a 0.25-mile radius of the activity.</p> <ul style="list-style-type: none"> <li>• Speed limits along all access roads will not exceed 15 miles per hour.</li> <li>• Avoid or minimize night lighting by using shielded directional lighting pointed downward, thereby avoiding illumination of adjacent natural areas and the night sky.</li> <li>• The boundaries of all areas to be newly disturbed (including Quarry expansion areas, staging areas, access roads, and sites for temporary placement of construction materials and spoils) will be delineated with stakes and flagging prior to disturbance. All disturbances, vehicles, and equipment will be confined to the flagged areas. The Biological Monitor will be on the site to ensure that no ground-disturbing activities occur outside the staked area during initial Quarry expansion or ground disturbance.</li> <li>• Spoils will be stockpiled only within previously disturbed areas, or areas designated for future disturbance (including spoils areas designated in the PoO).</li> <li>• No potential wildlife entrapments (e.g., trenches, bores) will be left uncovered overnight. Any uncovered pitfalls will be excavated to 3:1 slopes at the ends to provide wildlife escape ramps. Covered pitfalls will be covered completely to prevent access by small mammals or reptiles.</li> <li>• To avoid wildlife entrapment (including birds) all pipes or other construction materials or supplies will be covered or capped in storage or laydown area, and at the end of each work day in construction, Quarrying and processing/handling areas. No pipes or tubing of sizes or inside diameters ranging from 1 to 10 inches will be left open either temporarily or permanently.</li> <li>• No anticoagulant rodenticides, such as Warfarin and related compounds (indandiones and hydroxycoumarins), may be used</li> </ul>	

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Impact	Significance Before Mitigation	Mitigation Measures	Significance After Mitigation
		<p><i>within the project site, on off-site project facilities and activities, or in support of any other project activities.</i></p> <ul style="list-style-type: none"> <li><i>Avoid wildlife attractants. All trash and food-related waste shall be placed in self-closing raven-proof containers and removed regularly from the site to prevent overflow. Workers shall not feed wildlife. Water applied to dirt roads and construction areas for dust abatement shall use the minimal amount needed to meet safety and air quality standards to prevent the formation of puddles, which could attract wildlife. Pooled rainwater or floodwater within quarries will be removed to avoid attracting wildlife to the active work areas.</i></li> <li><i>Any injured or dead wildlife encountered during project-related activities shall be reported to the Designated Biologist, Biological Monitor, CDFW, or a CDFW-approved veterinary facility as soon as possible to report the observation and determine the best course of action. For special-status species, the Designated Biologist or Biological Monitor shall notify the BLM, USFWS, and/or CDFW, as appropriate, within 24 hours of the discovery.</i></li> </ul> <p><b>Mitigation Measure 3.4-9:</b> <i>Burrowing Owl Avoidance. If an active burrowing owl burrow is observed within a work area at any time of year, the Designated Biologist or Biological Monitor, in coordination with BLM, will designate and flag an appropriate buffer area around the burrow where project activities will not be permitted. The buffer area will be based on the nature of project activity and burrowing owl activity (i.e., nesting vs. wintering). The Designated Biologist or Biological Monitor will continue to monitor the site until it is confirmed that the burrowing owl(s) is no longer present. If avoidance of quarrying or pipeline construction within the buffer area is infeasible, Burrowing Owls may be excluded from an active wintering season burrow in coordination with CDFW and in accordance with CDFW guidelines, including provision of replacement burrows prior to the exclusion.</i></p> <p><b>Mitigation Measure 3.4-10:</b> <i>(See full text under Impact 4.2-1)</i></p> <p><b>Mitigation Measure 3.4-11:</b> <i>PBS Monitoring and Reporting. USG will support the CDFW PBS monitoring and reporting program within the</i></p>	

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		<p><i>federal action area by funding the purchase of radio collars and the capture of ten (10) PBS in the Fish Creek and Vallecito Mountains Ewe Group areas, to provide location monitoring data over a ten-year period. The funding amount will be \$157,115 (cost provided by CDFW), to be transferred to the CDFW program via a means agreed up by USG, BLM, and CDFW.</i></p> <p><b>Mitigation Measure 3.4-12:</b> <i>PBS Avoidance and Minimization. USG will implement the following measures throughout the life of the project.</i></p> <ul style="list-style-type: none"> <li>• <i>New ground-disturbing activities (i.e., initial Quarry development, Quarry expansion, clearing for spoils deposition, or road construction in previously undisturbed areas) in designated critical habitat will not occur within PBS lambing season (January 1 through June 30) as defined in the Recovery Plan, except with prior approval by the Wildlife Agencies.</i></li> <li>• <i>The Designated Biologist or Biological Monitor will be on-site during any Quarry expansion activities or other new ground-disturbing activities and will walk the perimeter of the Quarry expansion area and view surrounding habitat with binoculars, stopping work if PBS are within a 0.25-mile radius of the activity.</i></li> <li>• <i>If a PBS enters an active work area, all heavy equipment operations will be halted until it leaves. Quarry staff may not approach the animal. If the animal appears to be injured or sick, USG will immediately notify USFWS and BLM.</i></li> <li>• <i>Fencing installed anywhere within the Quarry area will be standard temporary construction fencing, silt fencing, or chain-link fence at least 7 feet tall. Any proposed permanent fencing design will be submitted for BLM and USFWS review and approval to confirm that the fence design is not likely to pose a threat to PBS.</i></li> </ul> <p>Implement the following <u>newly</u> proposed mitigation measure:</p> <p><b>Mitigation Measure 4.2-2a:</b> <i>Minimize Temporary Use Areas: During pipeline construction the need for temporary use areas would be minimized by using the USG private parcels on either end of the</i></p>	

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		<p><i>alignment for staging and equipment and material storage. Materials would be transported to the project areas as needed for immediate use.</i></p> <p><b>Mitigation Measure 4.2-2b:</b> <i>Wildlife Avoidance and Minimization Measures—Viking Ranch Restoration Site)</i></p> <p><i>To avoid impacts to common and special-status wildlife on the Viking Ranch Restoration site, the following measures shall be implemented during restoration activities:</i></p> <ul style="list-style-type: none"> <li>• <i>The clearing of vegetation and other initial site disturbance shall occur outside of the bird nesting season. Grading shall take place between September 1 and March 1. If grading must occur during the nesting season, a qualified wildlife biologist and biological monitor shall conduct a nesting bird survey prior to clearing work. If an active nest is found it shall be protected in place with a work-free buffer with a radius determined by the biologist in consultation with the CDFW.</i></li> <li>• <i>Preconstruction surveys for San Diego black-tailed jack and/or active burrows shall be conducted by a qualified biologist prior to initiating restoration activities on the site. If any individuals are observed in a burrow or shelter form, they will be allowed to leave the area on their own accord. Once the burrow is determined clear of rabbits, a qualified biologist shall collapse the burrow or shelter form.</i></li> <li>• <i>Speed limits on all access roads shall not exceed 15 miles per hour.</i></li> <li>• <i>Avoid or minimize night lighting by using shielded directional lighting pointed downward, thereby avoiding illumination of adjacent natural areas and the night sky.</i></li> <li>• <i>The boundaries of all areas to be newly disturbed (including areas proposed for clearing and grading, access roads, staging and equipment storage areas) shall be delineated with stakes and flagging prior to disturbance. All disturbances, vehicles, and equipment shall be confined to the flagged area. The biological monitor shall be onsite to ensure that no ground disturbing activities</i></li> </ul>	

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		<p><i>occur outside of the flagged area during vegetation clearing, grading, or other ground disturbing activities.</i></p> <ul style="list-style-type: none"> <li>• <i>No potential wildlife entrapments (e.g., trenches, bores) will be left uncovered overnight.</i></li> <li>• <i>To avoid wildlife entrapment all pipes and other construction materials and supplies shall be covered or capped in storage areas, and at the end of each workday. No pipes or tubing of sizes or inside diameters ranging from 1 to 10 inches will be left open either temporarily or permanently.</i></li> <li>• <i>To avoid wildlife attractants, all trash and food-related waste shall be placed in self-closing raven-proof containers and removed regularly from the site to prevent overflow. Workers shall not feed wildlife. Water applied to dirt roads and construction areas for dust abatement shall use the minimal amount needed to meet safety and air quality standards to prevent the formation of puddles, which could attract wildlife. Pooled rainwater shall be avoided or removed to avoid attracting wildlife.</i></li> <li>• <i>Any injured or dead wildlife encountered during site restoration or monitoring shall be reported to the project biologist, biological monitor, CDFW, or a CDFW-approved veterinary facility as soon as possible to report the observation and determine the best course of action. For special-status species, the project biologist or biological monitor shall notify the USFWS and/or CDFW as appropriate, within 24 hours of the discovery.</i></li> </ul>	
<p>Impact 4.2-3:                      The Project Could Have Substantial Adverse Effects on State or Federally Protected Wetlands</p>	<p>PS</p>	<p>Implement the following existing mitigation measures from the 2008 EIR/EIS:</p> <p><b>Mitigation Measure 3.5-1f:</b> <i>Agency contacts for impacts to streambeds: Prior to any new disturbances on the alluvial wash portion of the project area, USG shall contact the CDFG and the US Army Corps of Engineers to determine whether either agency holds jurisdiction over the wash through Sections 1601-3 of the California Fish and Game Code or Section 404 of the Federal Clean Water Act, respectively.</i></p>	<p>LTS</p>

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Impact	Significance Before Mitigation	Mitigation Measures	Significance After Mitigation
		Implement the following existing mitigation measures from the 2019 SEIS:  <i><b>Mitigation Measure 3.4-13.</b> Future Quarry Phasing Notification and Review. USG will notify the BLM, CDFW, and USFWS 90 days prior to initiating future mining activities in the four phases nearest to the highest PBS occurrence and habitat connectivity areas (phases 6Bp, 7Bp, 8, and 9). Upon notification, the agencies will coordinate with USG to review PBS occurrence and activity in the vicinity obtained during the intervening years, as well as relevant documentation of Nelson’s bighorn sheep behavior near other mining operations. PBS avoidance and minimization measures may be revised as needed to conform to new information.</i>	
Impact 4.2-4: The Project Would Not Interfere Substantially with Native Wildlife Movement or Impede Nursery Site Use	PS	Implement the following existing mitigation measures from the 2019 SEIS:  <i><b>Mitigation Measure 3.4-8:</b> (See full text under Impact 4.2-2)</i> <i><b>Mitigation Measure 3.4-12:</b> (See full text under Impact 4.2-2)</i>	
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	PS	Implement the following existing mitigation measures from the 2008 EIR/EIS:  <i><b>Mitigation Measure 3.5-2:</b> USG comply with the Flat-tailed Horned Lizard Rangelwide Management Strategy, as revised, Standard Mitigation Measures when constructing Quarry Well #3 and the Quarry pipelines.</i>  Implement the following existing mitigation measures from the 2019 SEIS:  <i><b>Mitigation Measure 3.4-8:</b> (See full text under Impact 4.2-2)</i>	
<b>CULTURAL RESOURCES</b>			
Impact 4.3-1: The Project Could Cause a Substantial Adverse Change in the Significance of a Historical Resource Pursuant to §15064.5.	LTS	Implement the following existing mitigation measures from the 2008 EIR/EIS:  <i><b>Mitigation Measure 3.8-3:</b> If any archaeological resources are encountered during implementation of the Proposed Action, construction or any other activity that may disturb or damage such resources shall be halted, and the services of a qualified archaeologist shall be secured to assess the resources and evaluate the potential impact. Such construction or other activity may resume only after the archaeological resources have been assessed and evaluated and a plan to avoid or mitigate any potential impacts to a level of insignificance has been</i>	LTS

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Impact	Significance Before Mitigation	Mitigation Measures	Significance After Mitigation
		<p><i>prepared and implemented.</i></p> <p>Implement the following existing mitigation measures from the 2019 SEIS:</p> <p><b>Mitigation Measure 3.6-1:</b> <i>Develop and Implement a Plan for Archaeological Monitoring, Post-Review Discovery, and Unanticipated Effects. Avoidance and protection measures for cultural resources within the Project APE will be outlined in a Construction Monitoring and Inadvertent Discovery Plan. This Plan will be prepared and approved prior to the implementation of any of the action alternatives. It will describe worker awareness training, avoidance measures, and monitoring procedures that will be implemented to protect known cultural resources from Project impacts. It will also detail the procedures that will be used to assess, manage, and mitigate potential impacts on inadvertent discoveries during Project implementation.</i></p> <p><b>Mitigation Measure 3.6-2:</b> <i>Develop a Maintenance Notification Agreement for Future Maintenance of Pipeline Rights-of-Way. A Maintenance Notification Agreement will be outlined prior to the authorization of any pipeline right-of-way grant to ensure continued avoidance of archaeological resources during the life of the grant. This agreement will identify the schedule and data needs that will be submitted by USG to BLM when maintenance is needed on any of the pipelines authorized for this project. The BLM archaeologist will review this data to determine if and where archaeological monitors are needed during future maintenance activities.</i></p> <p>Implement the following <u>newly</u> proposed mitigation measure:</p> <p><b>Mitigation Measure 4.3-1:</b> <i>Develop and Implement a Plan for Archaeological Monitoring, Post-Review Discovery, and Unanticipated Effects. Avoidance and protection measures for cultural resources within the Viking Ranch APE shall be outlined in a Construction Monitoring and Inadvertent Discovery Plan. This Plan will be prepared and approved prior to the implementation of any of the action alternatives. The Plan shall describe worker awareness training, avoidance measures, and monitoring procedures that will be implemented to protect known cultural</i></p>	

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Impact	Significance Before Mitigation	Mitigation Measures	Significance After Mitigation
		<i>resources from project impacts. It shall also detail the procedures that will be used to assess, manage, and mitigate potential impacts on inadvertent discoveries during project implementation.</i>	
Impact 4.3-2: The Project Could Cause a Substantial Adverse Change in the Significance of an Archaeological Resource Pursuant to §15064.5.	LTS	Implement the following existing mitigation measures from the 2008 EIR/EIS: <b>Mitigation Measure 3.8-3:</b> (See full text under Impact 4.3-1) Implement the following existing mitigation measures from the 2019 SEIS: <b>Mitigation Measure 3.6-1:</b> (See full text under Impact 4.3-1) <b>Mitigation Measure 3.6-2:</b> (See full text under Impact 4.3-1) Implement the following <u>newly</u> proposed mitigation measure: <b>Mitigation Measure 4.3-1:</b> (See full text under Impact 4.3-1)	LTS
Impact 4.3-3: The Project Could Disturb Any Human Remains, Including Those Interred Outside of Dedicated Cemeteries	PS	Implement the following <u>newly</u> proposed mitigation measure: <b>Mitigation Measure 4.3-2:</b> <i>Inadvertent Discovery of Unmarked Burials. If human remains are uncovered during project activities, the project operator shall immediately halt work within 50 feet of the find, contact the Imperial County Coroner to evaluate the remains, and follow the procedures and protocols set forth in CEQA Guidelines Section 15064.4(e)(1). If the County Coroner determines that the remains are Native American in origin, the Native American Heritage Commission (NAHC) will be notified, in accordance with Health and Safety Code Section 7050.5(c) and Public Resources Code (PRC) 5097.98 (as amended by Assembly Bill 2641). The NAHC shall designate a Most Likely Descendent (MLD) for the remains per PRC Section 5097.98, and designate a Most Likely Descendent (MLD) for the remains per PRC Section 5097.98, with the MDL regarding their recommendations for the disposition of the remains, taking into account the possibility of multiple human remains.</i>	LTS
<b>GEOLOGY, SOILS, AND PALEONTOLOGICAL RESOURCES</b>			
Impact 4.4-1: Directly or Indirectly Destroy a Unique Paleontological Resource or Site or Unique Geological Feature	PS	Implement the following existing mitigation measures from the 2008 EIR/EIS: <b>Mitigation Measure 3.2-1a:</b> <i>Reclaimed cut slopes in the alluvial materials</i>	LTS

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		<p>(map units Qya and Qoa) should be constructed no steeper than 1.75H:1V up to a maximum height of 100 feet.</p> <p><b>Mitigation Measure 3.2-1b:</b> Reclaimed cut slopes in the gypsum (map unit Tfc) should be no steeper than 1H:1V up to a maximum height of approximately 225 feet.</p> <p><b>Mitigation Measure 3.2-1c:</b> Any large, unstable, rounded boulders on reclaimed slopes steeper than approximately 2H:1V should be removed or stabilized prior to the end of reclamation.</p> <p>Implement the following existing mitigation measures from the 2019 SEIS:</p> <p><b>Mitigation Measure 3.2-3:</b> Once the pipeline alignment is located and staked, a pre-construction pedestrian field survey is recommended in order to locate any surficial fossil localities and verify the geologic units underlying the area associated with the Proposed Action. For any areas where potential resources cannot be avoided by the pipeline construction, a Paleontological Resources Monitoring and Mitigation Plan (PRMMP) should be prepared and implemented by a BLM-permitted paleontologist and approved by the BLM and Imperial County.</p> <p>Implement the following <u>newly</u> proposed mitigation measure:</p> <p><b>Mitigation Measure 4.4-1:</b> Pre-construction pedestrian field surveys shall be conducted throughout the proposed areas of disturbance for the Well No. 3 site, the final pipeline alignment, and the Viking Ranch site to locate any surficial fossil localities and verify the underlying geologic units. For any areas where potential resources cannot be avoided by proposed construction activities, a Paleontological Resources Monitoring and Mitigation Plan (PRMMP) shall be prepared and implemented by a BLM-permitted paleontologist and approved by the BLM and Imperial County.</p>	
<b>GREENHOUSE GAS EMISSIONS</b>			
Impact 4.5-1: Greenhouse Gas Emissions Generated by Project Activities Could Have a Significant Impact on Global Climate Change	LTS	Implement the following existing mitigation measures from the 2008 EIR/EIS:  <b>Mitigation Measure 1:</b> USG has already acquired approximately \$1.6 million in emission credits for the Project to meet applicable air quality	LTS

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		<p>standards. Similarly, to the extent necessary, USG will acquire recognized carbon credits to offset the project's increased GHG emissions.</p> <p><b>Mitigation Measure 3.6-1a:</b> USG shall ensure all equipment is maintained and tuned according to manufacturer's specifications.</p> <p><b>Mitigation Measure 3.6-1b:</b> USG shall schedule production activities to minimize daily equipment operations and idling trucks.</p> <p><b>Mitigation Measure 3.6-1c:</b> USG shall comply with all existing and future California Air Resources Board (CARB) and ICAPCD regulations related to diesel-fueled trucks and equipment, which may include: (1) meeting more stringent engine emission standards; (2) retrofitting existing engines with particulate traps; (3) use of low or ultra-low sulfur diesel fuel; and (4) use of alternative fuels or equipment.</p>	
Impact 4.5-2: Consistency with Applicable GHG Plans, Policies, or Regulations	LTS	None required.	LTS
<b>HYDROLOGY AND WATER QUALITY</b>			
Impact 4.6-1: The Project Could Violate Water Quality Standards or Waste Discharge Requirements or Otherwise Substantially Degrade Surface or Ground Water Quality	LTS	None required.	LTS
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	LTS	None required.	LTS
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	PS	<p>Implement the following existing mitigation measures from the 2008 EIR/EIS:</p> <p><b>Mitigation Measure 3.3-7:</b> An earthen berm will be constructed along the west side of the Quarry in order to preserve the natural drainage pathway. The berm would work as a natural earth channel, to preserve existing flow characteristics in the drainage area and protect the Quarry from flood waters by diverting water away from the Quarry and towards the Fish</p>	LTS

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		<p><i>Creek Wash. This channel requires a minimum 50-foot bottom width for the floodway and 2:1 channel side slopes. The graded channel only requires an earthen berm of approximately 5 feet high, assuming 2 feet of freeboard. The berm would be 5 feet high by 20 feet wide, and would provide an adequate solution to contain and divert run-off.</i></p> <p>Implement the following <u>newly</u> proposed mitigation measure:</p> <p><b>Mitigation Measure 4.6-1:</b> <i>The final design for the proposed berm along the westerly edge of the Quarry shall incorporate the recommendations provided in the Hydrologic and Water Quality Study prepared by Dudek dated April 2018 and appended to this SEIR. These recommendations include a 50-foot-wide conveyance channel on the western side of the berm and armoring of the westerly bank of the berm with rock riprap.</i></p>	
Impact 4.6-4: The Project Could Release Pollutants in the Event of Inundation from Flood, Tsunami, or Seiche	LTS	None required.	LTS
Impact 4.6-5: The Project Could Conflict with or Obstruct Implementation of a Water Quality Control Plan or Sustainable Groundwater Management Plan	LTS	None required.	LTS
<b>LAND USE AND PLANNING</b>			
Impact 4.7-1: Physically Divide an Established Community	LTS	None required.	LTS
Impact 4.7-2: Conflict with Land Use Plans, Policies, and Regulations	LTS	None required.	LTS
<b>TRIBAL CULTURAL RESOURCES</b>			
Impact 4.8-1: Would the Project Adversely Affect the Significance of a Tribal Cultural Resources, As Defined in PRC §21074	LTS	Implement the following existing mitigation measures from the 2008 EIR/EIS:  <b>Mitigation Measure 3.8-3:</b> <i>If any archaeological resources are encountered during implementation of the Proposed Action, construction or any other activity that may disturb or damage such resources shall be halted, and the services of a qualified archaeologist shall be secured to assess the resources and evaluate the potential impact. Such construction or other activity may resume only after the archaeological</i>	LTS

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		<p><i>resources have been assessed and evaluated and a plan to avoid or mitigate any potential impacts to a level of insignificance has been prepared and implemented.</i></p> <p>Implement the following existing mitigation measures from the 2019 SEIS:</p> <p><b>Mitigation Measure 3.6-1:</b> <i>Develop and Implement a Plan for Archaeological Monitoring, Post-Review Discovery, and Unanticipated Effects. Avoidance and protection measures for cultural resources within the Project APE will be outlined in a Construction Monitoring and Inadvertent Discovery Plan. This Plan will be prepared and approved prior to the implementation of any of the action alternatives. It will describe worker awareness training, avoidance measures, and monitoring procedures that will be implemented to protect known cultural resources from Project impacts. It will also detail the procedures that will be used to assess, manage, and mitigate potential impacts on inadvertent discoveries during Project implementation.</i></p> <p><b>Mitigation Measure 3.6-2:</b> <i>Develop a Maintenance Notification Agreement for Future Maintenance of Pipeline Rights-of-Way. A Maintenance Notification Agreement will be outlined prior to the authorization of any pipeline right-of-way grant to ensure continued avoidance of archaeological resources during the life of the grant. This agreement will identify the schedule and data needs that will be submitted by USG to BLM when maintenance is needed on any of the pipelines authorized for this project. The BLM archaeologist will review this data to determine if and where archaeological monitors are needed during future maintenance activities.</i></p> <p>Implement the following <u>newly</u> proposed mitigation measure:</p> <p><b>Mitigation Measures:</b> <i>Implement Mitigation Measures 4.3-1 (See Impact 4.3-1 for complete text) and 4.3-2. (See Impact 4.3-3 for complete text)</i></p>	
<b>OTHER CEQA TOPICS</b>			
Impact 7-1: Substantially Degrade the Quality of the Environment, Reduce Habitat of a Fish or Wildlife Species, Cause a Fish or	PS	<b>Mitigation Measures:</b> <i>Relevant mitigation measures required to reduce this impact to a less than significant level include the following measures</i>	LTS

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Impact	Significance Before Mitigation	Mitigation Measures	Significance After Mitigation
Wildlife Population to Drop Below Self-Sustaining Levels, Threaten to Eliminate a Plant or Animal Community, Substantially Reduce the Number or Restrict the Range of a Rare or Endangered Plant or Animal or Eliminate Important Examples of the Major Periods of California History or Prehistory		<p>from Section 4.2, “Biological Resources,” and Section 4.3, “Cultural Resources,” of this SEIR:</p> <ul style="list-style-type: none"> <li>• 2008 EIR/EIS:                             <ul style="list-style-type: none"> <li>– Mitigation Measure 3.5-1a</li> <li>– Mitigation Measure 3.5-1b</li> <li>– Mitigation Measure 3.5-1c</li> <li>– Mitigation Measure 3.5-1d</li> <li>– Mitigation Measure 3.5-1e</li> <li>– Mitigation Measure 3.5-1f</li> <li>– Mitigation Measure 3.5-2</li> <li>– Mitigation Measure 3.8-3</li> </ul> </li> <li>• 2019 SEIS:                             <ul style="list-style-type: none"> <li>– Mitigation Measure 3.4-5</li> <li>– Mitigation Measure 3.4-6</li> <li>– Mitigation Measure 3.4-7</li> <li>– Mitigation Measure 3.4-8</li> <li>– Mitigation Measure 3.4-9</li> <li>– Mitigation Measure 3.4-10</li> <li>– Mitigation Measure 3.4-11</li> <li>– Mitigation Measure 3.4-12</li> <li>– Mitigation Measure 3.4-13</li> <li>– Mitigation Measure 3.6-1</li> <li>– Mitigation Measure 3.6-2</li> </ul> </li> </ul>	
Impact 7-2: Impacts that are Individually Limited but Cumulatively Considerable	LTS	None required.	LTS
Impact 7-3: Environmental Effects which will Cause Substantial Adverse Effects on Human Beings	PS	<b>Mitigation Measures:</b> Implement the following existing and newly proposed mitigation measures:	LTS

LTS = Less than Significant; PS = Potentially Significant; S = Significant; SU = Significant and Unavoidable

Impact	Significance Before Mitigation	Mitigation Measures	Significance After Mitigation
		<ul style="list-style-type: none"> <li>• 2008 EIR/EIS:                             <ul style="list-style-type: none"> <li>– Mitigation Measure 3.6-1a</li> <li>– Mitigation Measure 3.6-1b</li> <li>– Mitigation Measure 3.6-1c</li> </ul> </li> <li>• SEIR Section 4.1:                             <ul style="list-style-type: none"> <li>– Mitigation Measure 4.1-1a</li> <li>– Mitigation Measure 4.1-1b</li> </ul> </li> </ul>	

**LTS** = Less than Significant; **PS** = Potentially Significant; **S** = Significant; **SU** = Significant and Unavoidable

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# CHAPTER 1: INTRODUCTION

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# CHAPTER 1: INTRODUCTION

This draft subsequent environmental impact report (SEIR) has been prepared by Imperial County (County), the lead agency under the California Environmental Quality Act (CEQA) (Public Resources Code [PRC], Section 21000 et seq.; California Code of Regulations [CCR] Title 14 Section 15000 et seq. [CEQA Guidelines]) pursuant to 14 CCR section 15162, to evaluate the potentially significant environmental effects associated with United States Gypsum Company's ("USG" or "the applicant") request for a Condition Use Permit (CUP) to develop Well No. 3 and an associated pipeline to support mining operations at the Plaster City Quarry (Quarry). In addition, this SEIR evaluates mining operations at the Quarry under the 2008 Quarry Expansion and restoration and preservation of two off-site properties (Viking Ranch restoration site and Old Kane Springs Road preservation site). Together these components make up the proposed project. A detailed description of the proposed project can be found in Chapter 2, "Project Description."

Under CEQA, the County must identify and consider the potentially significant environmental effects of the actions proposed before making a final decision to approve the proposed project. This SEIR will be used in the planning and decision-making process by the lead agency (the County) and other responsible and trustee agencies.

This introductory chapter provides a background and summary of the proposed project; an overview of the environmental review process required under CEQA; agency roles and responsibilities; and the organization used in this SEIR.

## 1.1 PURPOSE OF A SUBSEQUENT ENVIRONMENTAL IMPACT REPORT

An EIR is an informational document that informs public agency decision makers and the public of significant environmental effects that could occur as a result of implementing a proposed project. EIRs also provide mitigation measures to reduce those environmental effects and an evaluation of alternatives to the proposed project. Development of Well No. 3 and an associated pipeline, expansion of the existing Quarry, replacement of an existing 8-inch diameter water pipeline from USG's wells in Ocotillo to the Plaster City Plant (Plant), installation of an approximately 14.4-megawatt (MW) cogeneration unit for the Plant operation, and construction of an off-specification material recycling system were part of the United States Gypsum Company Expansion/Modernization Project (USG Expansion/Modernization Project) that was evaluated in a 2006 Draft Environmental Impact Report/Environmental Impact Statement (2006 Draft EIR/EIS) and a 2008 Final EIR/EIS. Together, the two documents are referred to in this SEIR as the "2008 EIR/EIS" (Imperial County 2008). The 2008 EIR/EIS was certified by the Imperial County Board of Supervisors (Board) in 2008 (SCH No. 200121133). As such, the potential environmental impacts of Quarry expansion and reclamation and Quarry Well No. 3 development were previously evaluated in the 2008 EIR/EIS.

In addition to the 2008 EIR/EIS, analysis of the USG Expansion/Modernization Project was completed under the National Environmental Policy Act (NEPA) as part of the process of obtaining the federal approvals required for the Quarry expansion. The NEPA process resulted in the completion of a Draft Supplemental EIR (SEIS) in June 2019 and a Final SEIS in November 2019 for the USG Expansion/Modernization Project. The 2019 Final SEIS included mitigation to offset the impacts to 139 acres of waters of the United States at the Quarry by restoring, enhancing, and preserving aquatic resources at a property where aquatic functions are similar to the impacted functions. In response, USG proposes to mitigate impacts at a 1.92:1 mitigation-

top-impact ratio, for a total of 267.3 acres of rehabilitation, enhancement, and preservation of aquatic resources. The proposed compensatory mitigation consists of the restoration and enhancement of an approximately 207-acre area at the Viking Ranch restoration site and the preservation of approximately 121 acres at the Old Kane Springs Road preservation site.

The County has determined that it will prepare an SEIR for the proposed project, as provided for in CEQA Guidelines Section 15162, which states:

- (a) When an EIR has been certified or a negative declaration adopted for a project, no subsequent EIR shall be prepared for that project unless the lead agency determines, on the basis of substantial evidence in the light of the whole record, one or more of the following:
  - (1) Substantial changes are proposed in the project which will require major revisions of the previous EIR or ND due to the involvement of new significant environmental effects or a substantial increase in the severity of previously identified significant effects;
  - (2) Substantial changes occur with respect to the circumstances under which the project is undertaken which will require major revisions of the previous EIR or ND due to the involvement of new significant environmental effects or a substantial increase in the severity of previously identified significant effects; or;
  - (3) New information of substantial importance, which was not known and could not have been known with the exercise of reasonable diligence at the time the previous EIR was certified as complete or the ND was adopted, shows any of the following:
    - (A) The project will have one or more significant effects not discussed in the previous EIR or ND;
    - (B) Significant effects previously examined will be substantially more severe than shown in the previous EIR;
    - (C) Mitigation measures or alternatives previously found not to be feasible would in fact be feasible, and would substantially reduce one or more significant effects of the project, but the project proponents decline to adopt the mitigation measure or alternative; or
    - (D) Mitigation measures or alternatives which are considerably different from those analyzed in the previous EIR would substantially reduce one or more significant effects on the environment, but the project proponents decline to adopt the mitigation measure or alternative.
- (b) If changes to a project or its circumstances occur, or new information becomes available after adoption of a ND, the lead agency shall prepare a subsequent EIR if required under [14 CCR Section 15162(a)]. Otherwise, the lead agency shall determine whether to prepare a subsequent negative declaration or an addendum, or no further documentation.
- (c) A subsequent EIR or subsequent ND shall be given the same notice and public review as required under CEQA Guidelines Section 15072 or Section 15087. A subsequent EIR or ND shall state where the previous documents are available and may be reviewed.

In addition, California Public Resources Code section 21166 provides:

When an [EIR] has been prepared for a project..., no subsequent or supplemental [EIR] shall be required by the lead agency...unless one or more of the following events occurs:

- (a) Substantial changes are proposed in the project which will require major revisions of the [EIR].
- (b) Substantial changes occur with respect to the circumstances under which the project is being undertaken which will require major revisions in the [EIR].
- (c) New information, which was not known and could not have been known at the time the [EIR] was certified as complete, becomes available.

The County has determined that factors exist that warrant preparation of an SEIR in this case, including project changes and changes in the project's circumstances. An SEIR is not intended to recommend either approval or denial of a project. Rather, an SEIR is a document whose primary purpose is to disclose all new potential environmental impacts associated with a revised action or "project."

The SEIR process and the information it generates is used for purposes that include:

- informing governmental decision makers, agencies, and the public about potential, significant environmental effects of proposed activities;
- identifying ways that environmental damage can be avoided or significantly reduced; and
- preventing significant, avoidable damage to the environment by requiring changes to the project by using alternatives or mitigation measures if the governmental agency finds the changes to be feasible.

The purpose of this SEIR is to provide an opportunity for agency representatives and the public to review and comment on the adequacy of the SEIR before it is prepared as a final document and certified. This SEIR has been prepared by the County, acting in its capacity as lead agency, pursuant to CEQA and the CEQA Guidelines. The County has independently reviewed and analyzed this SEIR in accordance with PRC Section 21082.1(c)(1).

The mitigation measures from the 2008 EIR/EIS and the 2019 SEIS have been carried forward from the original certified environmental documents for the proposed project. In addition, new mitigation measures have been recommended to address new significant impacts. Mitigation measures to be imposed, if the project is approved, will be included in a Mitigation Monitoring and Report Program (MMRP) that documents the mitigation measures, specifies the parties responsible for implementing and funding each measure, and identifies the agency or other party responsible for monitoring, verifying, and documenting that measures have been or are being implemented. These measures may also be included in the conditions of project approval.

## 1.2 SUMMARY OF THE PROPOSED PROJECT

The proposed project consists of approval of a Conditional Use Permit from the County of Imperial (County) for the development of a new production well, Well No. 3, and an associated pipeline to provide water to the United States Gypsum (USG) Plaster City Quarry (Quarry). Together, these three project components are referred to as the "project area."

Additional land use entitlements from the County are not needed for mining and reclamation activities under the Quarry expansion. However, because Well No. 3 and the associated pipeline would provide water to support Quarry operations, this SEIR evaluates potential environmental impacts associated with mining and

reclamation activities under the Quarry expansion, for full disclosure and to provide the appropriate CEQA compliance analysis and mitigation for responsible and trustee agencies.

This SEIR also evaluates potential environmental impacts associated with the Viking Ranch restoration and Old Kane Springs Road preservation actions, as proposed in the Habitat Mitigation and Monitoring Plan (Appendix D-4). As described under the “Previous EIR/EIS” section below, USG identified the approximately 207-acre Viking Ranch site for restoration and the 121-acre Old Kane Spring Road site for preservation to provide compensatory mitigation for the impacts to 139 acres of water of the United States at the Quarry. Although the Viking Ranch restoration and Old Kane Spring Road preservation will not require entitlements from Imperial County, this EIR evaluates the environmental impacts of these actions for full disclosure and to provide the appropriate CEQA compliance analysis and mitigation for responsible and trustee agencies, including San Diego County which will issue a Major Grading Permit.

### **1.3 ENVIRONMENTAL REVIEW PROCESS**

#### **1.3.1 Scope of this Environmental Impact Report**

The County prepared an initial study that included a preliminary evaluation of the potential scope of the SEIR (see Appendix A-1, “Initial Study”). The County then circulated a notice of preparation (NOP) that indicated those topic areas that would require evaluation in the SEIR (see Appendix A-2, “NOC/NOP”). Also included in Appendix A is Appendix A-3, which includes written comments received from the NOP and scoping meeting). The NOP was published on July 18, 2022, and the public comment period for commenting on the scope of the SEIR lasted through August 22, 2022. The NOP was sent to property owners within 1,000 feet of the project areas, trustee agencies, interested organizations and individuals, and the State Clearinghouse.

A public scoping session was held on August 11, 2022, at the Imperial County Planning and Development Services Department offices and virtually via the Zoom platform. Three public agency comments were received by the County during the scoping period. These comments were accounted for during preparation of the SEIR and are included as Appendix A-3.

The initial study determined that the following environmental factors would be potentially affected by the proposed project and are, therefore, addressed in this SEIR:

- Air Quality
- Biological Resources
- Cultural Resources
- Geology and Soils
- Greenhouse Gas Emissions
- Hydrology and Water Quality
- Land Use and Planning
- Tribal Cultural Resources
- Mandatory Findings of Significance

The initial study also determined that the project would not result in significant adverse impacts associated with the following resource topics and eliminated these issues from further consideration in the SEIR:

- Aesthetics
- Agricultural and Forestry Resources
- Energy
- Population and Housing
- Public Services
- Recreation

- Hazards and Hazardous Materials
- Mineral Resources
- Noise
- Transportation
- Utilities and Services Systems
- Wildfire

### 1.3.2 Public Review

This SEIR is available for public review and comment during the 45-day period identified on the notice of availability/notice of completion (NOA/NOC) of an SEIR accompanying this document. This SEIR and all supporting technical documents and reference documents are available for public review at the Imperial County Planning and Development Services Department located at 801 Main Street in El Centro, California 92243 and on the Imperial County website at:

<http://icpds.com/planning/environmental-impact-reports/draft-eirs/>

During the 45-day public comment period, written comments on the SEIR may be submitted to the Planning and Development Services Department at the following address:

Attn.: Ms. Diana Robinson, Planning Division Manager  
Imperial County Planning and Development Services Department  
801 Main Street  
El Centro, California 92243

Written comments on the SEIR may alternately be submitted via e-mail with the subject line “USG Plaster City Quarry Expansion and Well No. 3 Project SEIR” to [DianaRobinson@co.imperial.ca.us](mailto:DianaRobinson@co.imperial.ca.us).

Oral comments on the SEIR are welcome and may be stated at a public meeting, which shall be held as indicated on the NOA/NOC.

Following the public review and comment period, the County will respond to all written and oral comments received on the environmental analysis in this SEIR. The responses and any other revisions to the SEIR will be prepared as a response-to-comments document. The SEIR and its appendices, together with the response-to-comments document, will constitute the final SEIR for the proposed project.

### 1.3.3 Use of the SEIR

Pursuant to CEQA, this is a public information document for use by governmental agencies and the public. The information contained in this SEIR is subject to review and consideration by the County (as the lead agency) and any other responsible agencies before the County decides to approve, reject, or modify the proposed project.

The Imperial County Planning Commission must ultimately certify that it has reviewed and considered the information in the SEIR and that the SEIR has been completed in conformity with the requirements of CEQA before making any decision on the proposed project. Certification of the SEIR does not constitute approval of the project.

## 1.4 DISCRETIONARY ACTIONS

It is anticipated that this SEIR will provide environmental review for all discretionary approvals and actions necessary for this project. A number of permits and approvals would be required before the proposed project could be implemented, although quarrying operations pursuant to existing entitlements are anticipated to continue throughout the environmental review process.

As lead agency for the proposed project, the County is primarily responsible for the approvals required. The primary approval being sought is a Conditional Use Permit (CUP) to allow for development of Well No. 3 and an associated pipeline. As part of any approval action for the project, the County would be required to certify the final EIR, adopt findings of fact and overriding considerations (if necessary), and adopt a mitigation monitoring and reporting program. In Imperial County, the County Planning Commission is the approval authority for surface mining permits and reclamation plans, which action is appealable to the County Board of Supervisors.

## 1.5 RESPONSIBLE AND TRUSTEE AGENCIES

Projects or actions undertaken by the lead agency (i.e., the County) may require subsequent oversight, approvals, or permits from other public agencies to be implemented. Other such agencies are referred to as “responsible agencies” and “trustee agencies.” Pursuant to Sections 15381 and 15386 of the CEQA Guidelines, as amended, responsible agencies and trustee agencies are defined as follows:

- A “responsible agency” is a public agency that proposes to carry out or approve a project, for which a lead agency is preparing or has prepared an EIR or negative declaration. For the purposes of CEQA, the term “responsible agency” includes all public agencies other than the lead agency that have discretionary approval power over the project (Section 15381).
- A “trustee agency” is a state agency having jurisdiction by law over natural resources affected by a project that are held in trust for the people of the State of California (Section 15386).

A number of agencies may have a particular interest in the project. These agencies include those listed below:

### ***Federal Agencies***

- United States Corps of Engineers (404 Permit)

### ***State Agencies***

- California Department of Fish and Wildlife (Lake and Streambed Alteration Agreement)
- Colorado River Regional Water Quality Control Board (401 Certification)

### ***Regional and Local Agencies***

- County of San Diego (Major Grading Permit)
- Colorado River Regional Water Quality Control Board (Construction General Permit Notice of Intent [NOI], Industrial General Permit NOI, Waste Discharge Requirements)

The following public agency approvals have already been obtained:

- U.S. Bureau of Land Management (Right-of-Way Grants [Case file numbers CACA-056908 and CACA-044014], 2003 Plan of Operations Revised April 2018)
- U.S. Fish and Wildlife Service (Biological Opinion FWS-ERIV-11B0345-19F1352)

## 1.6 REPORT ORGANIZATION

This SEIR is organized into the following chapters and sections:

### ***Executive Summary***

This chapter provides a summary of the project and a summary of new significant environmental impacts not covered in the original EIR that would result from implementation of the proposed project, and describes new conditions of approval and mitigation measures, also not covered in the original EIR, recommended to avoid or reduce significant impacts.

### ***Chapter 1, “Introduction”***

This chapter discusses the overall SEIR purpose; provides a summary of the proposed project; describes the SEIR scope; and summarizes the organization of the SEIR.

### ***Chapter 2, “Project Description”***

This chapter provides a description of the project’s objectives, the project site and context, and a detailed description of the proposed project and its required local (County) approval process.

### ***Chapter 3, “Terminology, Approach, and Assumptions”***

This chapter describes key terminology, approaches, and assumptions used in the SEIR analysis, including definitions of existing conditions versus baseline conditions, descriptions of the increment of net new changes at the site attributable to the project, and assumptions regarding other cumulative development and approaches used to define cumulative scenarios.

### ***Chapter 4, “Environmental Analysis”***

This chapter provides the environmental setting, impacts, and required mitigation measures for the project organized by issue area corresponding to topics in the CEQA Environmental Checklist (CEQA Guidelines Appendix G, as amended). Sections 4.1 through 4.8 address the environmental topics of this SEIR: aesthetics, air quality, biological resources, climate change and greenhouse gas emissions, geology and soils, hydrology and water quality, land use and planning, and noise, respectively.

Each resource section follows the same format and includes the following primary subsections:

- The “**Environmental Setting**” subsections provide an overview of the existing physical environmental conditions at the time this analysis was prepared, which establishes a baseline used during analysis of potential impacts created by the project. When relevant to the analysis, the “Environmental Setting” subsection also provides predicted future environmental conditions under circumstances without the project to provide a benchmark for the impact analysis of future conditions with the project.

- The “**Regulatory Setting**” subsections identify the plans, policies, laws, regulations, and ordinances that are relevant to each resource subject. This subsection describes required permits and other approvals necessary to implement the project.
- The “**Impact Analysis Methodology**” subsections provide criteria that define when an impact would be considered significant. Criteria are based on CEQA Guidelines, scientific and factual data, views of the public in affected area(s), the policy/regulatory environment of affected jurisdictions, or other factors.
- The “**Impacts and Mitigation Measures**” subsections provide an assessment of the potential impacts of the project and specify why impacts are found to be either significant and unavoidable, significant, or potentially significant but mitigable, less than significant, or why no environmental impact would result. Feasible mitigation measures to avoid or reduce the severity of identified impacts follow the impact discussions. Where feasible mitigation cannot reduce impacts to a less-than-significant level, the impacts are identified as significant and unavoidable. The analysis of cumulative impacts is provided in Chapter 5, “Cumulative Impacts.”

### ***Chapter 5, “Cumulative Impacts”***

This section provides an evaluation of the cumulative impacts, which is based on the past, present, and reasonably foreseeable conditions, together with the effects of the project.

### ***Chapter 6, “Alternatives”***

This section provides a comparative evaluation of alternatives to the proposed project. The alternatives include:

- No Project—Reclamation of Existing Conditions Alternative,
- Prohibited Nighttime Reclamation Alternative,
- Revised ADV Construction Phasing Alternative, and
- Reduced Capacity of Lake A Diversion Structure Alternative.

### ***Chapter 7, “Other CEQA Topics”***

This section provides the required analysis of growth-inducing impacts; significant irreversible changes; effects found not to be significant; and significant unavoidable impacts.

### ***Chapter 8, “List of Preparers”***

This section identifies the preparers of the SEIR and the persons and organizations contacted.

### ***Chapter 9, “References and Resources”***

This section identifies the references and resources cited within the text of this SEIR.

### ***Chapter 10, “Acronyms”***

This section provides an alphabetical list of the acronyms and initialisms used throughout the SEIR.



### ***Appendices***

The appendices contain the initial study, the NOC and NOP, written comments submitted on the NOP, and technical studies and reports used to prepare the SEIR.

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# CHAPTER 2: PROJECT DESCRIPTION

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# CHAPTER 2: PROJECT DESCRIPTION

## 2.1 INTRODUCTION

United States Gypsum (USG) Plaster City Quarry (Quarry) holdings consist of 2,048 acres located in the northwestern portion of Imperial County adjacent to the Imperial County/San Diego County line (see Figure 2-1, “Regional Location” and Figure 2-2a, “Site Location—Quarry, Well No. 3, and Pipeline”). USG has continuously owned and operated the Quarry and associated wallboard manufacturing plant (Plant) since 1945. This section provides a detailed description of the proposed project, which includes development of Well No. 3 and associated pipeline, operations under the 2008 Quarry expansion, and restoration and preservation of two off-site properties (Viking Ranch restoration site and Old Kane Springs Road preservation site) (see Figures 2-2b and 2-2c, respectively).

## 2.2 PROJECT BACKGROUND

A water well for Quarry operations was permitted in 1983 under CUP No. 635-83 for a maximum withdrawal of 7,000 gallons per day (Quarry Well No. 1). The well was drilled in basin fill on the eastern side of the wash. The water was non-potable (due to high dissolved solids) and was used exclusively for dust suppression. Consequently, the Quarry has historically received potable water for drinking and sanitary uses via a narrow-gauge railroad tank car from the Plant.

Production from Quarry Well No. 1 declined due to incrustation and became unusable. Therefore, a second well (Quarry Well No. 2) was drilled in 1993 to replace the original well pursuant to CUP No. 635-83, which was re-issued for a new well. However, water production from Quarry Well No. 2 declined steadily over time.

Currently, Quarry Well No. 2 produces approximately 4,800 to 5,000 gallons per day (gpd), which is insufficient to meet USG’s current need for approximately 15,000 gpd for dust control for Quarry operations. Therefore, USG proposes to replace existing Quarry Well No. 2 with planned Well No. 3 on USG-owned land located approximately 3 miles northeast of the Quarry. Quarry Well No. 3 would also replace an existing test well that was installed in 2001 at the proposed location of Quarry Well No. 3.

As described in Chapter 1, “Introduction,” proposed Quarry Well No. 3 is part of a larger project involving the expansion and modernization of USG’s Plant and Quarry (Quarry Expansion), that was evaluated in the 2008 EIR/EIS, which was certified by the Imperial County Board of Supervisors (Board) on March 18, 2008. As such, the potential environmental impacts of proposed Quarry Well No. 3 were previously evaluated in the 2008 EIR/EIS.

On March 18, 2008, the Board approved a Conditional Use Permit for Quarry Well No. 3 in Case No. CUP-08-0003, recorded document 2008-018433. However, USG did not initiate or obtain construction permits for Well No. 3 within the period set forth in Imperial Land Use Ordinance Section 90203.13. Therefore, CUP-08-0003 has expired.

### ***Settlement Agreement***

Water at the Plant is delivered by pipeline from three wells owned by USG within an area located approximately 8 miles west of Plaster City near or adjacent to the community of Ocotillo. The USG wells

pump from the same basin as other users. The 2008 EIR/EIS included Mitigation Measures 3.3-1 and 3.3-2 to address the potential impacts of additional pumping due to proposed Plant operations on other groundwater wells in the Coyote Wells Groundwater Basin. The Sierra Club filed a Motion of Supplemental Writ in 2008 that challenged the adequacy of the EIR and sought an order restricting USG’s ability to pump groundwater in the Basin.

On December 16, 2013, the Court of Appeal reversed a prior Superior Court order, holding that there was insufficient evidence to support the county conclusion that the Mitigation Measures for the project, as adopted in January 2008, would be viable or effective in reducing the project’s potential impacts on individual groundwater wells to a level of insignificance. As a result, in October 2018, the Sierra Club, Imperial County and the Imperial County Planning Commission, and USG (referred to collectively as the “Parties”) entered into settlement negotiations. The settlement agreement dated November 13, 2018 and revised and augmented by the Notice of Entry of Order Regarding Discharge of the Writ and Satisfied Order on Remittitur dated August 5, 2019 (Settlement Agreement), replaces Mitigation Measures 3.3-1 and 3.3-2 adopted in the 2008 EIR/EIS with new mitigation measures (Mitigation Measures 3.3-1-A through 3.3-1-G). The measures are intended to ensure that project impacts on individual groundwater wells within the Coyote Wells Groundwater Basin are less than significant. The project area analyzed in this SEIR is not located within the Coyote Wells Groundwater Basin, and therefore this Settlement Agreement does not pertain to the proposed project.

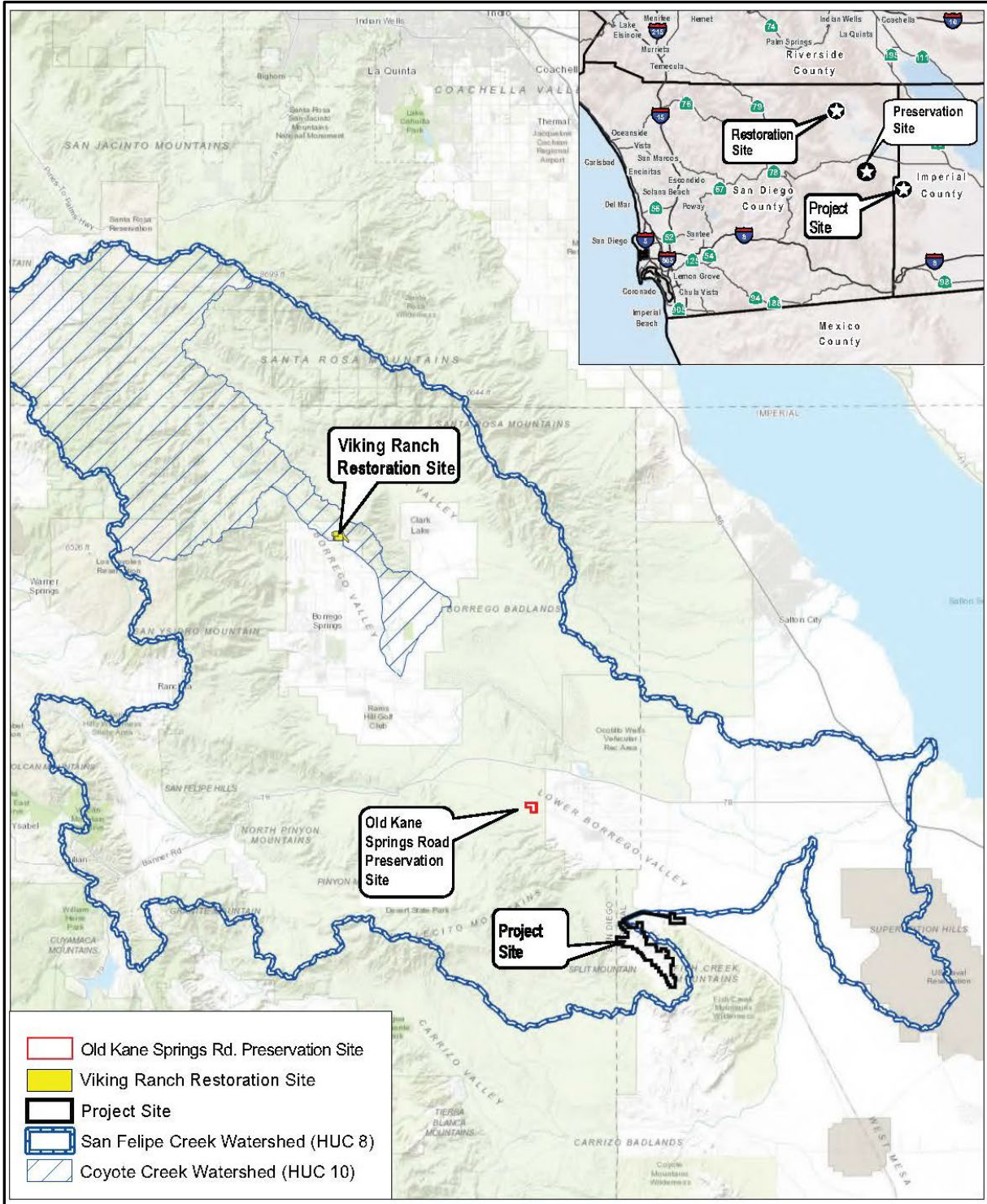
**Mitigation Sites**

In addition to the 2008 EIR/EIS, additional analysis of the USG Expansion/Modernization Project was completed under NEPA as part of the process of obtaining the federal approvals required for the Quarry expansion. The NEPA process resulted in the completion of a Draft Supplemental EIS (SEIS) in June 2019 and a Final SEIS in November 2019 for the USG Expansion/Modernization Project. The 2019 Final SEIS included mitigation to offset the impacts to 139 acres of water of the United States at the Quarry by restoring, enhancing, and preserving aquatic resources at a property where aquatic functions are similar to the impacted functions. In response, USG proposes to mitigate impacts at a 1.92:1 mitigation-to-impact ratio, for a total of 267.3 acres of rehabilitation, enhancement, and preservation of aquatic resources. The proposed compensatory mitigation consists of the restoration and enhancement of an approximately 206-acre area at the Viking Ranch restoration site (see Figure 2-2b) and the preservation of approximately 121-acres at the Old Kane Springs Road preservation site (see Figure 2-2c).

**2.3 PROJECT PURPOSE**

The proposed Well No. 3 and associated pipeline were approved under an existing County Conditional Use permit (CUP) CUP-08-0003, “US Gypsum water well for Quarry Expansion Project, Assessor’s Parcel Number APN 033-020-009,” which was approved by the Board on March 18, 2008. However, USG did not initiate or obtain construction permits for Quarry Well No. 3 within the time period set forth in Imperial County Land Use Ordinance Section 90203.13. Therefore, CUP-08-0003 has expired.

The location and characteristics of the proposed Quarry Well No. 3 and associated pipeline have not changed since the USG Expansion/Modernization Project was approved in 2008 and remain as described in the original application for CUP-08-0003 and in the associated 2008 EIR/EIS. The proposed well and associated facilities request has not changed since approval in 2008. Therefore, the CUP requested under the proposed project would essentially replace CUP-08-0003.



**SOURCE:** Dudek, 2021; Basemap USGS

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**Figure 2-1**  
**Regional Location**

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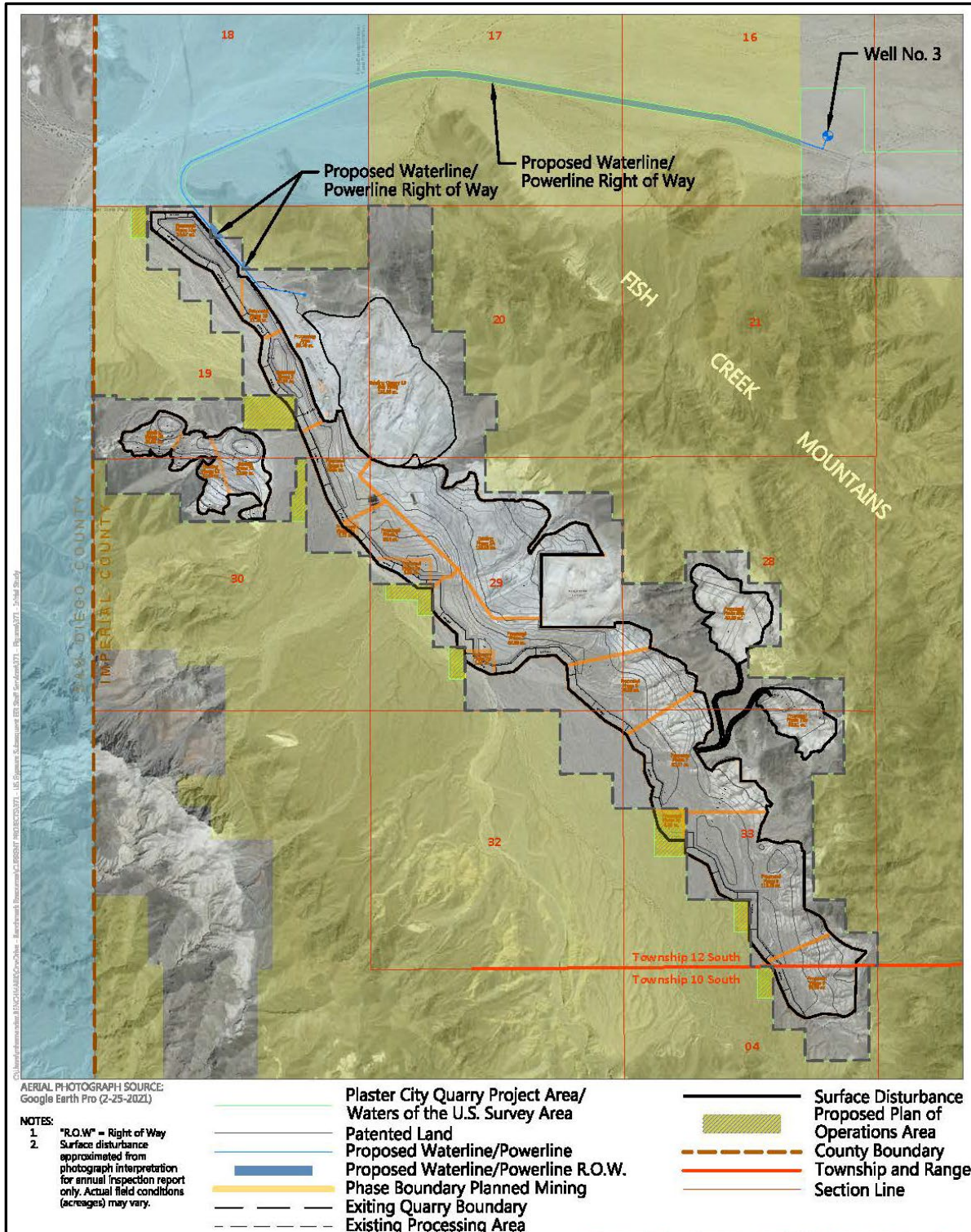
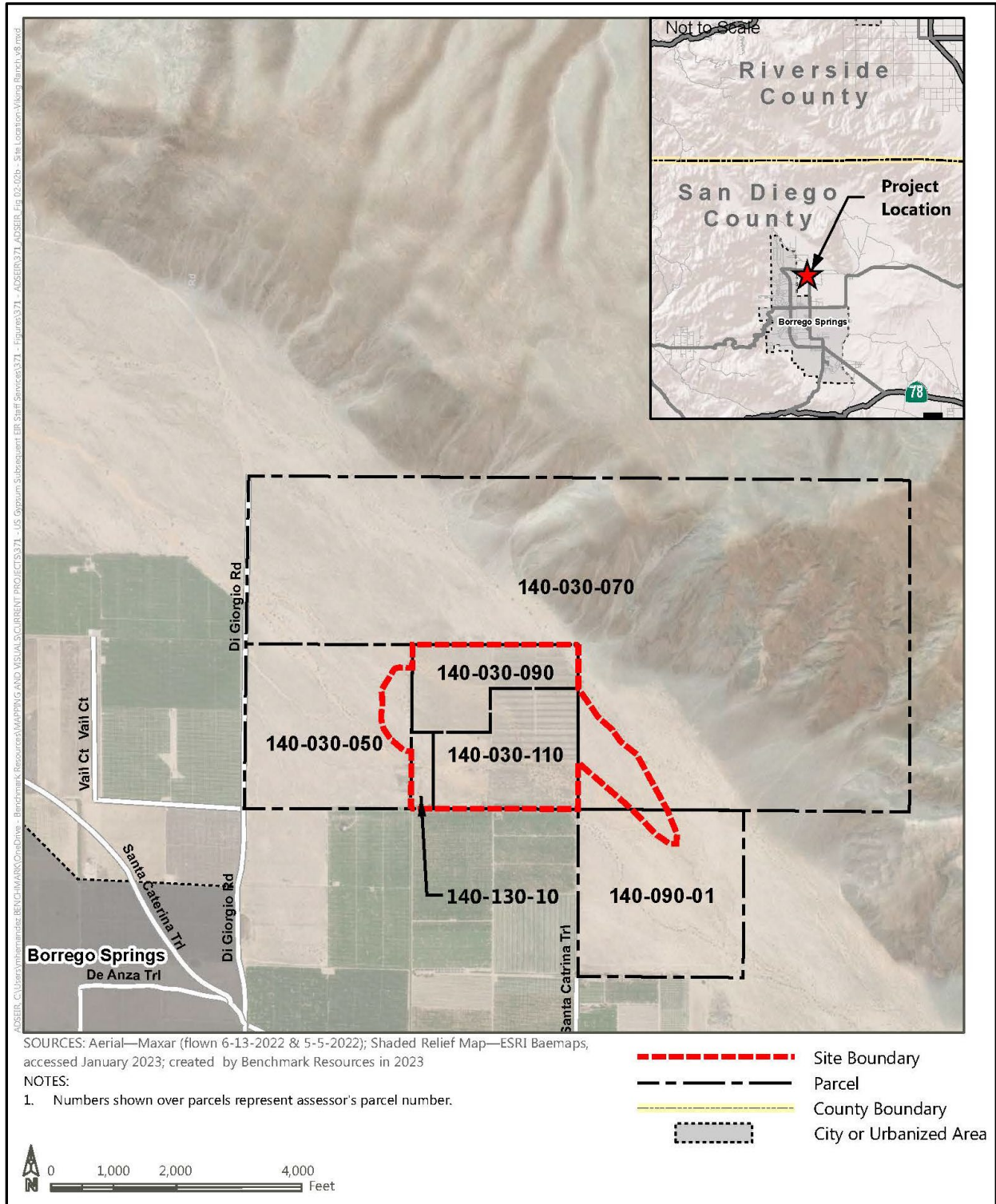


Figure 2-2a  
 Site Location—Quarry, Well No. 3, and Pipeline

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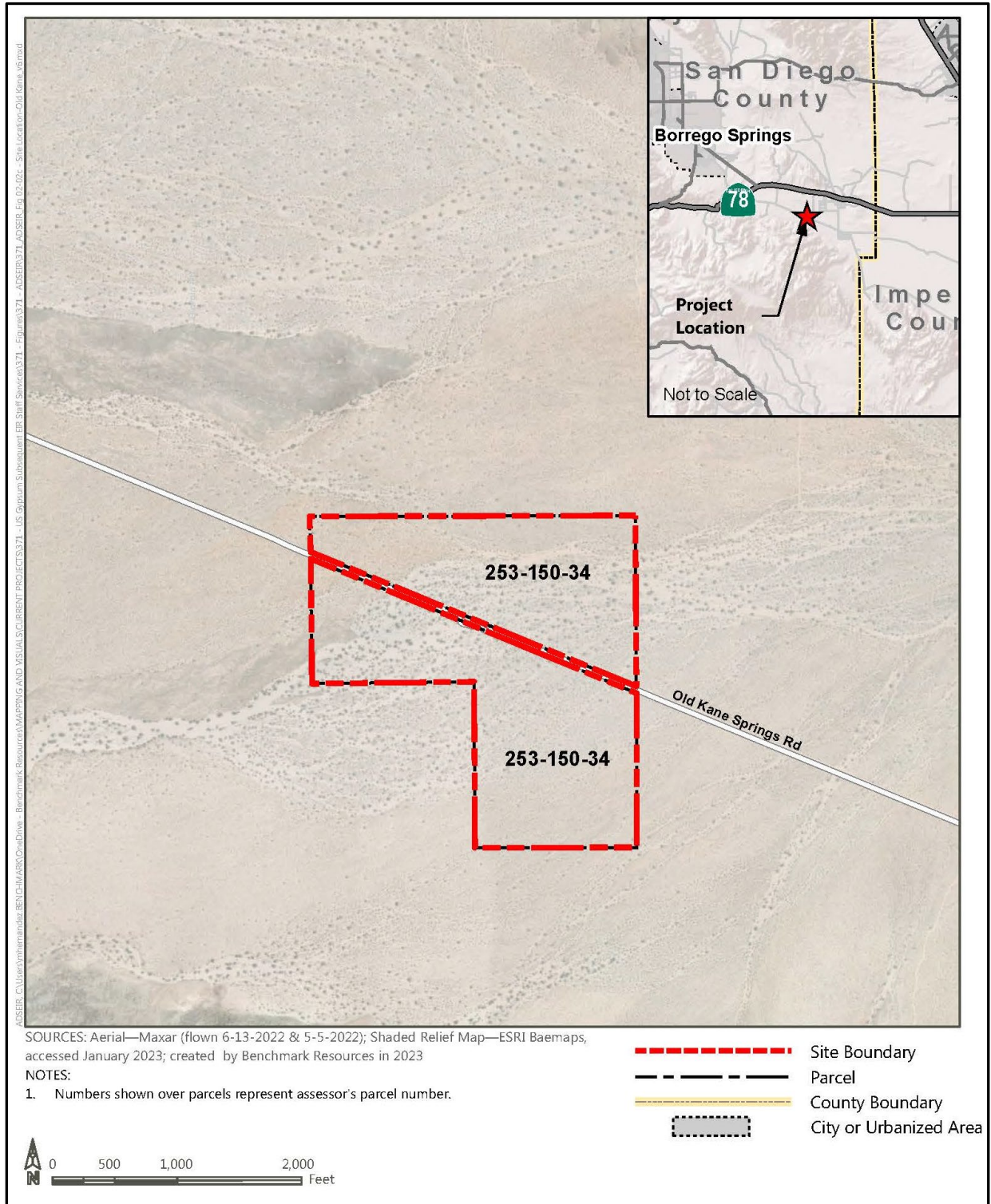


**SOURCE:** Benchmark Resources, 2023

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**Figure 2-2b**  
**Site Location—Viking Ranch Restoration Site**

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**SOURCE:** Benchmark Resources, 2023

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**Figure 2-2c**  
**Site Location—Old Kane Springs Road Preservation Site**

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Although no entitlements are required from Imperial County for the Quarry expansion and Viking Ranch restoration or preservation off the Old Kane Springs Road preservation site, this SEIR evaluates potential environmental impacts associated with mining and reclamation activities under the Quarry expansion and with the associated restoration and preservation actions, for full disclosure and to provide the appropriate CEQA compliance analysis and mitigation for responsible agencies.

## **2.4 PROJECT OBJECTIVES**

The proposed project includes the following objectives:

- 1) Secure permits and approvals to continue and fully develop quarrying gypsum reserves;
- 2) Maximize the recovery of known gypsum reserves needed for the Plant to fulfill its estimated operational design life;
- 3) Meet market demands for gypsum products;
- 4) Develop and maintain a replacement Quarry water supply designed to meet dust suppression requirements;
- 5) Concurrently reclaim Quarry site for post-mining uses as Open Space;
- 6) Secure permits and approvals to develop a water source to support the mining of gypsum reserves at the Quarry; and
- 7) Provide compensatory mitigation for potential impacts to waters of the state as a result of project implementation in compliance with State of California Fish & Game Code Section 1600 and the Porter Cologne Act.

## **2.5 ENVIRONMENTAL SETTING**

### **2.5.1 Project Location and Access**

The USG Plaster City Quarry holdings consists of 2,048 acres and is in the northwestern portion of Imperial County adjacent to the Imperial County/San Diego County line (see Figure 2-1 and Figure 2-2a). Well No. 3 would be located east of the existing Quarry on a USG-owned parcel (Assessor's Parcel Number [APN] 033-020-009). The proposed pipeline would be approximately 3.5 miles in length and would be developed within an existing right-of-way over an additional 12.7 acres (30 foot wide by 3.5 miles) of land, most of which (7.25 acres) is managed by the BLM. A portion of the right-of-way (3.75 acres) is located within the Anza-Borrego Desert State Park. The proposed pipeline would be developed within the existing narrow-gauge railroad right-of-way that is already disturbed by an existing unpaved access road. The approximately 207-acre Viking Ranch restoration site (see Figure 2-2b) is located 26 miles northwest of the USG Quarry in San Diego County (APNs 140-030-01-00, -05-00, -07-00, -09-00, -10-00, and -11-00). The 121-acre Old Kane Springs Road preservation site (see Figure 2-2c) is located 7 miles northwest of the USG Quarry in San Diego County (APN 253-150-34-00).

The Quarry, well site, and pipeline alignment are accessed via West Evan Hewes Highway. Viking Ranch is accessed on an unpaved easement that proceeds east from the northern extension of De Gregorio Road in Borrego Springs, California. The Old Kane Springs Road preservation site is accessed via the unpaved Old Kane Springs Road off Highway 78 or Split Mountain Road in Ocotillo Wells, California.

## 2.5.2 Assessor Parcel Numbers

The project site's assessor parcels are listed in Table 2-1, "Assessor's Parcel Numbers."

**Table 2-1  
Assessor's Parcel Numbers**

Assessor's Parcel Numbers	Ownership	Acres (Approximate) <sup>1</sup>	Zoning
<b>IMPERIAL COUNTY</b>			
<b>Well No. 3 Site</b>			
033-020-009	USG	159.9	S-2
<b>Pipeline Alignment</b>			
033-010-016	State	17.0	STATE
033-010-017	BLM	12.6	BLM
033-010-025	BLM	18.1	BLM
033-060-008	USG	388.6	S-2
033-060-010	USG	80.3	S-2
033-060-012	BLM	1.2	BLM
<b>USG Plaster City Quarry</b>			
033-060-009	USG	40.0	S-2
033-070-010	USG	80.0	S-2
033-070-004	USG	37.2	S-2
033-070-005	USG	159.0	S-2
033-070-008	USG	69.0	S-2
033-070-010	USG	80.0	S-2
033-070-011	USG	108.7	S-2
033-070-017	USG	32.6	S-2
033-070-023	USG	11.4	S-2
033-080-005	USG	37.9	BLM
033-090-011	USG	10.4	S-2
033-090-012	USG	70.0	S-2
033-090-013	USG	37.6	BLM
033-090-014	USG	42.2	BLM
033-090-015	USG	122.0	BLM/S-2
<b>Subtotal</b>		<b>2,048</b>	
<b>SAN DIEGO COUNTY</b>			
<b>Viking Ranch Restoration Site</b>			
140-030-01-00		4.8	
140-030-05-00	Anza-Borrego Foundation	12.3	8
140-030-07-00	State Park	26.5	n/a <sup>3</sup>
140-030-09-00	Borrego Water District	62.5	n/a <sup>3</sup>
140-030-10-00	Private	9.8	8
140-030-11-00	Borrego Water District	87.5	n/a <sup>3</sup>
<b>Subtotal</b>		<b>207<sup>2</sup></b>	
<b>Old Kane Springs Road Preservation Site</b>			
253-150-34-00	Private	121	8
<b>TOTAL:</b>		<b>2,376</b>	

Source: Imperial County 2022b

Notes: 1—Portion of parcel within project area; 2—does not add due to independent rounding; 3—parcels are federal land and not subject to County zoning



### **2.5.3 Existing Land Uses and Conditions**

The site of Well No. 3 and associated pipelines, the quarry area (impact area), Viking Ranch restoration site, and Old Kane Springs Road preservation site are located within the Colorado Desert, marked by land with relatively low elevations, some areas even below sea level. This area is characterized by a series of low-lying mountain ranges opening to the Salton Sea and Imperial Valley. The Quarry and project alignment are located in an undeveloped area at the northwest end of the Fish Creek Mountains, east of Split Mountain (part of the Vallecito Mountains) and along the southeast segment of the Fish Creek Wash. A portion of the northwest segment of the proposed pipeline alignment would cross Anza-Borrego Desert State Park.

The Quarry facilities, narrow-gauge railroad, and adjacent unpaved dirt access road are the only structures or infrastructure in the vicinity of the proposed project. The nearest residences are rural residences located approximately 2.5 miles north of the pipeline alignment at the nearest location, and approximately 3.7 miles northwest of Well No. 3.

The Viking Ranch restoration site was primarily former agricultural land located within the Coyote Creek Wash (see Figure 2-3, “Viking Ranch Restoration Site”). However, parcel 140-030-10-00 and the southeastern portion of parcel 140-030-11-00 are undeveloped and were not historically in agriculture. The Viking Ranch restoration site is bordered to the west, north, and east by the Anza-Borrego Desert State Park and to the south by privately-owned orchards. It is located at the base of Coyote Mountain, which is part of the Sana Rosa Mountain Range. The nearest sensitive receptor is a rural residence located approximately 900 feet west of the southwest corner of the restoration site.

The Old Kane Springs Road preservation site is bisected by Old Kane Springs Road and an associated overhead power transmission line supported by wooden poles (see Figure 2-4, “Old Kane Springs Road Preservation Site”). It contains Sonoran mixed woody scrub and desert dry wash woodland with little non-native species. It is surrounded by undeveloped desert lands, some of which are privately owned, but the predominate ownership in the area is Anza-Borrego Desert State Park.

### **2.5.4 General Plan Land Use Designations**

The Quarry (including the expansion area), Well No. 3, and approximately 2.5 miles of the pipeline alignment are in an area designated as Recreation/Open Space, the remaining 1 mile of the pipeline alignment is in areas designated by the Imperial County General Plan as Government/Special Public (Imperial County 1993); this segment is part of the Anza-Borrego Desert State Park.

The San Diego County General Plan designates the Viking Ranch restoration site as Semi-Rural Residential (SR-4) and the Old Kane Springs Road preservation site as Rural Lanes (RL-30) (San Diego County 2011). The restoration of the Viking Ranch site to more natural conditions and preservation of the Old Kane Springs Road preservation site would not conflict with these designations.

### **2.5.5 Zoning Classifications**

As the local land use authority, the County authorizes mining activities on unincorporated lands through the issuance of surface mining permits and approval of reclamation plans pursuant to County Code of Ordinances Title 9, Land Use Code, Division 20, Surface Mining and Reclamation. The provisions of the County Surface Mining and Reclamation ordinance apply to all lands within the County, both public and private. As provided

by this ordinance, surface mining operations are permitted within any County zoning designation upon approval of a surface mining permit (or existence of vested rights), reclamation plan, and financial assurances for reclamation.

The Quarry parcels (including the expansion area) are zoned either S-2 (Open Space/Preservation) or BLM (see Table 2-1). The proposed site of Well No. 3 is primarily zoned S-2 (Open Space/Preservation), with one parcel zoned STATE (APN 033-010-016). The S-2 Zone is the County's Open Space Preservation Zone. The primary intent of this zoning designation is to preserve the significant cultural, biological, and open space areas of the county. Permitted uses in the S-2 zone include agriculture and accessory uses, mineral extraction, pasturing and grazing, solar energy generation, public buildings, and storage. Additional industrial, manufacturing, commercial, energy, and recreational uses are allowed with the issuance of a CUP. The minimum lot size in the S-2 zone is 20 acres and the maximum height limit is 40 feet. The BLM and STATE zoning designations indicate parcels which are owned by the federal and State governments and not subject to County zoning requirements (Imperial County 2022).

The Quarry and Well No. 3 and the associated pipeline are associated with surface mining operations and are consistent with the Recreation/Open Space designation of the Imperial County General Plan (Imperial County 2015). Title 9, Land Use Ordinance, requires approval of a CUP to allow surface mining operations on lands zoned S-2.

The Viking Ranch restoration site and Old Kane Springs Road preservation site are in San Diego County and are not subject to Imperial County zoning requirements. Both properties are zoned by San Diego County as S92 (General Rural). This zoning designation is intended to provide approximate controls for land, which is rugged terrain, watershed, dependent on ground water for a water supply, desert, susceptible to fire and erosion, or subject to other environmental constraints (County of San Diego 2022).

### **2.5.6 Mineral Resource Designations**

An objective of SMARA is to create a mineral lands inventory by designating certain areas of California as being important for the production and conservation of existing and future supplies of mineral resources. Pursuant to Section 2790 of SMARA, the State Mining and Geology Board has designated certain mineral resource areas to be of regional significance.

The project area and the Viking Ranch restoration site and Old Kane Springs Road preservation site are in areas that have not yet been mapped as part of a Mineral Land Classification study (DOC 2022).

The Fish Creek Mountains gypsum deposit constitutes the largest reserves of this commodity in California. More than 31.2 million tons of gypsum has come from this deposit; of that, 30.1 million tons have been extracted by USG since 1945. This is the sole active gypsum quarry in the county, and the largest gypsum quarry in the United States (Imperial County 2006).

No locally important mineral resources are identified at either the Viking Ranch restoration site or the Old Kane Springs Road preservation site (San Diego County 2011).

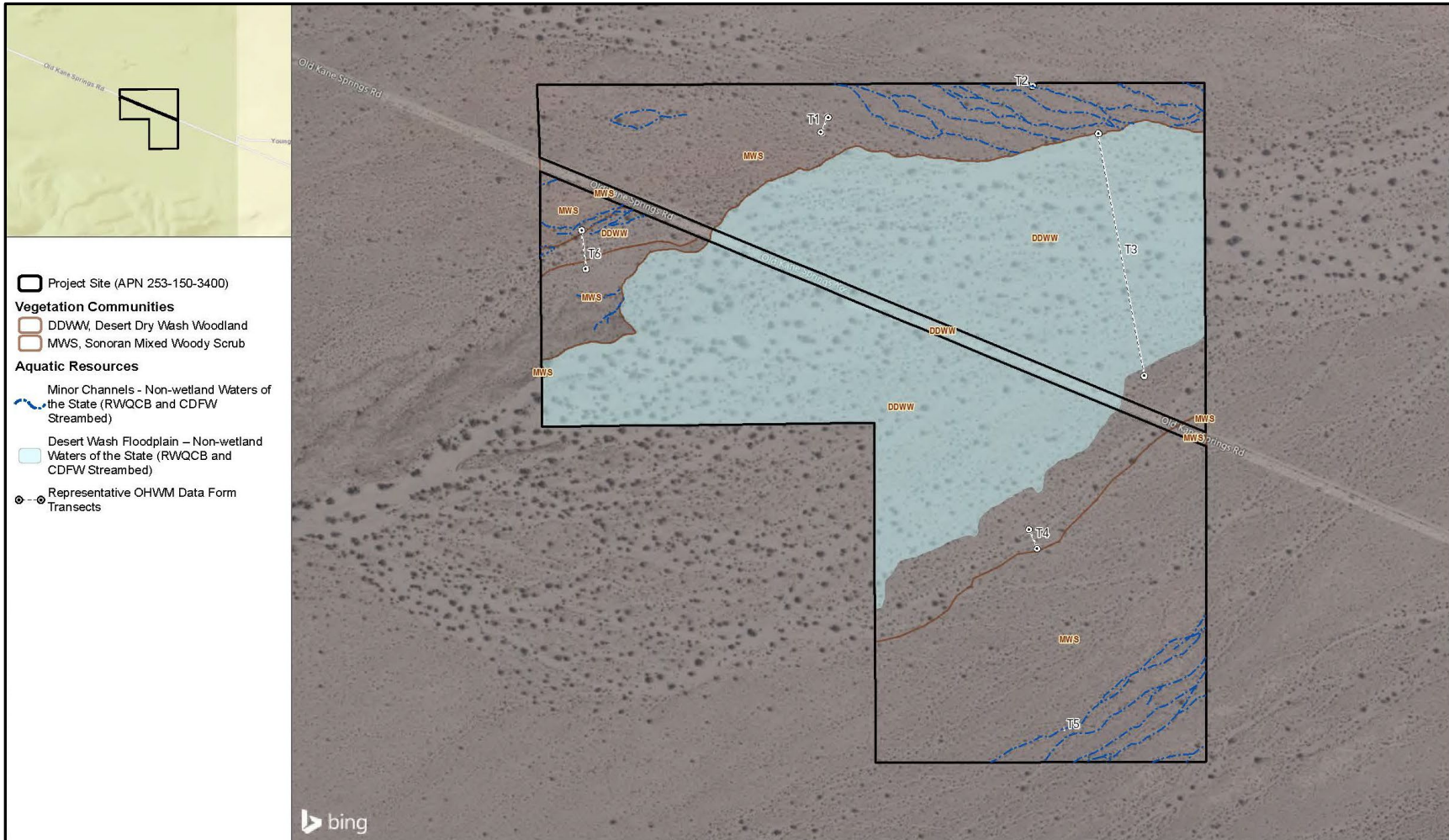


SOURCE: Dudek, 2021; Aerial-Bing Mapping Services, 2018

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

**Figure 2-3**  
**Viking Ranch Restoration Site**

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**SOURCE:** Dudek, 2021; Aerial-Bing Mapping Services, 2020  
**NOTE:** Image has been modified by Benchmark Resources and is not printed to scale.

**Figure 2-4**  
**Old Kane Springs Road Preservation Site**

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### **2.5.7 Utilities**

The site of proposed Well No. 3 and associated pipeline alignment are not currently served by any utilities. In conjunction with the development of the proposed pipeline, the project applicant would install an electric supply to serve the well. The electric supply would be installed alongside the existing alignment of the narrow-gauge railroad. No other utilities would be required to serve the proposed well or pipeline.

Water for dust suppression is currently provided to the Quarry by three existing wells located near Ocotillo. The Quarry is currently provided electricity by the onsite 14.4-megawatt (MW) cogeneration unit.

The Viking Ranch restoration site and Old Kane Springs Road preservation site are not currently served by any utilities and no utilities are proposed for installation at either site.

### **2.5.8 Equipment**

Both construction of the proposed well and pipeline and restoration of the Viking Ranch restoration site would be expected to require the use of backhoes, a trencher, grader, dozer, and dump truck, as well as supply and water trucks.

## **2.6 PROPOSED PROJECT ELEMENTS**

### ***Plaster City Quarry Expansion***

The Quarry expansion component of the USG Expansion/Modernization Project consists of the following:

- Improvements already made to the crushing and loading facilities (i.e., development of a new crusher building and extension to the existing rock storage building to allow additional hopper cards to be loaded).
- Adoption of a long-term mining and reclamation plan for the extent of USG's mineral holdings.

### ***Overview of Quarry Operation and Production***

The quarry operations are designed to quarry, crush, screen, and ship material via narrow-gauge rail to the Plant for finish processing and via truck for agricultural and Portland cement manufacturing uses. The existing Quarry processing facility would not be expanded beyond the existing improvements already made. Haul road alignments would be changed to accommodate individual quarrying in various areas, and the rail facility and access road would be maintained. Quarry access would regularly change as the individual quarries expand. All service and haul roads would be retained within the Quarry footprint. Equipment parking and storage areas at the Quarry would be on absorbent pads over a plastic membrane to keep fluids from passing through it to the soil below. Access roads outside the mining footprint, but within the Quarry boundary, would be maintained in place once established as identified in the Reclamation Plan.

Proposed Quarry operations are approved to produce up to 1.92 million tons of gypsum per year. At this rate of production, the number of train trips between the Quarry and the Plant could reach about 1,800 round trips per year.

### **Summary of Approved 2003 Mine Reclamation Plan**

On March 18, 2008, the Board approved a Mine Reclamation Plan (2003) for the U.S. Gypsum Mining & Quarry expansion project pursuant to Case No. CUP-08-0003, recorded document 2008-018432. The 2003 Mine Reclamation Plan consists of a multi-phased plan that would systematically quarry and process up to the rate authorized in USG's current air quality permit, approximately 1.92 million tons of gypsum annually. The Mine Reclamation Plan is divided into phases based on current geological data, quantity and quality of gypsum, market demand and proximity to the existing Plant. Each phase has been numbered for purposes of identification. Figure 2-5, "Plaster City Quarry Plan." shows the proposed phasing. At maximum production rates, the known reserves would provide in excess of 80 years of production.

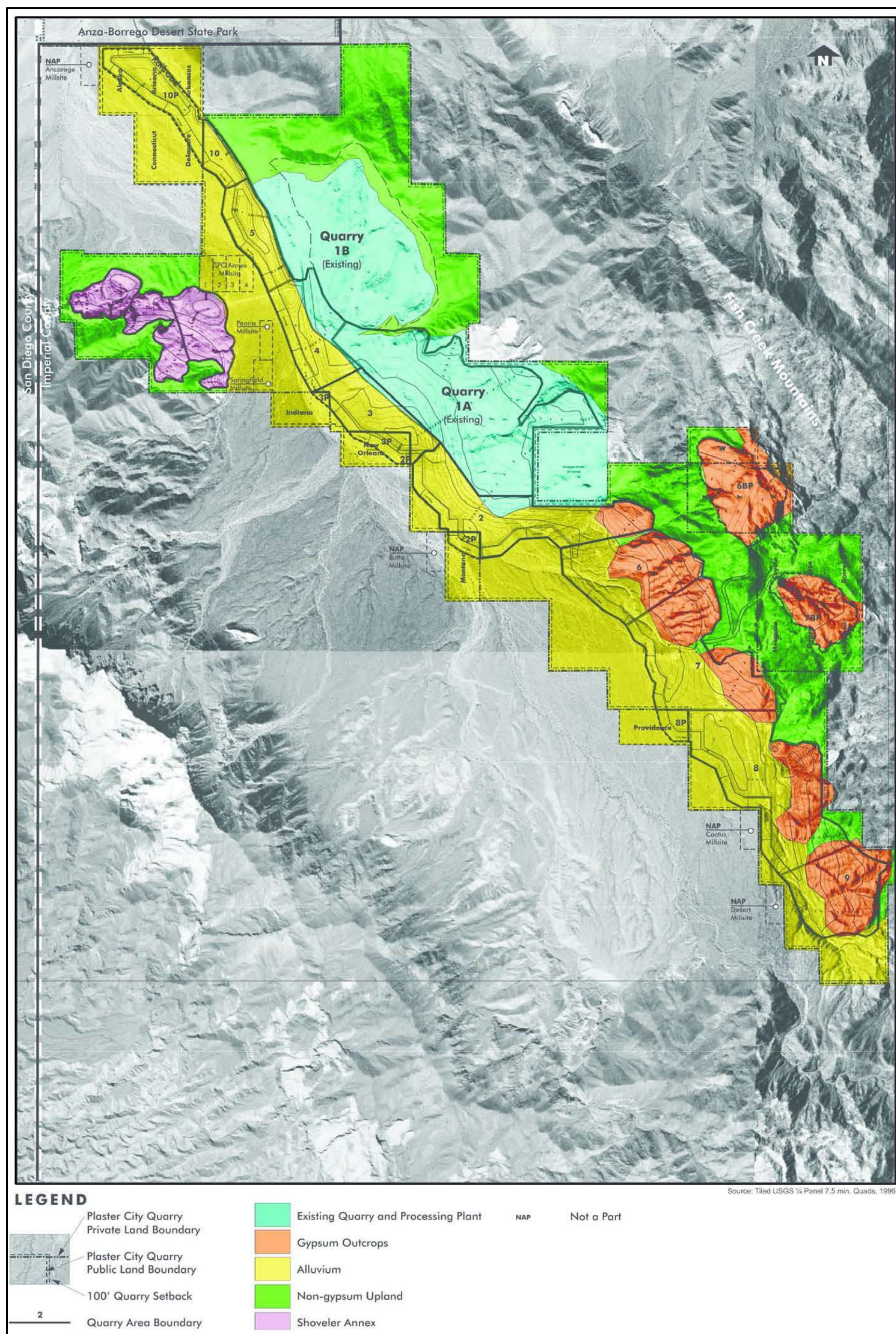
Two types of quarrying are proposed: outcrop quarrying and alluvial wash quarrying. The two methods of quarrying are described below.

*Outcrop Quarrying:* The areas of current production are designated as Quarry 1A and Shoveler. These areas consist of outcrops of gypsum above the level of the alluvial wash. Under the proposed project, production would continue with the extension and development of benches with a height of 25 feet. The final configuration of the benches would be based upon: (1) the contact with underlying low-purity gypsum, anhydrite, arkose, or granite; and (2) the up-dip limit of the outcrops. Quarry development would progress to each of the additional phases beginning with Phase 2, then proceeding both north and south into adjacent phases based on proximity and gypsum quality. As previously indicated, overburden on these outcrops is almost nonexistent. When surface clays are encountered, they would be removed for use in reclaiming previously mined outcrops.

*Alluvial Wash Quarrying:* Under the USG Modification/Expansion Project, quarrying would extend north to south. Quarrying of the alluvial wash deposits would progress downward and westward to a maximum overburden depth of 100 feet. Extraction of the gypsum would progress downward from the toe of the overburden strip slope in 25-foot vertical benches at a maximum stable slope of 1H:1V (Horizontal:Vertical) until the bottom of the mineable zone is reached. The depth of each Quarry phase would vary based on the bottom limit of gypsum.

An earthen berm would be constructed along the west side of the Quarry to divert natural surface water flows toward Fish Creek Wash and away from the Quarry operations. The design was based on a hydrology study and drainage analysis (Joseph E. Bonadiman & Associates Inc. 2004, cited in Dudek 2018). The berm would be constructed of overburden material from various gypsum mining phases, or portions of phases, in the alluvial wash stripped to expose the gypsum. As overburden is stripped, a portion would be pushed to the east bank of the wash and the furthest southern limits of the planned disturbance to form the berm. Another berm consisting of the top 1 foot of surface alluvium would be pushed over the west Quarry slopes and used as surface soil upon reclamation. Remaining overburden may be stockpiled for a short period of time but would typically be pushed into the adjoining mined out areas for reclamation of the slopes such that overburden from Phase 3 would be used in Phase 2, overburden from Phase 4 would be used in Phase 3, and so forth. At end of the quarry life, all berms will have been used for Reclamation.





SOURCE: Resource Design Technology, Inc., 2006; Modified by Benchmark Resources, 2022  
 NOTE: Image is not printed to scale.

Figure 2-5  
 Plaster City Quarry Plan

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### **Quarry Reclamation Techniques**

Where feasible, reclamation would occur concurrently during mining operations. Following the removal of gypsum, the disturbed areas would be reclaimed to a state of natural open space. The steepest portion of the hillside quarries would be sloped no steeper than 1H:1V slopes and about 100 feet high. The site access on the north would remain gated. The privately held lands would not be open to public recreational use. The benched hillsides would be recontoured by blasting or dozing the benches to soften the topography.

Once quarrying operations are terminated, equipment and structures would be removed; their foundations would be reduced below grade and covered in place. It is likely that an office or trailer would remain on site for ongoing revegetation monitoring, and for security purposes. The access road would be maintained for access to the main process area site and specific haul roads would be maintained to access reclamation activity and monitoring. Those portions of the rail line at natural surface elevation would remain in place. The length of rail proceeding below original ground line under the rock storage building will be removed and the spur cut backfilled. Ultimately all equipment, power poles, and buildings would be removed, road access would be restricted by gates, warning signs would be posted, and access to Quarry benches would be blocked by berms and/or boulders.

### **Revegetation**

Revegetation of the mined areas occurs as described in the approved 2003 Mine Reclamation Plan. The Revegetation Plan element of the Reclamation Plan focuses on preparing the surface of the mined area and providing native seeds to take advantage of the infrequent rains.

Revegetation efforts are fully described in the Mine Reclamation Plan and would be varied over the life of the operation. The revegetation techniques are proposed as guidelines that would be followed until new information or techniques become available, which could improve the results of the revegetation activities. Revegetation efforts would use seeds and plants of native species collected locally (on-site and on adjacent areas). The undisturbed portions of the Quarry and areas adjacent to the Quarry provide the targets for achievement through the revegetation effort. The areas to be disturbed by future mining would also provide specimens for direct transplanting of native species, and the undisturbed areas would provide a source of seeds for the revegetation effort.

### **Changes to Mine Reclamation Plan**

Since the USG Expansion/Modernization Project was approved in 2008, no changes to the Quarry Mine Plan as proposed in the Mine Reclamation Plan (March 2003) have occurred. However, minor changes have occurred to the Plan of Operations due to a reduction in the amount of public land at the Quarry. The Plan of Operations is subject to federal review by BLM and not County review, and, as such, is not described further in this Initial Study.

Under the current Quarry expansion, the limits of disturbance identified in the 2003 Mine Reclamation Plan have not changed; however, due to changes in land ownership and adjustments to the private land boundary resulting from updated and more precise mapping, the portion of the Mine Plan consisting of public lands has been reduced from 408 acres in 2003 to the present 73.2 acres. Of the 73.2 acres, 1.1 acres in the Annex Mill Site #1 have been disturbed by development of the access road; continued development of the Quarry is anticipated to disturb approximately 9.8 additional acres of public lands. Approximately 1,118.7 acres of USG privately-owned land is currently disturbed or would be disturbed

under the 2003 Mine Plan. For a total disturbance area of approximately 1,129.6 acres on both private and public land.

### ***Well No. 3 and Associated Pipeline***

Well No. 3 would be located east of the existing Quarry on a USG-owned parcel (APN 033-020-009) and would provide processing water via a 10-inch-diameter, approximately 3.5-mile-long underground pipeline that would be developed within the existing USG narrow-gauge railroad right-of-way (ROW CACA 56908). The pipeline would extend from Well No. 3 to the existing offload facility within the Quarry processing area. In conjunction with the development of the pipeline, USG would install an electric supply line to serve the well pump. The power service line would be installed underground from the well head to the Quarry gate; power poles would be installed within the Quarry site. In this document, where reference is made to this pipeline, the electrical line is understood to be included even if not specifically mentioned. The locations of the proposed Well No. 3 and pipeline are shown on Figure 2-2.

### **Well No. 3**

Approximately 26 AF/yr are needed to support Quarry operations. Originally, a water well for Quarry operations was permitted in 1983 under CUP 635-83 for a maximum withdrawal of 7,000 gallons per day (gpd) (Well No. 1). The well was drilled in basin fill on the eastern side of the wash. The water was non-potable (due to high dissolved solids) and was used exclusively for dust suppression. Consequently, the Quarry has historically received, and continues to receive, potable water for drinking and sanitary uses via a narrow-gauge railroad tank car from the Plant.

Production from Well No. 1 declined steadily over time due to the limited presence of groundwater in the penetrated aquifer and severe scale buildup in the well casing due to high Total Dissolved Solids (TDS) levels. Therefore, a second well (Well No. 2) was drilled in 1993 to replace the original well pursuant to CUP 635-83, which was re-issued for the new well. However, water production from Well No. 2 also declined steadily over time. Quarry Well No. 2 has been rehabilitated without a significant improvement in water production. Currently, Quarry Well No. 2 produces between approximately 4,000 and 4,800 gallons per day (gpd), which is insufficient to meet USG's current need for approximately 15,000 gpd for Quarry operations.

In 2001, USG drilled a test hole approximately three miles east-northeast of the Quarry on company-owned land along the USG railroad right-of-way. Pumping tests indicate that a production rate of 25 gallons per minute (gpm) to 50 gpm may be sustainable at the test hole location. USG is proposing to install Quarry Water Well No. 3 within one-half mile of the successful test hole.

For comparison purposes, the current permit limit of 7,000 gallons per day is approximately equivalent to 7.8 AF/yr, or 4.9 gpm assuming that the pump is operated continuously. The needed 26 AF/yr is approximately equivalent to 16.1 gpm assuming that the pump is operated continuously. Thus, based on the pumping test results, a production well developed in the vicinity of the test well would be able to sustain an adequate production rate. The proposed project would result in an increase in the rate of groundwater extraction of approximately 18.2 AF/yr.

The proposed Quarry Well No. 3 site represents approximately 1/8-acre on USG property. Well No. 3 would provide a reliable water supply capable of producing approximately 23,000 gallons per day (or 26 acre-feet per year [AF/yr]). The well would be approximately 6 inches in diameter and 565 feet in depth.

Final well design and pipeline criteria are being engineered. The water would be used in the Quarry for dust suppression on the haul roads and crushing equipment, for the watering of transplanted desert plant species during reclamation, and as a possible supply of potable water for use by employees.

### **Pipeline**

The proposed pipeline would be constructed of high-density polyethylene pipe (HDPE) and would be installed at a depth of about 4 feet below the ground surface. The pipeline would be developed within the existing narrow-gauge railroad right-of-way that is already disturbed by an existing unpaved access road. A trench, approximately five feet wide and seven feet deep would be excavated between the railroad and access road for installation of the pipeline. Excavated soils would be temporarily stockpiled along the alignment and used as backfill. Import of fill material is not anticipated. Construction would occur within a 30-foot-wide area along the entire length of the pipeline alignment. Therefore, development of the pipeline would disturb approximately 12.7 acres (30 foot wide by 3.5 miles) of land, most of which is managed by the BLM. A portion of the right-of-way (3.75 acres) is located within the Anza-Borrego Desert State Park. All waterline/powerline construction areas would be restored to pre-project conditions following the completion of construction activities.

### ***Viking Ranch Restoration***

The Viking Ranch parcels were primarily former orchard land located north of Borrego Springs and within the Coyote Creek Wash (see Figure 2-1). However, parcel 140-030-10-00 and the southwestern portion of parcel 140-030-11-00 are undeveloped and were not historically in agriculture. The mitigation site is located approximately 26 miles from the USG Quarry. Viking Ranch was used for orchard production until the site was purchased by the Borrego Water District in 2017. Previous agricultural land modifications were constructed that diverted hydrology of Coyote Creek around the agricultural field. These topographic modifications included excavation of ditches and construction of berms to protect the orchard from flooding. The restoration program will remove these diversion features to re-establish braided, unconstrained flow across the site, consistent with the existing Coyote Creek floodplain. The restoration program is described in the Draft Habitat Mitigation and Monitoring Plan for the United States Gypsum Company Plaster City Expansion/Modernization Project (HMMP) (see Appendix D-4).

### **Baseline Conditions**

The HMMP documents existing conditions on the restoration site. A site reconnaissance of the Viking Ranch restoration site was conducted on June 1, 2018, by Hugh McManus of Dudek. No residence or other habitable structures were observed on the site. Evidence of past agricultural activity was observed in the form of irrigation lines and remnants of chipped trees in windrows. Additional notable observations include a decommissioned water well, a power distribution board, electrical power hook ups, debris, containers storing oil, and a weather station maintained and operated by University of California Irvine.

A jurisdictional delineation was completed for the restoration site that identified floodplain areas, ephemeral channels, and braided channels on the site, as shown on Figure 2-3. A total of 53.12 acres of jurisdictional waters were identified on the restoration site.

A Preliminary Environmental Site Assessment Report (ESA) (Dudek 2018, cited in Dudek 2022) was conducted on the site that included the collection of 10 soil samples that were analyzed for organochlorine pesticides. No organochlorine pesticides were detected at or above the above reporting

limits in any of the 10 samples analyzed. The ESA includes the following recommendations to address potential hazards and hazardous materials concerns on the site:

- Two oil filled plastic containers observed on the site should be removed and properly disposed of in accordance with applicable local, state, and federal guidelines.
- Stained soil was observed on the site near a cement platform located in the southwest corner of the site. The stained soil should be removed and disposed of in accordance with applicable local, state, and federal guidelines.
- A water well was located on the site. If the owner of the site plans to use the well in the future, the well should be capped with a lockable lid. If no future use of the well is planned, the turbine discharge head and impeller shaft should be removed, and the well should be abandoned in accordance with local, state, and federal guidelines. Alternatively, the well may be converted to a monitoring well.
- Surface water was observed flowing on the site from the adjacent property to the south. The source of the surface water should be identified. The surface water should then be prevented from entering the site or rerouted off of the site. Surface water from unknown sources has the potential to carry contamination onto the site.

A general biological survey and habitat assessment for sensitive species was conducted on the restoration site on October 17, 2019, by Callie Amoaku and Kathleen Dayton of Dudek. The species observed and their potential to occur on the site are described in the HMMP.

A record search for potential cultural resources was conducted by Dudek archeologists for the restoration site. No cultural resources have been recorded within the proposed restoration site and within a 1-mile buffer area. While no significant impacts or known tribal resources have been identified, the HMMP recommends monitoring cultural resources during earth disturbance work during restoration implementation.

### **Site Preparation**

USG will select a County of San Diego-approved Project Biologist who will review the final HMMP and restoration construction documents and help to ensure that all site protections, pre-work bird surveys, and any other required items are adequately performed prior to beginning restoration work.

*Weed and Invasive Species Removal:* Although a former orchard was demolished several years ago, the following process was not conducted in a manner that re-established normal desert ecological systems on the property and the hydraulic disconnection with Coyote Creek remains. Orchard debris wood chips and larger stumps and branches remain a significant impediment to flow as well as diversion berms and ditches. The restoration of the site would clean the site of all large and/or coarse woody debris, surface irrigation pipe, irrigation standpipes, electrical infrastructure, etc. Existing native and non-native vegetation would be removed where necessary. Topsoil containing the seed bank of existing native vegetation would be retained on site.

The non-native tamarisk within the restoration site would be cut to grade and treated with a systemic herbicide approved for use in wetland areas. Cut tree segments would be carefully removed from the site avoiding damage to adjacent habitat. Any other non-native herbaceous species present in

the enhancement areas would be removed using hand tools. Cut vegetation would be bagged/containerized and disposed of off-site in a legal manner.

*Grading:* Following non-native vegetation removal, the northern berm and diversion ditch would be backfilled and leveled with the adjacent upstream topography to remove the impediment to downgradient braided flow. The eastern berm would be graded to create numerous breaks in the berm to create multiple flow paths for flood waters to enter the restoration site. Portions of the eastern berm would be retained as dune features where possible, without impeding re-establishment of braided flow onto the restoration site from the floodplain to the east and northeast of the restoration site. Interior non-jurisdictional areas of the restoration site would be graded to provide the opportunity for flood water to flow in braided pattern across the entire restoration site. No soil import or export is anticipated for the restoration project. Berm removal areas are shown Figure 2-6, “Viking Ranch Conceptual Restoration Plan.”

The overall site would be graded to be compatible with the surrounding native land surface elevations, setting the top 2 inches of topsoil aside and used for final grade. Rough contour grading of ephemeral channels would take place to create micro-topographic variances as shown on Figure 2-3. The design is intended to re-establish braided flow patterns across the restoration site, consistent with adjacent Coyote Creek wash. It is anticipated that flood flows would naturally create macro- and micro-topographic fluvial features within the restoration site and a diversity of hydrologic and geomorphic conditions, leading to characteristic desert plant communities and animal habitat.

A grade structure is planned to be constructed in the southeast corner of the project where channel incision is beginning to run up into the proposed restoration site. If left unchecked, the head cut would continue to migrate upstream into the restoration site resulting in erosion of the land surface and destabilization of the floodplain. The structure would be constructed of wood timbers and slats to retain the soil on the restoration site. The effect of the structure would be to retain the upstream channel bed to stabilize the head cut that is presently causing unnatural flow and erosion on the site. The structure would be built to withstand water flow over the top, creating a stable bed gradient upstream (within the restoration site) and allowing water to continue flowing to the lower elevation floodplain present downstream.

Long term, the restoration site would once again become part of the wash and would receive hydrologic inputs from the surface flows of Coyote Creek.

*Erosion Control:* Heavy sediment transport is a typical function of desert washes and flood plains. The intent of the restoration project is to return the former agricultural field into the functional floodplain of Coyote Creek wash. As such, it is expected that sediment would be deposited and exported from the restoration site during flood events. Erosion control best management practices (BMPs) would be used where necessary to maintain normal sediment transport functions while limiting destabilization of the restoration site. In general, the native vegetation established through seeding would provide effective erosion control, however additional BMPs such as burlap encased straw wattles/fiber rolls or burlap gravel bags may be needed, as determined by the Project Biologist and, or Qualified SWPPP Practitioner (QSP). Any recommendations made by the QSP or anyone else for the restoration site would be pre-approved by the Project Biologist. BMPs with nylon netting would not be used in the restoration site. All straw wattles/fiber rolls would be certified free of noxious

weeds. Erosion control seeding may not be applied to restoration site unless pre-approved by the Project Biologist. Non-native seeds would be avoided at all times.

*Weed Control and Seed Selection and Application:* Weed control would include hand-pulling of weeds, use of hand tools, weed whips, and/or foliar treatments of appropriate herbicides as determined by the Project Biologist. A native seed mix of appropriate desert plant species that are present within the Coyote Creek Wash would be imprinted onto the restoration site.

*Avoidance and Minimization Measures:* Impacts from fugitive dust that may occur during berm demolition, filling of the diversion ditch, and restoration site grading, would be avoided to the maximum extent practicable and minimized through water application for dust control during grading activities.

A biologist would be on site to oversee installation of temporary fencing, any grading within 100 feet of existing waters of the State to ensure permit compliance (404, other permits for the project), and educate contractors as needed on biological resources associated with the project.

Equipment would be checked for fluid leaks prior to operation and repaired as necessary. A spill kit for each piece of construction related equipment should be on site and must be used in the event of a spill.

## **2.7 INTENDED USES OF THE SEIR**

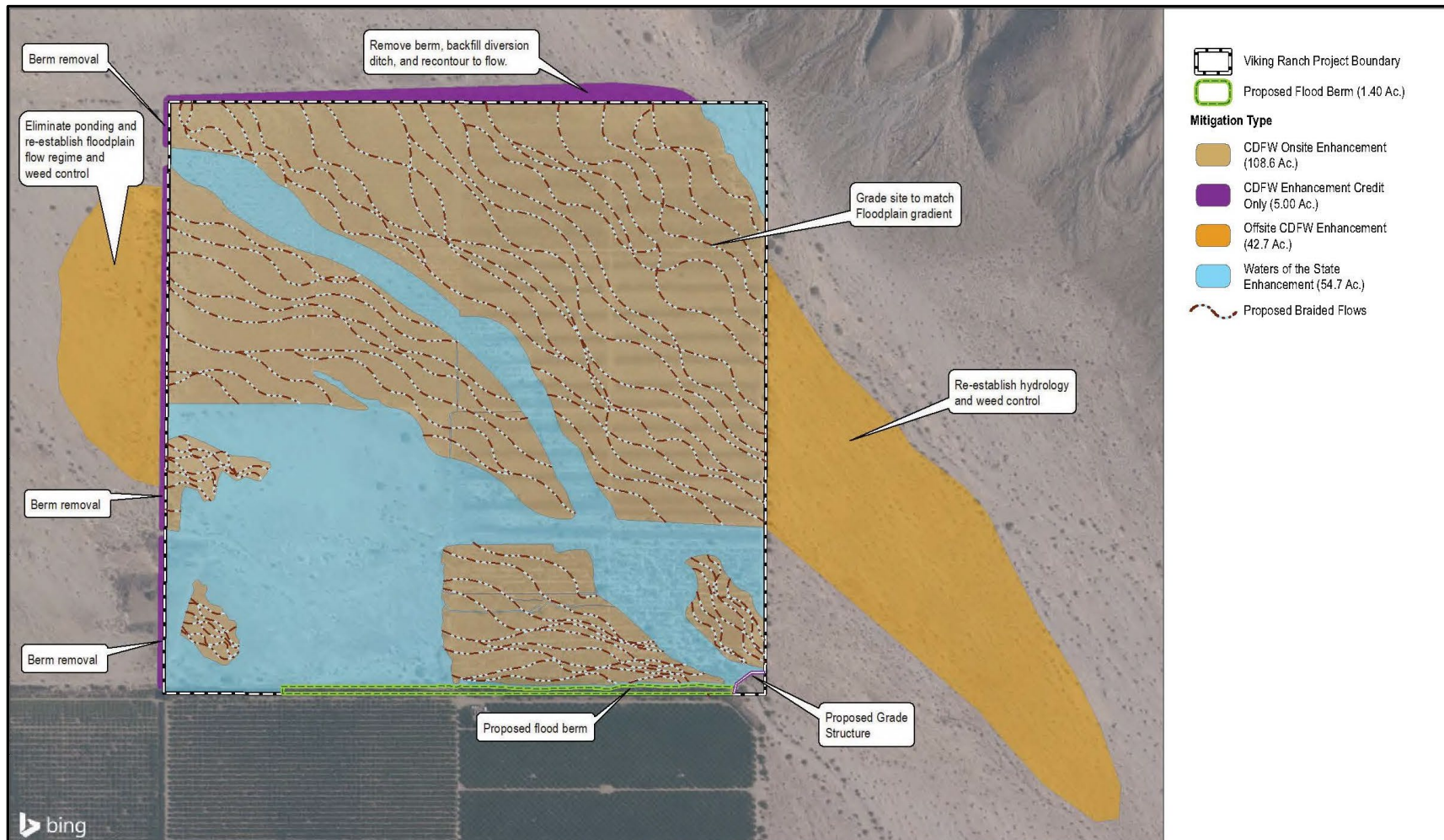
### **2.7.1 Imperial County**

It is anticipated that this SEIR will provide environmental review for all discretionary approvals and actions necessary for this project. Permits and approvals would be required before the project could be implemented, although quarrying operations pursuant to the currently effective use permit are anticipated to continue throughout the environmental review process period.

As lead agency for the proposed project, the County is primarily responsible for the approvals required. The primary approval being sought is a Conditional Use Permit for development of a new production well, Well No. 3, and an associated pipeline to provide water to the Quarry. As part of any approval action for the project, the County would be required to certify the final SEIR, adopt findings of fact and overriding considerations (if necessary), and adopt a mitigation monitoring and reporting program. In Imperial County, the County Planning Commission is the approval authority for the Conditional Use Permit, which is an action appealable to the County Board of Supervisors.

Additional land use entitlements from the County are not needed for mining and reclamation activities under the Quarry expansion. However, because Well No. 3 and the associated pipeline would provide water to support Quarry operations, this SEIR evaluates potential environmental impacts associated with mining and reclamation activities under the Quarry expansion, for full disclosure and to provide the appropriate CEQA compliance analysis and mitigation for responsible agencies.





**SOURCE:** Dudek, 2021; Aerial-Bing Mapping Services, 2018  
**NOTE:** Image has been modified by Benchmark Resources and is not printed to scale.

**Figure 2-6**  
**Viking Ranch Conceptual Restoration Plan**

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This SEIR also evaluates potential environmental impacts associated with the Viking Ranch restoration and Old Kane Springs Road preservation actions, as proposed in the Habitat Mitigation and Monitoring Plan (Dudek 2022). Although these project components do not require entitlements from Imperial County, this SEIR evaluates the environmental impacts of these actions for full disclosure and to provide the appropriate CEQA review for responsible agencies, which will include major grading permits issued by San Diego County.

### **2.7.2 Other Agencies Whose Approval May Be Required**

In addition to Imperial County approval, other permits and approvals would be required before implementation of the project could proceed. The other agencies whose approval may be required include:

- County of San Diego (Major Grading Permit)
- California Department of Fish and Wildlife (Lake and Streambed Alteration Agreement)
- Colorado River Regional Water Quality Control Board (Construction General Permit Notice of Intent [NOI], Industrial General Permit NOI, Waste Discharge Requirements)

The following public agency approvals have already been obtained:

- U.S. Bureau of Land Management (Right-of-Way Grants [Case file numbers CACA-056908 and CACA-044014])
- U.S. Fish and Wildlife Service (Biological Opinion FWS-ERIV-11B0345-19F1352)

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# **CHAPTER 3: TERMINOLOGY, APPROACH, AND ASSUMPTION**

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# CHAPTER 3: TERMINOLOGY, APPROACH, AND ASSUMPTIONS

This section provides an overview of the terminology, approaches, and assumptions underlying the topic-specific sections of this subsequent environmental impact report (SEIR) that follow. Included in this section is an overview of the terminology used, project analysis, organization of the sections, and methods for determining what impacts are significant.

## 3.1 TERMINOLOGY

To assist reviewers in understanding this SEIR, the following terms are defined:

- *Project* means the whole of an action that has the potential for resulting in a direct physical change in the environment, or a reasonably foreseeable indirect physical change in the environment.
- *Project site* refers to the area analyzed in the 2008 EIR/EIS and consists of the Quarry expansion area, site of proposed Well No. 3, and the associated pipeline alignment.
- *Off-site mitigation sites* collectively refers to the Viking Ranch Restoration Site and the Old Kane Springs Road Preservation Site.
- *Environment* means the physical conditions that exist in the area and that will be affected by a proposed project, including land, air, water, minerals, flora, fauna, ambient noise, and objects of historical or aesthetic significance. The area involved is where significant direct or indirect impacts would occur as a result of the project. The environment includes both natural and human-made (artificial) conditions.
- *Impacts* analyzed under the California Environmental Quality Act (CEQA) must be related to a physical change. Impacts are:
  - direct or primary impacts that would be caused by a proposed project and would occur at the same time and place; or
  - indirect or secondary impacts that would be caused by a proposed project and would be later in time or farther removed in distance but would still be reasonably foreseeable. Indirect or secondary impacts may include growth-inducing impacts and other effects related to induced changes in the pattern of land use; population density or growth rate; and related effects on air and water and other natural systems, including ecosystems.
- *Significant impact on the environment* means a substantial, or potentially substantial, adverse change in any of the physical conditions in the area affected by a proposed project, including land, air, water, minerals, flora, fauna, ambient noise, and objects of historical or aesthetic significance. An economic or social change by itself is not considered a significant impact on the environment. A social or economic change related to a physical change may be considered in determining whether the physical change is significant.
- *Mitigation* consists of measures that avoid or substantially reduce a proposed project's significant environmental impacts by:
  - avoiding the impact altogether by not taking a certain action or parts of an action;
  - minimizing impacts by limiting the degree or magnitude of the action and its implementation;
  - rectifying the impact by repairing, rehabilitating, or restoring the affected environment;

- reducing or eliminating the impact over time by preservation and maintenance operations during the life of the action; or
- compensating for the impact by replacing or providing substitute resources or environments.
- *Cumulative impacts* are two or more individual impacts that, when considered together, are considerable or that compound or increase other environmental impacts. The following statements also apply when considering cumulative impacts:
  - The individual impacts may be changes resulting from a single project or separate projects.
  - The cumulative impact from several projects is the change in the environment that results from the incremental impact of the project when added to other closely related past, present, and reasonably foreseeable probable future projects. Cumulative impacts can result from individually minor but collectively significant projects taking place over time.
- *Threshold of significance* is a criterion established by the lead agency to identify at what level an impact would be considered significant. A criterion is defined by a lead agency based on examples found in CEQA or the CEQA Guidelines, scientific and factual data relative to the lead agency jurisdiction, views of the public in affected areas, the policy/regulatory environment of affected jurisdictions, and other factors.

This SEIR uses a variety of terms to describe the level of significance of adverse impacts. These terms are defined as follows:

- *No impact*. The project would have no direct or indirect effects on the environmental resource issue.
- *Less than significant*. An impact that is adverse but that does not exceed the defined thresholds of significance. Less than significant impacts do not require mitigation.
- *Potentially significant*. An impact that would be considered a significant impact as described above; however, the occurrence of the impact cannot be immediately determined with certainty. For CEQA purposes, a potentially significant impact is treated in this SEIR as if it were a significant impact and mitigation measures are recommended, when feasible, to avoid or reduce potentially significant impacts.
- *Significant*. An impact that exceeds the defined thresholds of significance and would or could cause a substantial adverse change in the environment. When available, mitigation measures are recommended to avoid the impact or reduce it to a less-than-significant level.
- *Significant and unavoidable*. An impact that exceeds the defined thresholds of significance and cannot be eliminated or reduced to a less-than-significant level through the implementation of feasible mitigation measures.

### 3.2 APPROACH TO THE ENVIRONMENTAL ANALYSIS

CEQA Guidelines require analysis of environmental impacts caused by a proposed project. All phases of a proposed project, including planning, development, and implementation, are evaluated in the analysis. CEQA Guidelines Section 15126.2 states that:

An EIR shall identify and focus on the significant environmental effects of the proposed project. In assessing the impact of a proposed project on the environment, the Lead Agency should normally limit its examination to changes in the existing physical conditions in the affected area as they exist



at the time the notice of preparation is published, or where no notice of preparation is published, at the time environmental analysis is commenced. Direct and indirect significant effects of the project on the environment shall be clearly identified and described, giving due consideration to both the short-term and long-term effects. The discussion should include relevant specifics of the area, the resources involved, physical changes, alterations to ecological systems, and changes induced in population distribution, population concentration, and the human use of the land (including commercial and residential development), health and safety problems caused by the physical changes, and other aspects of the resource base such as water, historical resources, scenic quality, and public services. The EIR shall also analyze any significant environmental effects the project might cause by bringing development and people into the area affected.

According to CEQA Guidelines Section 15126.4, an EIR should describe feasible measures that could minimize significant adverse impacts (Section 15126.4[a][1]) and measures that are fully enforceable through permit conditions, agreements, or other legally binding process (Section 15126.4[a][2]). Mitigation measures are not required for effects that are found to be less than significant.

As discussed in Chapter 1, “Introduction,” and Appendices A-1, “Initial Study” and A-2, “NOC/NOP,” respectively, the County determined, through preliminary analysis of the project and agency comments received on the NOP and Initial Study, that the project would have no impact on aesthetics agricultural resources, energy, hazards and hazardous materials, mineral resources, noise, population and housing, public services, recreation, transportation, utilities and service systems, or wildfire. Therefore, these issues are not addressed further in this SEIR.

### **3.3 APPROACH TO SUBSEQUENT ENVIRONMENTAL IMPACT REPORT**

#### **3.3.1 Scope of Environmental Review**

CEQA only applies to discretionary approvals by public agencies (14 California Code of Regulations Section 15352[a]). USG’s mining and reclamation activities at the project site are subject to vested rights and do not require any new permits or other approvals from the County. Accordingly, no discretionary approval would trigger CEQA review of the mining or reclamation components of the applicant’s operations at the project site. However, because proposed Well No. 3 and associated pipeline would support quarry operations by providing water for dust suppression, this SEIR evaluates potential environmental impacts associated with mining and reclamation activities under the Quarry expansion, for full disclosure and to provide the appropriate CEQA compliance analysis and mitigation for responsible agencies.

In contrast, the application for a Conditional Use Permit (CUP) requires the County’s discretionary approval, which subjects the development of Well No. 3 and associated pipeline to CEQA compliance. In addition, the proposed off-site restoration and preservation activities would require discretionary approvals from other agencies, including a Major Grading Permit San Diego County for the Viking Ranch restoration site. Although these activates will not require entitlements from Imperial County, this SEIR evaluates the environmental impacts of these actions for full disclosure and to provide the appropriate CEQA compliance analysis and mitigation for responsible agencies.

Therefore, this SEIR limits environmental review to potential environmental impacts associated with development of Well No. 3 and associated pipelines, operations under the 2008 Quarry expansion,

restoration of the Viking Ranch site, and preservation of the Old Kane Springs Road site. Other aspects of the applicant's existing surface mining and manufacturing operations in the project area are not part of the discretionary approval and thus, are not part of the project subject to CEQA review (see, e.g., *City of Ukiah v. County of Mendocino* (1987) 196 Cal. App. 3rd 47; *El Dorado County Taxpayers for Quality Growth v. County of El Dorado* (2004) 122 Cal.App.4th 1591.)

### 3.3.2 Use of an SEIR to Evaluate Environmental Impacts

The applicant has been continuously mining for gypsum at the project site since 1945. The County certified a joint EIR/EIS for expansion of the Quarry in 2008, followed by a Subsequent Environmental Impact Statement (SEIS) in 2019. The project site and off-site mitigation sites are included within the boundaries of the 2008 Quarry expansion project site, with the exception of the off-site restoration and preservation activities.

The proposed project contains revisions to the project that were not analyzed in the 2008 EIR/EIS. The California Supreme Court concluded in *Friends of the College of San Mateo Gardens v. San Mateo County Community College District* (2016) that a lead agency has broad discretion to utilize CEQA's subsequent review provisions if "at least some of the environmental impacts of the modified project were considered in the original document, such that the original document retains some relevance to the ongoing decision-making process" (1 Cal.5th 937, 951). In this case, a SEIR is appropriate to evaluate the environmental impacts resulting from the proposed project because numerous portions of the 2008 EIR/EIS remain relevant to the proposed revisions. In particular, proposed development of Well No. 3 and associated pipeline would be essentially unchanged from that evaluated in the 2008 EIR/EIS.

The SEIR will review and update some portions of the 2008 EIR/EIS because of project revisions, (namely the proposed off-site restoration and preservation activities), changed circumstances, and availability of new information (including updated technical studies) that was not available in 2008. As a result, the relevant 2008 EIR/EIS sections will be reevaluated and expanded considering project revisions, changed circumstances, and availability of new information, as required by CEQA. In addition, the SEIR only replaces and updates portions of the 2008 EIR/EIS that pertain to the project impact area. Other 2008 EIR/EIS analysis and mitigation for the larger 2008 Quarry expansion project are not addressed in this EIR and will therefore remain in place.

### 3.3.3 Statutory and Regulatory SEIR Provisions

When an EIR has been prepared for a project, CEQA establishes a presumption against requiring further environmental review. In summary, "no [supplemental or subsequent EIR] is required unless there are substantial changes in the project or the circumstances surrounding the project, or if new information becomes available." (*Santa Teresa Citizen Action Group v. City of San Jose* (2003) 114 Cal.App.4th 689, 703.) The lead agency has determined that preparation of an SEIR, pursuant to CEQA Section 21166, is necessary, given that substantial changes to the project are proposed and new information has become available since 1981.

California Public Resources Code Section 21166 provides:

When an [EIR] has been prepared for a project..., no subsequent or supplemental [EIR] shall be required by the lead agency...unless one or more of the following events occurs:

- (a) Substantial changes are proposed in the project which will require major revisions of the [EIR].
- (b) Substantial changes occur with respect to the circumstances under which the project is being undertaken which will require major revisions in the [EIR].
- (c) New information, which was not known and could not have been known at the time the [EIR] was certified as complete, becomes available.

CEQA Guidelines Section 15162, subdivision (a), expands on the three circumstances listed in Section 21166:

- (1) Substantial changes are proposed in the project which will require major revisions of the previous EIR...due to the involvement of new significant environmental effects or a substantial increase in the severity of previously identified significant effects;
- (2) Substantial changes occur with respect to the circumstances under which the project is undertaken which will require major revisions of the previous EIR...due to the involvement of new significant, environmental effects or a substantial increase in the severity of previously identified significant effects;  
or
- (3) New information of substantial importance, which was not known and could not have been known with the exercise of reasonable diligence at the time the previous EIR was certified as complete..., shows any of the following:
  - (A) The project will have one or more significant effects not discussed in the previous EIR...;
  - (B) Significant effects previously examined will be substantially more severe than shown in the previous EIR;
  - (C) Mitigation measures or alternatives previously found not to be feasible would in fact be feasible and would substantially reduce one or more significant effects of the project, but the project proponents decline to adopt the mitigation measure or alternative; or
  - (D) Mitigation measures or alternatives which are considerably different from those analyzed in the previous EIR would substantially reduce one or more significant effects on the environment, but the project proponents decline to adopt the mitigation measure or alternative.

The requested CUP would replace expired CUP 635-83, and development of Well No 3 and associated pipeline would be essentially unchanged from that previously proposed and analyzed in the 2008 EIR/EIS. However, the current proposal includes additional project components which were not part of the original 2008 Quarry expansion. The 2019 Final SEIS included mitigation to offset the impacts to 139 acres of waters of the United States (WoUS) at the Quarry by restoring, enhancing, and preserving aquatic resources at a property where aquatic functions are similar to the impacted functions. In response, USG proposes to mitigate impacts at a 1.92:1 mitigation-to-impact ratio, for a total of 267.3 acres of rehabilitation, enhancement, and preservation of aquatic resources. The proposed compensatory mitigation consists of the restoration and enhancement of an approximately 207-acre area at the Viking Ranch restoration site and the preservation of approximately 121 acres at the Old Kane Springs Road preservation site. The sites are shown on Figures 2-1, "Regional Location," 2-2b, "Site Location—Quarry, Well No. 3, and Pipeline," and 2-2c, "Site Location—Viking Ranch Restoration Site." These activities could result in one or more significant effects not discussed in the previous EIR. Thus, the County has determined that an SEIR is required for this project. This SEIR is subsequent to the 2008 EIR/EIS.

### 3.3.4 Age of Previous CEQA Document

The age of the original EIR (2008) does not affect the County’s ability to use an SEIR for the proposed project. CEQA established no rules regarding the expiration of prior environmental review. For example, the appellate court in *Mani Brothers Real Estate Group v. City of Los Angeles* (2007) upheld the city’s decision to rely on an addendum prepared in 2005 for an EIR certified in 1989—a 16-year gap, except as to the issue of police services (153 Cal.App.4th 1385, 1390–1391, 1397–1398). On the topic of police services, the court required the county to prepare an SEIR, pursuant to Section 21166 (*Id.* at pp. 1403–1404). Indeed, *Mani Brothers* noted that courts have upheld even the use of an addendum (a much lesser degree of environmental review than an SEIR) under Section 21166 in “numerous contexts,” including “in cases where many years had elapsed between the original EIR and later project revisions...and where the project’s appearance had changed fairly dramatically” (*Id.* at p. 1398). In another case, the court endorsed the use of an SEIR, rather than a new EIR, when considering modifications to a conditional use permit (CUP) for mining operations in 1996, where that CUP had been previously studied in a 1976 EIR—20 years prior (*Fairview Neighbors, supra*, 70 Cal.App.4th at p. 243).

### 3.3.5 Project Description and Impacts Previously Considered in the 2008 EIR/EIS

The 2008 EIR/EIS evaluated the Quarry Expansion and Modernization project which consists of four general components:

1. Update and expansion at the Plaster City Plant,
2. Expansion of the mining operation at the Plaster City Quarry,
3. Development of Well No. 3 and associated pipeline for dust suppression at the Quarry,
4. Replacement of the existing water supply line to serve the Plant.

It should be noted that the focus of this SEIR is limited to the proposed Quarry Expansion and development of Well No. 3 and associated pipeline. The remaining project components are not included in the proposed project, and do not require further evaluation in this SEIR. The following is a summary of those project impacts identified in the 2008 EIR/EIS that relate only to the proposed Quarry expansion and development of Well No. 3 and associated pipeline.

#### **Geology**

- Slope Stability at Quarry (Impact 3.2-1)
- Loss of Paleontological Resources (Impact 3.2-2)

#### **Hydrology and Water Quality**

- Water Depletion at Quarry (Impact 3.3-5)
- Water Quality Degradation at Quarry (Impact 3.3-6)
- Surface Water Flow at Quarry (Impact 3.3-7)
- Cumulative Reduced Water Level (Impact 3.3-8)
- Cumulative Water Quality Degradation (Impact 3.3-9)

### ***Vegetation***

- Loss of Vegetation at Quarry (Impact 3.4-1)
- Loss of Vegetation at Well Site and Pipeline (Impact 3.4-2)

### ***Wildlife***

- Loss of Wildlife at Quarry (Impact 3.5-1)
- Loss of Wildlife at Well Site and Pipeline

### ***Air Quality***

- Increased PM<sub>10</sub> and/or Dust Emissions at Quarry (Impact 3.6-1)
- Increased Exhaust Emissions at Quarry (Impact 3.6-2)
- Increased PM<sub>10</sub> and/or Dust Emissions at Well Site and Pipeline (Impact 3.6-3)
- Increased Exhaust Emissions Along (Impact 3.6-7)

### ***Aesthetics***

- Aesthetic Degradation from Lighting and Glare at Quarry (Impact 3.7-1)
- Temporary and Permanent Aesthetic Degradation (Impact 3.7-2)

### ***Cultural Resources***

- Prehistoric Cultural Resources (Impact 3.8-1)
- Ethnic Cultural Resources (Impact 3.8-2)
- Historic Cultural Resources (Impact

### ***Land Use***

- Compatibility with Existing Land Uses (Impact 3.9-1)
- Quarry Compatibility with Wilderness Area (Impact 3.9-2)

### ***Hazards and Hazardous Materials***

- Groundwater Contamination Hazards at Plant and Quarry (Impact 3.10-1)
- Explosive Hazards at Quarry (Impact 3.10-2)

### ***Traffic and Circulation***

- Truck Traffic Increases (Impact 3.11-1)

### ***Acoustics/Noise***

- Noise Pollution at Quarry and Plant Sites (Impact 3.12-1)

### ***Public Health and Safety***

- Industrial Facility Safety (Impact 3.13-1)
- Reclaimed Quarry Site Safety (Impact 3.13-2)

### 3.3.6 New Impacts to Be Considered in the SEIR

The proposed project includes restoration and/or preservation of two off-site mitigation sites in San Diego County for the purpose of mitigating anticipated impacts to jurisdictional waters within the Quarry expansion area. These project components were not evaluated in the 2008 EIR/EIS or the 2019 SEIS but will undergo environmental review in this SEIR. Additionally, some portions of the 2008 EIR/EIS will be reviewed and updated in this SEIR, because circumstances have changes and new information has become available since publication of the 2008 EIR/EIS. As a result, the relevant EIR sections will be reevaluated and expanded to consider new information and changed circumstances, as required by CEQA.

### 3.4 RESOURCE SECTION FORMAT

Each resource section follows the same format and includes the following primary subsections:

- The “**Environmental Setting**” subsections provide an overview of the existing physical environmental conditions at the time this analysis was prepared, as relevant to each resource topic. When relevant to the analysis, the “Environmental Setting” subsection also provides the environmental conditions approved under the existing reclamation plan to provide a benchmark for the impact analysis of conditions with the project.
- The “**Regulatory Setting**” subsections identify the plans, policies, laws, regulations, and ordinances that are relevant to each resource subject. This subsection describes required permits and other approvals necessary to implement the project.
- The “**Significance Criteria and Analysis Methodology**” subsections provide criteria that define when an impact would be considered significant. Criteria are based on CEQA Guidelines, scientific and factual data, views of the public in affected area(s) where appropriate, the policy/regulatory environment of affected jurisdictions, or other factors. The methodology for the impact analysis is also provided as relevant to each resource topic.
- The “**Project Impacts and Mitigation Measures**” subsections provide an assessment of the potential impacts of the project and specify why impacts are found to be significant and unavoidable, significant, potentially significant, or less than significant, or why there is no environmental impact. Feasible mitigation measures to avoid or reduce the severity of identified impacts follow the impact discussions. Where feasible mitigation and feasible alternatives cannot reduce impacts to a less-than-significant level, the impacts are identified as significant and unavoidable. The analysis of cumulative impacts is provided in Chapter 6, “Other CEQA Topics.”

### 3.5 MITIGATION MEASURES

In most cases, implementation of recommended mitigation measures would either result in complete avoidance of impacts or reduce impacts to less than significant. However, impacts that cannot be reduced to a less-than-significant level after application of feasible mitigation measures and alternatives are considered significant and unavoidable. As a condition of project approval, the applicant for the proposed project would be required to implement all the feasible mitigation measures identified in this EIR and adopted by the County.

In accordance with PRC Section 21081.6(a), the County would adopt a mitigation monitoring and reporting program (MMRP) at the time it certifies the EIR. The purpose of the MMRP is to ensure that the applicant

would comply with the adopted mitigation measures when the project is implemented. The MMRP would identify each of the mitigation measures and describe the party responsible for monitoring, the time frame for implementation, and the program for monitoring compliance.

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# CHAPTER 4: ENVIRONMENTAL ANALYSIS

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## CHAPTER 4: ENVIRONMENTAL ANALYSIS

Sections 4.1 through 4.8 of this chapter document the resource impact analyses conducted for the project. As discussed in Section 1.1, “Purpose of a Subsequent Environmental Impact Report,” of this SEIR, the CEQA Guidelines require analysis of environmental impacts caused by a proposed project.

As an initial step in the environmental review process, issues identified in the Environmental Checklist of Appendix G of the CEQA Guidelines were considered to determine whether the project would have the potential to result in significant impacts associated with each issue. The initial review is documented in the initial study prepared for the project (see Appendix A-1, “Initial Study”). Sections 4.1 through 4.8 are based on the resource topics as listed in the CEQA Guidelines’ Appendix G Environmental Checklist. These resource topics are relevant to this project:

- air quality,
- biological resources,
- cultural resources,
- geology, soils, and paleontological resources,
- greenhouse gas emissions,
- hydrology and water quality,
- land use and planning,
- tribal cultural resources, and
- mandatory findings of significance.

Section 1.3.1, “Scope of this Environmental Impact Report,” discusses those issue areas for which a detailed analysis is not included. These issue areas are aesthetics, agricultural and forestry resources, energy, hazards and hazardous materials, mineral resources, noise, population and housing, public services, recreation, transportation, utilities and services systems, and wildfire.

The general methodologies used for analyzing project impacts for the resource analyses is discussed in Chapter 3, “Terminology, Methodology, and Assumptions.” Specific methodologies are discussed in each resource section.

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# SECTION 4.1: AIR QUALITY

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## SECTION 4.1: AIR QUALITY

This section of the subsequent environmental impact report (SEIR) documents potential project impacts associated with air quality and air pollutant emissions. Impacts considered in this section include the potential for project air emissions to exceed established thresholds or to cause or contribute to exceedance of state or federal ambient air quality standards. The section also considers human health risks associated with air pollutant emissions resulting from the project and the potential for public nuisance as a result of project odors.

The information in this section is based primarily on the *Air Quality Modeling Analysis US Gypsum Company—Southwest Plant* Trinity Consultants 1999) (Appendix C-1, “Air Quality Modeling Analysis”), the updated air emissions estimates and associated analysis provided in the 2019 SEIS Appendix C-2, “SEIS Air emissions Estimates”), new air emissions estimates for the Viking Ranch Restoration Site Appendix C-3, “Estimated Air Quality Emissions—Viking Ranch”), and other publicly available sources related to air quality.

### **4.1.1 Environmental Setting**

This section discusses the existing air quality conditions in the project area including relevant environmental factors such as climate and topography, descriptions of pertinent air pollutants and associated attainment statuses, and local air quality monitoring data.

#### **4.1.1.1 Regional Setting**

Imperial County is in the southeastern corner of California with the relatively flat Imperial Valley and the southern Salton Sea in the center surrounded by multiple mountain ranges to the east and west. State and federal air quality regulations have designated this region as the Salton Sea Air Basin (SSAB). The Imperial County portion of the SSAB is under the jurisdiction of the Imperial County Air Pollution Control District (ICAPCD). The SSAB encompasses the entirety of Imperial County and the southeast portion of Riverside County and is generally an arid desert region, with a significant land area located below sea level. The hot and dry conditions experienced in the region are a result of a large, semi-permanent high-pressure area that dominates the Imperial Valley and the presence of the coastal mountains to the west. The high pressure blocks most storms, except during the winter when the pressure is the weakest and tends to shift to the south. The coastal mountains tend to block moist air from entering the valley resulting in hot temperatures during the summer and dry weather year-round.

The Salton Sea Air Basin contains relatively few major emissions sources, but may experience emissions transported from Mexicali, Mexico and from significant vehicular traffic, particularly near the two international ports of entry: Calexico West and Calexico East. Emissions sources within the Salton Sea Air Basin consist of geothermal power generation, food processing, plaster and wallboard (gypsum) manufacturing, and other light industrial facilities. Additionally, the continuing fall in the water surface elevation of the Salton Sea is expected over time to generate fugitive dust originating from newly exposed sediments originally deposited underwater from agricultural runoff in the Salton Sea.

#### **4.1.1.2 Pollutants and Health Effects**

Air pollution contributes to a wide variety of adverse health effects. The United States Environmental Protection Agency (USEPA) has established national ambient air quality standards (NAAQS) for six of the

most common air pollutants—carbon monoxide, lead, ground-level ozone, particulate matter, nitrogen dioxide, and sulfur dioxide—known as “criteria” air pollutants. The California Air Resources Board (CARB) also has adopted California ambient air quality standards (CAAQS) for these same criteria air pollutants. The presence of criteria pollutants in ambient air is generally caused by numerous, diverse, and widespread sources of emissions.

Ambient air quality standards are established to protect the public from adverse health effects of criteria pollutants and to provide protection against visibility impairment and damage to animals, crops, vegetation, and buildings. Health effects that have been associated with each of the criteria pollutants are summarized below.

### **Ozone**

Ground-level ozone is a secondary pollutant that forms through the reaction of pollutants (e.g., oxides of nitrogen and reactive organic gases) in the atmosphere by a photochemical process involving sun energy. Chemicals that are precursors to ozone formation can also be emitted by natural sources, particularly trees and other plants. Ground-level ozone can pose risks to human health, in contrast to the stratospheric ozone layer that protects the earth from harmful wavelengths of solar ultraviolet radiation.

Short-term exposure to ground-level ozone can cause a variety of respiratory health effects, including inflammation of the lining of the lungs, reduced lung function, and respiratory symptoms such as cough, wheezing, chest pain, burning in the chest, and shortness of breath. Ozone exposure can decrease the capacity to perform exercise. Exposure to ozone can also increase susceptibility to respiratory infection. Exposure to ambient concentrations of ozone has been associated with the aggravation of respiratory illnesses such as asthma, emphysema, and bronchitis, leading to increased use of medication, absences from school, doctor and emergency department visits, and hospital admissions. Short-term exposure to ozone is associated with premature mortality. Studies have also found that long-term ozone exposure may contribute to the development of asthma, especially among children with certain genetic susceptibilities and children who frequently exercise outdoors. Long-term exposure to ozone can permanently damage lung tissue (EPA 2013).

Other health effects of ozone include the following:

- difficulty to breathe deeply and vigorously,
- shortness of breath and pain when taking a deep breath,
- coughing and sore or scratchy throat,
- inflammation and damage to the airways,
- aggravation of lung diseases such as asthma, emphysema, and chronic bronchitis,
- increased frequency of asthma attacks,
- increased susceptibility of the lungs to infection, and
- continued damage to the lungs even when the symptoms have disappeared (EPA 2012).

### **Nitrogen Oxides**

Nitrogen oxides (NO<sub>x</sub>) are a group of gases that form when nitrogen reacts with oxygen during combustion, especially at high temperatures. These compounds, including nitric oxide and nitrogen dioxide, can contribute



significantly to air pollution, especially in cities and areas with high motor vehicle traffic. At high concentrations, nitrogen dioxide can damage sensitive crops, such as beans and tomatoes, and aggravate respiratory problems (EPA 2013).

### **Sulfur Dioxide**

Fossil fuel combustion by electrical utilities and industry is the primary source of sulfur dioxide in the United States. People with asthma are especially susceptible to the effects of sulfur dioxide. Short-term exposures of asthmatic individuals to elevated levels of sulfur dioxide while exercising at a moderate level may result in breathing difficulties, accompanied by symptoms such as wheezing, chest tightness, or shortness of breath. Studies also provide consistent evidence of an association between short-term sulfur dioxide exposures and respiratory symptoms in children, especially those with asthma or chronic respiratory symptoms. Short-term exposures to sulfur dioxide have also been associated with respiratory-related emergency department visits and hospital admissions, particularly for children and older adults (EPA 2013).

### **Particulate Matter**

Particulate matter (PM) is a generic term for a broad class of chemically and physically diverse substances that exist as discrete particles (liquid droplets or solids) over a wide range of sizes. Particles originate from a variety of man-made stationary and mobile sources, as well as from natural sources like forest fires. The chemical and physical properties of PM vary greatly with time, region, meteorology, and the source of emissions.

For regulatory purposes, EPA distinguishes between categories of particles based on size and has established standards for fine and coarse particles.  $PM_{10}$ , in general terms, is an abbreviation for particles with an aerodynamic diameter less than or equal to 10 micrometers ( $\mu m$ ), and it represents inhalable particles small enough to penetrate deeply into the lungs (i.e., thoracic particles).  $PM_{10}$  is composed of a coarse fraction referred to as  $PM_{10-2.5}$  or as thoracic coarse particles (i.e., particles with an aerodynamic diameter less than or equal to 10  $\mu m$  and greater than 2.5  $\mu m$ ) and a fine fraction referred to as  $PM_{2.5}$  or fine particles (i.e., particles with an aerodynamic diameter less than or equal to 2.5  $\mu m$ ). Thoracic coarse particles are emitted largely as a result of mechanical processes and uncontrolled burning. Important sources include resuspended dust (e.g., from cars, wind, etc.), industrial processes, construction and demolition operations, residential burning, and wildfires. Fine particles are formed chiefly by combustion processes (e.g., from power plants, gas and diesel engines, wood combustion, and many industrial processes) and by atmospheric reactions of gaseous pollutants (EPA 2013).

Although scientific evidence links harmful human health effects from exposures to both fine particles and thoracic coarse particles, the evidence is much stronger for fine particles than for thoracic coarse particles. Effects associated with exposures to both  $PM_{2.5}$  and  $PM_{10-2.5}$  include premature mortality, aggravation of respiratory and cardiovascular disease (as indicated by increased hospital and emergency department visits), and changes in sub-clinical indicators of respiratory and cardiac function. Such health effects have been associated with short- and/or long-term exposure to PM. Exposures to  $PM_{2.5}$  are also associated with decreased lung function growth, exacerbation of allergic symptoms, and increased respiratory symptoms. Children, older adults, individuals with preexisting heart and lung disease (including asthma), and persons with lower socioeconomic status are among the groups most at risk for effects associated with PM exposures. Information is accumulating and currently provides suggestive evidence for associations between long-term  $PM_{2.5}$  exposure and developmental effects, such as low birth weight and infant mortality resulting from respiratory causes (EPA 2013).

**Lead**

Historically, the primary source of lead emissions to the air was combustion of leaded gasoline in motor vehicles (such as cars and trucks), prior to the eradication of leaded gasoline in the United States in the mid-1990s. Since then, the remaining sources of lead air emissions have been industrial sources, including lead smelting operations, battery recycling operations, and piston-engine small aircraft that use leaded aviation gasoline. Lead accumulates in bones, blood, and soft tissues of the body. Exposure to lead can affect development of the central nervous system in young children, resulting in neurodevelopmental effects such as lowered IQ and behavioral problems (EPA 2013).

**Carbon Monoxide**

Gasoline-fueled vehicles and other on-road and non-road mobile sources are the primary sources of carbon monoxide (CO) in the United States. Exposure to carbon monoxide reduces the capacity of the blood to carry oxygen, thereby decreasing the supply of oxygen to tissues and organs. Reduction in oxygen supply to the heart, in particular, causes critical complications. People with any heart disease already have a reduced capacity for pumping oxygenated blood to the heart, which can cause them to experience myocardial ischemia (reduced oxygen to the heart), often accompanied by chest pain (angina), when exercising or under increased stress. For these people, short-term CO exposure further affects their body’s already compromised ability to respond to the increased oxygen demands of exercise or exertion. Therefore, people with angina or heart disease are at the greatest risk from ambient CO. Other potentially at-risk populations include those with chronic obstructive pulmonary disease, anemia, diabetes, and those in prenatal or elderly life stages (EPA 2013).

**4.1.1.3 Regional Air Quality and Attainment Status**

The determination of whether a region’s air quality is healthful or unhealthful is made by comparing contaminant levels in ambient air samples to the CAAQS and NAAQS. Both CARB and USEPA use monitoring station data to designate an area’s attainment status with respect to the CAAQS and NAAQS, respectively, for criteria air pollutants. The purpose of these designations is to identify areas with air quality problems and thereby initiate planning efforts for improvement. The three basic designation categories are “nonattainment,” “attainment,” and “unclassified.” The “unclassified” designation is used in an area that cannot be classified on the basis of available information as meeting or not meeting the standards. See Table 4.1-1, “Ambient Air Quality Standards.”

**Table 4.1-1  
 Ambient Air Quality Standards**

Pollutant	Average Time	California Standards <sup>1</sup>	National Standards <sup>2</sup>	
		Concentration <sup>3</sup>	Primary <sup>3,4</sup>	Secondary <sup>3,5</sup>
O <sub>3</sub>	1 hour	0.09 ppm (180 mg/m <sup>3</sup> )	—	Same as Primary Standard
	8 hours	0.070 ppm (137 mg/m <sup>3</sup> )	0.070 ppm (147 mg/m <sup>3</sup> )	
NO <sub>2</sub>	Annual Arithmetic Mean	0.030 ppm (57 mg/m <sup>3</sup> )	0.053 ppm (100 mg/m <sup>3</sup> )	Same as Primary Standard
	1 hour	0.18 ppm (339 mg/m <sup>3</sup> )	0.100 ppm (188 mg/m <sup>3</sup> )	

Pollutant	Average Time	California Standards <sup>1</sup>	National Standards <sup>2</sup>	
		Concentration <sup>3</sup>	Primary <sup>3,4</sup>	Secondary <sup>3,5</sup>
CO	8 hours	9 ppm (10 mg/m <sup>3</sup> )	9 ppm (10 mg/m <sup>3</sup> )	None
	1 hour	20 ppm (23 mg/m <sup>3</sup> )	35 ppm (40 mg/m <sup>3</sup> )	
SO <sub>2</sub>	24 hours	0.04 ppm (105 mg/m <sup>3</sup> )	0.14 ppm (for certain areas)	—
	Annual Arithmetic Mean	—	0.030 ppm (for certain areas)	—
	3 hours	—	—	0.5 ppm (1300 mg/m <sup>3</sup> )
	1 hour	0.25 ppm (655 mg/m <sup>3</sup> )	0.075 ppm (196 mg/m <sup>3</sup> )	—
PM <sub>10</sub>	24 hours	50 mg/m <sup>3</sup>	150 mg/m <sup>3</sup>	Same as Primary Standard
	Annual Arithmetic Mean	20 mg/m <sup>3</sup>	—	
PM <sub>2.5</sub>	24 hours	No Separate State Standard	35 mg/m <sup>3</sup>	Same as Primary Standard
	Annual Arithmetic Mean	12 mg/m <sup>3</sup>	12 mg/m <sup>3</sup>	15 mg/m <sup>3</sup>
Lead <sup>6</sup>	30-day Average	1.5 mg/m <sup>3</sup>	—	—
	Calendar Quarter	—	1.5 mg/m <sup>3</sup>	Same as Primary Standard
	Rolling 3-Month Average	—	0.15 mg/m <sup>3</sup>	
Hydrogen sulfide	1 hour	0.03 ppm	—	—
Vinyl chloride	24 hours	0.01 ppm	—	—
Sulfates	24 hours	25 µg/m <sup>3</sup>	—	—
Visibility-reducing particles	8 hours (10:00 a.m. to 6:00 p.m. PST)	Insufficient amount to produce an extinction coefficient of 0.23 per kilometer because of particles when the relative humidity is less than 70%	—	—

Source: CARB 2016

**Notes:**

ppm = parts per million by volume.  
 mg/m<sup>3</sup> = micrograms per cubic meter.  
 mg/m<sup>3</sup> = milligrams per cubic meter.

- California standards for O<sub>3</sub>, CO, SO<sub>2</sub> (1-hour and 24-hour), NO<sub>2</sub>, suspended particulate matter (PM<sub>10</sub>, PM<sub>2.5</sub>), and visibility-reducing particles are values that are not to be exceeded. All others are not to be equaled or exceeded. CAAQS are listed in the Table of Standards in Section 70200 of Title 17 of the California Code of Regulations.
- National standards (other than O<sub>3</sub>, NO<sub>2</sub>, SO<sub>2</sub>, particulate matter, and those based on annual averages or annual arithmetic mean) are not to be exceeded more than once a year. The O<sub>3</sub> standard is attained when the fourth highest 8-hour concentration in a year, averaged over 3 years, is equal to or less than the standard. For NO<sub>2</sub> and SO<sub>2</sub>, the standard is attained when the 3-year average of the 98th and 99th percentile, respectively, of the daily maximum 1-hour average at each monitor within an area does not exceed the standard (effective April 12, 2010). For PM<sub>10</sub>, the 24-hour standard is attained when the expected number of days per calendar year with a 24-hour average concentration above 150 micrograms per cubic meter (µg/m<sup>3</sup>) is equal to or less than one. For PM<sub>2.5</sub>, the 24-hour standard is attained when 98 percent of the daily concentrations, averaged over 3 years, are equal to or less than the standard.
- Concentration expressed first in units in which it was promulgated. Equivalent units given in parentheses are based on a reference temperature of 25°C and a reference pressure of 760 torr.  
 Most measurements of air quality are to be corrected to a reference temperature of 25°C and a reference pressure of 760 torr; ppm (parts per million) in this table refers to ppm by volume, or micromoles of pollutant per mole of gas.
- National Primary Standards: The levels of air quality necessary, with an adequate margin of safety, to protect the public health.
- National Secondary Standards: The levels of air quality necessary to protect the public welfare from any known or anticipated adverse effects of a pollutant.
- CARB has identified lead and vinyl chloride as toxic air contaminants with no threshold level of exposure for adverse health effects determined. These actions allow for the implementation of control measures at levels below the ambient concentrations specified for these pollutants.

**4.1.1.4 Toxic Air Contaminants**

According to Section 39655 of the California Health and Safety Code, toxic air contaminants (TACs) are a defined set of airborne pollutants that may “cause or contribute to an increase in mortality or an increase in serious illness, or which may pose a present or potential hazard to human health.” A wide range of sources, from industrial plants to motor vehicles, emit TACs. TACs can be emitted directly and can also be formed in the atmosphere through reactions among different pollutants.

The health effects associated with TACs are quite diverse and generally are assessed locally, rather than regionally. TACs can cause long-term health effects such as cancer, birth defects, neurological damage, asthma, bronchitis or genetic damage; or short-term acute effects, such as eye watering, respiratory irritation (coughing), running nose, throat pain, and headaches. For evaluation purposes, TACs are separated into carcinogens and non-carcinogens based on the nature of the physiological effects associated with exposure to the pollutant. Carcinogens are assumed to have no safe threshold below which health impacts would not occur, and cancer risk is expressed as excess cancer cases per one million exposed individuals, typically over a lifetime of exposure. Non-carcinogenic substances differ in they are generally assumed to feature a safe level of exposure below which no negative health impact is believed to occur. These levels are determined on a pollutant-by-pollutant basis. Acute and chronic exposure to non-carcinogens is expressed as an HI, which is the ratio of expected exposure levels to an acceptable reference exposure level.

TACs are primarily regulated through state and local risk management programs. These programs are designed to eliminate, avoid, or minimize the risk of adverse health effects from exposures to TACs. A chemical becomes a regulated TAC in California based on designation by the Office of Environmental Health Hazard Assessment (OEHHA). As part of its jurisdiction under Air Toxics Hot Spots Program (Health and Safety Code Section 44360(b)(2)), OEHHA derives cancer potencies and reference exposure levels (RELs) for individual air contaminants based on the current scientific knowledge that includes consideration of possible differential effects on the health of infants, children and other sensitive subpopulations, in accordance with the mandate of the Children’s Environmental Health Protection Act (Senate Bill 25, Escutia, Chapter 731, Statutes of 1999, Health and Safety Code Sections 39669.5 et seq.).

**4.1.1.5 Air Quality Conditions at the Time of the 2008 EIR/EIS**

**Attainment Status and Planning**

At the time the 2008 EIR/EIS was published, the ICAPCD was designated nonattainment for both federal and state standards for ozone and PM<sub>10</sub>. The ICAPCD was in the process of preparing an attainment plan for the PM<sub>10</sub> standards that would demonstrate a reduction of PM<sub>10</sub> emissions by 5 percent each year until the standard is attained.

**Monitoring Data**

The 2008 EIR/EIS provided a summary of air quality monitoring data taken at CARB monitoring stations located throughout Imperial County. The nearest monitoring station to the Quarry was at Westmorland, approximately 25 miles east of the Quarry, surrounded by urban and agricultural uses. Data collected at the Calexico east station for nitrogen dioxide and sulfur dioxide was also utilized as the Westmorland station did not record these pollutants.

According to the 2008 EIR/EIS, monitoring data collected at these stations for the period 1997-2001 indicated that concentrations from one hour of ozone collection exceeded the State standards an average of 14 days

per year and exceeded the federal standards on an average of 2 days per year. The more stringent PM<sub>10</sub> state standards were exceeded about 90 days per year and the federal standard was exceeded about 2 days per year. Except for a couple days in which NO<sub>x</sub> was exceeded in Calexico, measurements of the other pollutants did not exceed the air quality standards.

#### **4.1.1.6 Air Quality Conditions at Present**

##### **Imperial County Air Pollution Control District**

The project site, including the Quarry expansion area, Well No. 3 site, and associated pipeline alignment are located in Imperial County which is under the jurisdiction of the ICAPCD.

##### ***Attainment Status and Planning***

The portion of the SSAB that is in Imperial County is currently designated nonattainment (moderate) for both federal and state standards for ozone. The area is also partially designated nonattainment (moderate) for the federal PM<sub>2.5</sub> standard. This partial nonattainment area encompasses the Imperial Valley in the southcentral urban and agricultural portions of the County. The Quarry, well site, and associated pipeline alignment are outside and west of this designated partial nonattainment area for PM<sub>2.5</sub>. Imperial County is in attainment of the state PM<sub>2.5</sub> standard and in attainment or designated unclassified for the remaining criteria air pollutant standards.

Since publication of the 2008 EIR/EIS, the ICAPCD achieved attainment of the federal and state PM<sub>10</sub> standards and in 2018, both ICAPCD and CARB approved the Imperial County 2018 Redesignation Request and Maintenance Plan for PM<sub>10</sub>. This plan demonstrates that the ICAPCD has measures in place to ensure compliance with the PM<sub>10</sub> standards through 2030. Also in 2018, the ICAPCD approved the Imperial County 2018 Annual PM<sub>2.5</sub> State Implementation Plan (SIP) requiring reduction of PM<sub>2.5</sub> emissions by 5 percent each year until the standard is attained. With regard to ozone emissions, the ICAPCD adopted the 2017 Imperial County 2008 8-Hour Ozone SIP. Each of these plans is described further in the regulatory setting subsection below.

##### ***Monitoring Data***

The two nearest monitoring stations to the project site are in El Centro and Westmoreland, approximately 20 and 25 miles east of the Quarry and well site/pipeline corridor, respectively. The El Centro station measures ozone, PM<sub>10</sub>, PM<sub>2.5</sub>, and nitrogen dioxide. The Westmoreland station measures ozone and PM<sub>10</sub>. The monitoring stations are surrounded by urban and agricultural uses. By contrast, the Quarry is in an isolated canyon surrounded by open space.

According to the 2019 SEIS, the data collected at these stations between 2014 and 2017 indicate that 8-hour concentrations of ozone exceeded the federal standard an average of 13 days per year at the El Centro station. The 8-hour concentrations of ozone did not exceed the federal standard at the Westmoreland station. The federal PM<sub>10</sub> standard was exceeded an average of about 5 days per year at the El Centro station, and 17 days per year at the Westmoreland station. PM<sub>2.5</sub> and NO<sub>x</sub> federal standards were not exceeded at the El Centro station; those pollutants are not monitored at the Westmoreland station. Measurements of the other pollutants monitored did not exceed the applicable air quality standards.

## San Diego County Air Pollution Control District

The Viking Ranch Restoration Site and Old Kane Springs Road Preservation Site are located in San Diego County which is under the jurisdiction of the San Diego County Air Pollution Control District (SDAPCD).

### ***Attainment Status and Planning***

The SDAPCD is currently designated nonattainment of the federal and state 8-hour ozone standards, nonattainment of the state 1-hour ozone standard, and nonattainment of the state PM<sub>10</sub> and PM<sub>2.5</sub> standards. The San Diego County APCD is designated attainment or unclassified for the remaining criteria air pollutant standards.

The SDAPCD's State Ozone Attainment Plan ("Regional Air Quality Strategy" or RAQS) was initially adopted in 1992 and was most recently updated in 2023. The RAQS identifies measures to reduce emissions from sources regulated by the SDAPCD, primarily stationary sources such as industrial operations and manufacturing facilities (SDAPCD 2023).

### ***Monitoring Data***

The nearest CARB air quality monitoring stations to the offsite mitigation sites in San Diego County, are the Alpine-Victoria Drive station (about 35 miles west) which monitors ozone and NO<sub>x</sub> and the El Cajon stations (40 miles west) which monitor ozone, carbon monoxide, NO<sub>x</sub>, SO<sub>2</sub>, and particulate matter. A review of monitoring data from these stations for the years 2017 through 2021 indicates that the 8-hour ozone standards were exceeded a total of 123 times and the 1-hour state ozone standard was exceeded a total of 22 times at the Alpine station during the three-year period (SDAPCD 2021).

## 4.1.2 Regulatory Setting

Federal, state, and local regulations pertaining to air quality potentially applicable to the project are discussed below.

### 4.1.2.1 Federal

#### **U.S. Environmental Protection Agency**

The federal Clean Air Act, passed in 1970 and last amended in 1990, forms the basis for the national air pollution control effort. The U.S. EPA is responsible for implementing most aspects of the Clean Air Act, which include NAAQS for major air pollutants, performance standards for new and modified sources, hazardous air pollutant standards, approval of state attainment plans, motor vehicle emission standards, stationary source emission standards and permits, acid rain control measures, stratospheric ozone protection, and enforcement provisions. NAAQS are established for "criteria pollutants" under the Clean Air Act, which are O<sub>3</sub>, CO, NO<sub>2</sub>, SO<sub>2</sub>, PM<sub>10</sub>, PM<sub>2.5</sub>, and lead.

NAAQS describe acceptable air quality conditions designed to protect the health and welfare of the citizens of the nation. NAAQS (other than for O<sub>3</sub>, NO<sub>2</sub>, SO<sub>2</sub>, PM<sub>10</sub>, PM<sub>2.5</sub>, and those based on annual averages or arithmetic mean) are not to be exceeded more than once per year. NAAQS for O<sub>3</sub>, NO<sub>2</sub>, SO<sub>2</sub>, PM<sub>10</sub>, PM<sub>2.5</sub>, are based on statistical calculations over 1- to 3-year periods, depending on the pollutant. The Clean Air Act requires EPA to reassess NAAQS at least every 5 years to determine whether adopted standards are adequate to protect public health based on current scientific evidence. States with areas that exceed NAAQS must prepare a state implementation plan that demonstrates how those areas will attain the standards within mandated time frames. NAAQS are presented in Table 4.1-1.

#### **4.1.2.2 State**

##### **California Air Resources Board**

The Clean Air Act delegates the regulation of air pollution control and the enforcement of NAAQS to the states. In California, the task of air quality management and regulation has been legislatively granted to the CARB, with subsidiary responsibilities assigned to air quality management districts and air pollution control districts at the regional and county levels. CARB is responsible for ensuring implementation of the California Clean Air Act (CCAA) and the federal Clean Air Act and regulating emissions from motor vehicles, mobile equipment, and consumer products. CARB also sets health-based air quality standards and control measures for TACs. CARB has established CAAQS, which are generally more restrictive than NAAQS. CAAQS describes an adverse condition (i.e., pollution levels must be below these standards before a basin can attain the standard). CAAQS for O<sub>3</sub>, CO, SO<sub>2</sub> (1 hour and 24 hours), NO<sub>2</sub>, PM<sub>10</sub>, and PM<sub>2.5</sub> and visibility-reducing particles are values that are not to be exceeded. All others are not to be equaled or exceeded. NAAQS and CAAQS are presented in Table 4.1-1.

##### **Idling of Commercial Heavy-Duty Trucks**

In January 2005, CARB adopted an Airborne Toxic Control Measure (ATCM) to control emissions from idling trucks. The ATCM, which became effective February 1, 2005, prohibits idling for more than 5 minutes for all diesel-fueled commercial motor vehicles with a gross vehicular weight ratings over 10,000 pounds that are or must be licensed for operation on highways. The ATCM contains several exceptions that allow trucks to idle, including during the following periods:

- (1) a bus is idling for
  - (A) up to 10.0 minutes prior to passenger boarding, or
  - (B) when passengers are onboard;
- (2) idling of the primary diesel engine is necessary to power a heater, air conditioner, or any ancillary equipment during sleeping or resting in a sleeper berth. This provision does not apply when operating within 100 feet of a restricted area;
- (3) idling when the vehicle must remain motionless due to traffic conditions, an official traffic control device, or an official traffic control signal over which the driver has no control, or at the direction of a peace officer, or operating a diesel-fueled APS at the direction of a peace officer;
- (4) idling when the vehicle is queuing that at all times is beyond 100 feet from any restricted area;
- (5) idling of the primary engine or operating a diesel-fueled APS when forced to remain motionless due to immediate adverse weather conditions affecting the safe operation of the vehicle or due to mechanical difficulties over which the driver has no control;
- (6) idling to verify that the vehicle is in safe operating condition as required by law and that all equipment is in good working order, either as part of a daily vehicle inspection or as otherwise needed, provided that such engine idling is mandatory for such verification;
- (7) idling of the primary engine or operating a diesel-fueled APS is mandatory for testing, servicing, repairing, or diagnostic purposes;

(8) idling when positioning or providing a power source for equipment or operations, other than transporting passengers or propulsion, which involve a power take off or equivalent mechanism and is powered by the primary engine for:

(A) controlling cargo temperature, operating a lift, crane, pump, drill, hoist, mixer (such as a ready mix concrete truck), or other auxiliary equipment;

(B) providing mechanical extension to perform work functions for which the vehicle was designed and where substitute alternate means to idling are not reasonably available; or

(C) collection of solid waste or recyclable material by an entity authorized by contract, license, or permit by a school or local government;

(9) idling of the primary engine or operating a diesel-fueled APS when operating defrosters, heaters, air conditioners, or other equipment solely to prevent a safety or health emergency;

(10) idling of the primary engine or operating a diesel-fueled APS by authorized emergency vehicles while in the course of providing services for which the vehicle is designed;

While the goal of this measure is primarily to reduce public health impacts from diesel emissions, compliance with the regulation also results in energy savings in the form of reduced fuel consumption from unnecessary idling (CARB 2020).

### **In-Use Off-Road Diesel-Fueled Fleets**

On July 26, 2007, CARB adopted the Regulation for In-Use Off-Road Diesel-Fueled Fleets (Off-Road Diesel Regulation) to reduce PM and NO<sub>x</sub> emissions from existing off-road heavy-duty diesel vehicles in California. This regulation required that specific fleet average requirements are met for NO<sub>x</sub> emissions and for PM emissions. Where average requirements cannot be met, Best Available Control Technology (BACT) requirements apply. All self-propelled off-road diesel vehicles 25 horsepower (hp) or greater used in California and most two-engine vehicles (except on-road two-engine sweepers) are subject to the Off-Road Diesel Regulation. This includes vehicles that are rented or leased (rental or leased fleets).

The Off-Road Diesel Regulation:

- requires all vehicles be reported to CARB and labeled,
- restricts the adding of older vehicles into fleets starting on January 1, 2014,
- requires fleet owners to reduce their emissions by retiring, replacing, or repowering older engines, or installing Verified Diesel Emission Control Strategies (VDECS) i.e., exhaust retrofits,
- imposes limits on idling and requires a written idling policy, and
- requires a disclosure when selling vehicles.

All fleets must meet emission performance and reporting requirements by January 1, 2028. Annual reporting requirements, including the Responsible Official Affirmation of Reporting form, must be completed by March 1, 2028. Large fleets must report annually from 2012 to 2023, medium fleets from 2016 to 2023, and small fleets from 2018 to 2028. For each annual reporting date, a fleet must report any changes to the fleet, hour meter readings (for low-use vehicles and vehicles used a majority of the time, but not solely, for agricultural operations), and also must submit the Responsible Official Affirmation of Reporting (ROAR) form. Following January 1, 2023, small fleets may no longer add a vehicle with a Tier 2 engine to its fleet. The engine tier



must be Tier 3 or higher. Medium and large fleets may not add tier 2 engines as of January 1, 2018. The goal of the In-Use Off-Road Diesel-Fueled Fleets Regulation is to reduce PM and NO<sub>x</sub> emissions from in-use (existing) off-road heavy-duty diesel vehicles in California (CARB 2020).

### **Truck and Bus Regulation**

The Truck and Bus regulation affects individuals, private companies, and Federal agencies that own diesel vehicles with a Gross Vehicle Weight Rating (GVWR) greater than 14,000 lbs. that operate in California. The regulation also applies to publicly and privately owned school buses; however, their compliance requirements are different, and reporting is not required. The regulation does not apply to state and local government vehicles and public transit buses because they are already subject to other regulations. Vehicles that are exempt from other heavy duty diesel regulations, such as Cargo Handling Equipment, Drayage Truck, and Solid Waste Collection Vehicle regulations, may be subject to the Truck and Bus Regulation. Drayage and solid waste collection trucks with 2007 to 2009 model year engines must meet the requirements of the regulation by January 1, 2023.

Heavier trucks and buses with a GVWR greater than 26,000 pounds must comply with a schedule by engine model year or owners can report to show compliance with more flexible options. All heavier vehicles with 1996 or newer model year engines should have a PM filter (OEM or retrofit). By January 1, 2023, all trucks and buses must have 2010 model year or later engines with few exceptions.

Lighter trucks and buses with a GVWR of 14,001 to 26,000 lbs. have replacement requirements starting January 1, 2015. The Engine Model Year Schedule for Lighter vehicles shown in the table to the right lists the compliance dates by engine model year for existing lighter trucks. Starting January 1, 2015, lighter vehicles with engines that are 20 years or older must be replaced with newer trucks (or engines). Starting January 1, 2020, all remaining vehicles need to be replaced so that they all have 2010 model year engines or equivalent emissions by January 1, 2023 (CARB 2020).

#### **4.1.2.3 Local**

##### **Imperial County General Plan**

The goals, objectives, and policies in the *Imperial County General Plan* are intended to inform decision makers, the general public, public agencies, and those doing business in the County of the County's position on land use-related issues and to provide guidance for day-to-day decision-making. The following objectives and policies contained within the *Imperial County General Plan Conservation Element* pertain to air quality and the proposed project:

##### ***Conservation and Open Space Element***

**Goal 7:** The County shall actively seek to improve the quality of air in the region.

**Objective 7.1:** Ensure that all projects and facilities comply with current Federal, state, and local requirements for attainment of air quality objectives.

**Objective 7.2:** Develop management strategies to mitigate fugitive dust. Cooperate with all Federal, State and local agencies in the effort to attain air quality objectives.

**Objective 7.4:** Enforce and monitor environmental mitigation measures relating to air quality.

## **Imperial County Air Pollution Control District**

Imperial County Air Pollution Control District (ICAPCD) shares responsibility with CARB for ensuring that all state and federal ambient air quality standards are achieved and maintained within the County. Generally, the ICAPCD is responsible for the inspection of stationary sources, monitoring of ambient air quality, and planning activities such as modeling and maintenance of the emissions inventory.

### ***Attainment Plans***

Under the CCAA, ICAPCD is required to develop an air quality plan for nonattainment criteria pollutants. The ICAPCD is designated nonattainment for the federal and state standards for 8-hour ozone and is designated nonattainment (partial) for the federal PM<sub>2.5</sub> standard. The ICAPCD adopted an Ozone State Implementation Plan (SIP) in 2017 and an Annual Particulate Matter Less than 2.5 Microns in Diameter State Implementation Plan in 2018.

### **Imperial County 2017 State Implementation Plan for the 2008 8-Hour Ozone Standard**

The 2017 Ozone SIP was adopted by ICAPCD in September 2017 and subsequently by CARB. The SIP shows through photochemical grid modeling and a weight of evidence analysis that, but for emissions emanating from Mexico, the control measures included in the SIP are adequate to attain the 2008 Ozone standard and maintain this status through the July 20, 2018, attainment date and into the future.

The ICAPCD is working cooperatively with counterparts from Baja California Department of Environmental Protection to implement emissions reductions strategies and projects for air quality improvements at the border. The two states strive to achieve these goals through local input from government officials and representatives from academia, environmental organizations, and the general public. The Imperial Valley-Mexicali Air Quality Task Force (AQTF) has been organized to address unique issues in the binational Mexicali/Imperial Valley air shed. This group promotes regional efforts to improve the air quality monitoring network, to inventory emissions, and to develop air pollution transport modeling, as well to create programs and strategies to improve air quality.

### **Imperial County 2009 PM<sub>10</sub> SIP and 2018 Redesignation Request and Maintenance Plan for PM<sub>10</sub>**

The ICAPCD adopted the 2009 PM<sub>10</sub> SIP in August 2009 that developed fugitive dust control measures (Regulation VIII). The EPA approved these Regulation VIII fugitive dust rules into the Imperial County portion of the California SIP in April 2013. The Regulation VIII fugitive dust rules (as updated) were based on the related 2005 Best Available Control Measure (BACM) analysis. Rules 800 to 805 of the Regulation VIII fugitive dust rules were included in the 2008 EIR/EIS. USG's operations are required to comply with these regulations as applicable and updated enforceable through the ICAPCD.

The ICAPCD and CARB approved the Imperial County 2018 Redesignation Request and Maintenance Plan for PM<sub>10</sub> in late 2018. This document revises the 2009 PM<sub>10</sub> SIP and requests redesignation of the Imperial Valley Planning Area as attainment. The Imperial Valley Planning Area is currently designated as nonattainment (serious) area for the PM<sub>10</sub> NAAQS but can be redesignated as attainment if, among other requirements, the USEPA determines that the NAAQS has been attained. A review of the PM<sub>10</sub> monitoring data from 2014 through 2016 shows that, when excluding

exceptional events (i.e., high wind driven dust storms), the Imperial Valley Planning Area did not violate the federal 24-hour PM<sub>10</sub> standard.

#### **Imperial County 2013 PM<sub>2.5</sub> SIP (2006 24-Hour PM<sub>2.5</sub>)**

The ICAPCD and the CARB approved the 2013 PM<sub>2.5</sub> SIP in December 2014 and this SIP is under review by the EPA. The 2013 PM<sub>2.5</sub> SIP concluded that the majority of the PM<sub>2.5</sub> emissions result from emissions originating in Mexico. The SIP demonstrates attainment of the 2006 PM<sub>2.5</sub> NAAQS “but for” transport of international emissions from Mexicali, Mexico. In accordance with the CAA, the PM<sub>2.5</sub> SIP satisfies the attainment demonstration requirement satisfying the provisions of the CAA and the County is considered in attainment for CAAQS. However, the partial County area is currently considered nonattainment (moderate) for PM<sub>2.5</sub> NAAQS. Note that the project sites are outside of this partial nonattainment area for PM<sub>2.5</sub>.

#### ***CEQA Air Quality Handbook***

ICAPCD’s CEQA Air Quality Handbook provides guidance to assist lead agencies in determining the level of significance of project-related emissions, and contains thresholds of significance for criteria air pollutants, TACs, and odors. According to ICAPCD’s Air Quality Handbook, project emissions that exceed the recommended threshold levels are considered potentially significant and should be mitigated where feasible. Although the Air Quality Handbook is intended to help lead agencies navigate through the CEQA process, ICAPCD indicates that the guidelines for implementation of its significance thresholds are advisory only and should be followed by local governments at their own discretion.

#### **San Diego County General Plan**

The goals and policies of the *San Diego County General Plan* provide direction to future growth and development in the county. The following goals and policies from the *San Diego County General Plan Conservation Element* relate to air quality and apply to proposed actions at the Viking Ranch Restoration Site and Old Kane Springs Road Preservation Site, located in unincorporated San Diego County.

#### ***Conservation and Open Space Element***

**Goal COS-14:** Sustainable Land Development. Land use development techniques and patterns that reduce emissions of criteria pollutants and GHGs through minimized transportation and energy demands, while protecting public health and contributing to a more sustainable environment.

**Policy COS-14.8:** Minimize Air Pollution. Minimize land use conflicts that expose people to significant amounts of air pollutants.

**Policy COS-14.9:** Significant Producers of Air Pollutants. Require projects that generate potentially significant levels of air pollutants and/or GHGs such as quarries, landfill operations, or large land development projects to incorporate renewable energy, and the best available control technologies and practices into the project design.

**Policy COS-14.10:** Low-Emission Construction Vehicles and Equipment. Require County contractors and encourage other developers to use low-emission construction vehicles and equipment to improve air quality and reduce GHG emissions.

**Policy COS-14.11:** Native Vegetation. Require development to minimize the vegetation management of native vegetation while ensuring sufficient clearing is provided for fire control.

**Goal COS-15:** Sustainable Architecture and Buildings. Building design and construction techniques that reduce emissions of criteria pollutants and GHGs, while protecting public health and contributing to a more sustainable environment.

**Policy COS-15.6:** Design and Construction Methods. Require development design and construction methods to minimize impacts to air quality.

### **San Diego County Air Pollution Control District**

The San Diego County APCD is responsible for regulating stationary sources of air emissions in the San Diego Air Basin (SDAB). The San Diego APCD Rules and Regulations establish emission limitations and control requirements for stationary sources, based on their source type and magnitude. The San Diego County APCD and the San Diego Association of Governments are responsible for developing and implementing the clean air plan for attainment and maintenance of the ambient air quality standards in the SDAB. The San Diego County RAQS was initially adopted in 1991 and is periodically updated to reflect updated information on air quality, emission trends, and new feasible control measures. The most recent update was adopted March 9, 2023 (San Diego County APCD 2023).

The RAQS includes all feasible control measures that can be implemented for the reduction of O<sub>3</sub> precursor emissions. To be consistent with the RAQS, a project must conform to emission growth factors outlined in the plan. Control measures for stationary sources proposed in the RAQS and adopted by the San Diego County APCD are incorporated into the San Diego County APCD Rules and Regulations. The San Diego APCD has also developed the air basin's input to the SIP. The SIP includes the San Diego County APCD's plans and control measures for attaining the O<sub>3</sub> NAAQS. The SIP is also updated on a triennial basis. The San Diego County APCD developed its 2020 Eight-Hour Ozone Attainment Plan for San Diego County, which provides plans for attaining and maintaining the 8-hour NAAQS for O<sub>3</sub> (San Diego County APCD 2020). A Redesignation Request and Maintenance Plan for the 1997 National Ozone Standard was adopted by the SDAPCD in 2012 but has not yet been approved by the USEPA (San Diego County APCD 2012). The SDAB is designated attainment or unclassified for the remaining criteria air pollutants.

### **4.1.3 Significance Thresholds and Analysis Methodology**

#### **4.1.3.1 Significance Criteria**

##### **2008 EIR/EIS Significance Criteria**

The 2008 EIR/EIS evaluated the project's air quality impacts using the following significance criteria:

Significant impacts to air quality may result if the proposed project:

- Causes or makes worse a violation of an ambient air quality standard (ICAPCD Rule 207C.5.b1);
- Interferes or delays with the attainment of any ambient air quality standard;
- Conflicts with implementation of any applicable air quality plans of the ICAPCD;

- Results in a cumulatively considerable net increase in ozone and PM<sub>10</sub> which the Salton Sea Air Basin is in nonattainment;
- Causes sensitive receptors to be exposed to substantial pollutant concentrations; or
- Creates objectionable odors affecting a substantial number of people.

**CEQA Appendix G Significance Criteria**

Based on Appendix G of the CEQA Guidelines, the proposed project would have a significant impact on air quality if it would:

- a) conflict with or obstruct implementation of the applicable air quality plan;
- b) 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;
- c) expose sensitive receptors to substantial pollutant concentrations; or
- d) result in other emissions (such as those leading to odors) adversely affecting a substantial number of people.

**Imperial County Air Pollution Control District**

The Imperial County Air Pollution Control District’s *CEQA Air Quality Handbook* provides quantitative significance thresholds to assist lead agencies in making a determination on the type of environmental document to prepare. When the preliminary analysis of a project indicates that the proposed project may potentially be near the thresholds identified in Table 4.1-2, “ICAPCD Thresholds of Significance for Project Operations,” below, the lead agency may consider the project as having a potentially significant impact.

**Table 4.1-2  
 ICAPCD Thresholds of Significance for Project Operations**

<b>Pollutant</b>	<b>Tier I</b>	<b>Tier II</b>
NO <sub>x</sub> and ROG	Less than 137 lbs./day	137 lbs./day and greater
PM <sub>10</sub> and SO <sub>x</sub>	Less than 150 lbs./day	150 lbs./day and greater
CO and PM <sub>2.5</sub>	Less than 550 lbs./day	550 lbs./day and greater
Level of Significance	Less than Significant Impact	Significant Impact
Level of Analysis	Initial Study	Comprehensive Air Quality Analysis Report
Environmental Document	Negative Declaration	Mitigated Negative Declaration or Environmental Impact Report

Source: ICAPCD *CEQA Air Quality Handbook* 2017

In addition to the quantitative thresholds shown in Table 4.1-2, the ICAPCD requires Tier I projects to implement all feasible standard mitigation measures provided in the *CEQA Air Quality Handbook* in order to achieve a level of insignificance. For Tier II projects to achieve a level of insignificance, all feasible standard mitigation measures as well as all feasible discretionary mitigation measures must be implemented.

**San Diego County Air Pollution Control District**

The San Diego County Air Pollution Control District (SDAPCD) has established annual significance thresholds for NO<sub>x</sub> and reactive organic gases (ROG) for stationary sources. However, SDAPCD has not established rules for characterizing impacts from construction or general land use development. SDAPCD informally recommends quantifying construction emissions and comparing them to significance thresholds found in SDAPCD regulations for stationary sources (pursuant to SDAPCD Rule 20.1, et seq.) and shown in

Table 4.1-3, “San Diego County APCD Air Quality Significance Threshold Standards.” Per SDAPCD (2007), daily significance thresholds are most appropriately used for standard construction emissions.

**Table 4.1-3  
 San Diego County APCD Air Quality Significance Threshold Standards**

<b>Significance Thresholds (lbs./day)</b>	<b>NO<sub>x</sub></b>	<b>VOC</b>	<b>PM<sub>10</sub></b>	<b>PM<sub>2.5</sub></b>	<b>CO</b>	<b>SO<sub>x</sub></b>
Construction (lbs./day)	250	75	100	55	550	250
Construction (tons/year)	40	13.7	15	10	100	40

**Source:** San Diego County APCD 2017

**Notes:** The San Diego County APCD does not have thresholds of significance for VOCs or PM<sub>2.5</sub>. As such, the VOC and PM<sub>2.5</sub> thresholds for construction from the SCAQMD’s CEQA Air Quality Significance Thresholds (SCAQMD 2015) were utilized.

SDAPCD Rules do not provide established significance thresholds for emissions of volatile organic compounds (VOCs) or PM<sub>2.5</sub>. The use of the screening level for VOCs specified by the South Coast Air Quality Management District (SCAQMD), which generally has stricter emissions thresholds than SDAPCD, is recommended for evaluating projects in San Diego County. For PM<sub>2.5</sub>, the EPA “Proposed Rule to Implement the Fine Particle National Ambient Air Quality Standards” published September 8, 2005, which quantifies significant emissions as 55 pounds per day or 10 tons per year, is used as the screening-level criteria, as shown in Table 4.1-3.

**4.1.3.2 Analysis Methodology**

The following sections discuss the methods for evaluating emission of criteria air pollutants, health impacts associated with project emissions, and emission of objectionable odors.

As described previously, the project does not propose any changes to Quarry operations or the location, development, or operation of Well No. 3 and associated pipeline from that evaluated in the 2008 EIR/EIS and 2019 SEIS. Therefore, the following analysis focuses on emissions associated with restoration and preservation of the off-site mitigation sites which would be limited to temporary, construction-phase emissions. These emissions are compared against significance thresholds adopted by SDAPCD.

**Criteria Pollutant Emissions**

The methodology for analyzing the effects of the proposed project on air quality is the same as discussed in the 2008 EIR/EIS. Activities associated with the construction and operation of the proposed Quarry expansion and modernization were evaluated to determine the potential to affect existing air quality conditions. Construction and operation emissions were assessed in accordance with EPA and ICAPCD air quality regulations using CARB’s Off-Road Emissions Model, CARB Off-Road Diesel Tier Emission Factors, and Off-road and On-Road Mobile Source Emissions’ Factors (EMFAC per SCAQMD website) and emissions estimates were compared with applicable state and federal air quality standards.

**Health Risk**

Exposure to equipment exhaust and fugitive dust can lead to various health impacts. Specifically, the following three types of public health impacts are commonly associated with exposure to trace metals in dust and diesel particulate matter:

1. Cancer risk
2. Acute non-cancer risk

### 3. Chronic non-cancer risk

Due to the lack of sensitive receptors near the project site and offsite mitigation sites, a formal, quantitative health risk assessment was not performed. The following analysis of potential health risks associated with diesel exhaust and particulate matter emissions is qualitative and based on the distances between emission source and receptors, the projects estimated emissions as they compare to applicable air district significant thresholds, and wind direction and topography of the area.

#### **Odor**

For consideration of odors, the impact analysis relies on the screening distances for various land uses that typically generate odors presented in the ICAPCD's CEQA Guidelines as well as compliance history obtained from ICAPCD for the existing Quarry operation.

#### **4.1.4 Project Impacts and Mitigation Measures**

##### **4.1.4.1 2008 EIR/EIS Impact Analysis**

Under the Quarry expansion, excavation operations onsite would extend for approximately 80 years and Quarry production would increase from approximately 1.13 million tons per year to 1.92 million tons per year. Criteria air pollutant emissions associated with the Quarry operations include stationary sources, fugitive dust sources, and mobile sources. The 2008 EIR/EIS estimated emissions of criteria air pollutants for the pre-project and post-project conditions and found that emissions resulting from the expansion and modernization of the Quarry would not exceed the CEQA thresholds of significance presented in the CEQA Air Quality Handbook (ICAPCD 2017) and the impact would be less than significant. Although the criteria air pollutants generated by expansion of the Quarry would not exceed the CEQA thresholds of significance, the 2008 EIR/EIS noted that exhaust emissions from mobile equipment would increase due to increased production of gypsum at the Quarry. The 2008 EIR/EIS includes the following mitigation measures to further limit exhaust emissions from mobile equipment at the Quarry:

**Mitigation Measure 3.6-1a:** *USG shall ensure all equipment is maintained and tuned according to manufacturer's specifications.*

**Mitigation Measure 3.6-1b:** *USG shall schedule production activities to minimize daily equipment operations and idling trucks.*

**Mitigation Measure 3.6-1c:** *USG shall comply with all existing and future California Air Resources Board (CARB) and ICAPCD regulations related to diesel-fueled trucks and equipment, which may include: (1) meeting more stringent engine emission standards; (2) retrofitting existing engines with particulate traps; (3) use of low or ultra-low sulfur diesel fuel; and (4) use of alternative fuels or equipment.*

USG transports gypsum from the Quarry to the Plant via a private narrow-gauge railroad line which has been in operation since the 1920s. The analysis of Quarry expansion also evaluated the potential of the emissions generated by the increased number of train trips to and from the Quarry to exceed significance thresholds. It was found that the net exhaust emissions changes for criteria pollutants from the diesel locomotive between the pre-project and the post-project conditions would not exceed the CEQA thresholds of significance. The 2008 EIR/EIS noted that construction of Well No. 3 and the associated pipeline would be relatively short term

(10 weeks) and would disturb a relatively small area (1/8 acre would be disturbed during well, and about 1,500 feet of trench, about one acre, would be active at any given time during pipeline construction). The 2008 EIR/EIS found that the combined emissions from the construction of both the Quarry and Plant pipelines would not exceed the CEQA thresholds of significance. Emissions from the operation of Well No. 3 and associated pipeline were determined to be negligible. Therefore, the impact related to air quality emissions from the construction and operation of Well No. 3 and the associated pipeline was found to be less than significant.

The previous environmental review process did not identify odor as an issue with potentially significant environmental impacts and therefore this topic was not analyzed in the 2008 EIR/EIS.

#### **4.1.4.2 2019 SEIS Impact Analysis**

The 2019 SEIS provided further evaluation of the proposed project under the National Environmental Policy Act (NEPA). This evaluation was based on updated emissions estimates for the project, which are provided as Appendix C-2 to this SEIR. As described in more detail below, the SEIS concluded that the project would comply with all applicable NAAQS and no additional mitigation measures were provided.

#### **4.1.4.3 Substantial Project Changes**

##### **Project Revisions**

The proposed Quarry expansion, and the proposed Well No. 3 and associated pipeline, are substantially in the same location and same configuration as the features that were evaluated in the 2008 EIR/EIS. Therefore, any minor revisions would not create a new or increase a significant impact related to air quality. However, the restoration of the Viking Ranch site and preservation of the Old Kane Springs Road site are proposed in response to mitigation required by the 2019 SEIS, and these are new actions under the proposed project.

##### **Changed Circumstances**

Since the 2008 EIR/EIS was prepared, there have been changes to attainment designations, applicable regulations, plans or policies/management goals that affect air quality. The updated information, as described previously in this section and summarized below, is considered herein.

##### ***Attainment/Nonattainment Designations***

The Imperial County portion of the Salton Sea Air Basin is currently designated nonattainment (moderate) for both the federal and state 8-hour Ozone standards. This has not changed since the 2008 EIR/EIS. The most recently adopted ozone attainment plan adopted by the ICAPCD is the 2017 Imperial County 2008 8-Hour Ozone SIP.

There were no defined attainment/nonattainment areas for PM<sub>2.5</sub> in 2008. In 2009, the USEPA designated a partial County area, the south central or valley area of Imperial County, as nonattainment (moderate) for the federal PM<sub>2.5</sub> standard. The 2018 Imperial County Annual PM<sub>2.5</sub> SIP requires reduction of PM<sub>2.5</sub> emissions by 5 percent each year until the standard is attained.

Since publication of the 2008 EIR/EIS, the ICAPCD achieved attainment of the federal and state PM<sub>10</sub> standards and in 2018, both ICAPCD and CARB approved the Imperial County 2018 Redesignation Request and Maintenance Plan for PM<sub>10</sub>.



***Imperial County 2009 PM<sub>10</sub> SIP and 2018 Redesignation Request and Maintenance Plan for PM<sub>10</sub>***

The ICAPCD adopted the 2009 PM<sub>10</sub> State Implementation Plan (SIP) in August 2009 that developed fugitive dust control measures (Regulation VIII). The USEPA approved these Regulation VIII fugitive dust rules into the Imperial County portion of the California SIP in April 2013. The Regulation VIII fugitive dust rules (as updated) were based on the related 2005 Best Available Control Measure (BACM) analysis. Rules 800 – 805 of the Regulation VIII fugitive dust rules were included in the 2008 Final EIR/EIS. USG's operations are required to comply with these regulations as applicable and updated enforceable through the ICAPCD.

The ICAPCD and CARB approved the "Imperial County 2018 Redesignation Request and Maintenance Plan for PM<sub>10</sub>" in late 2018. This document revises the 2009 PM<sub>10</sub> SIP and requests redesignation of the Imperial Valley Planning Area as attainment. The Imperial Valley Planning Area is currently designated as a Serious nonattainment area for the PM<sub>10</sub> NAAQS but can be redesignated as attainment if, among other requirements, the USEPA determines that the NAAQS has been attained. A review of the PM<sub>10</sub> monitoring data from 2014 through 2016 shows that, when excluding exceptional events (i.e., high wind driven dust storms), the Imperial Valley Planning Area did not violate the federal 24-hour PM<sub>10</sub> standard.

***Imperial County 2017 75 ppb 8-Hour Ozone SIP***

The ICAPCD adopted the 2017 Ozone SIP in September 2017. This SIP is under review by the USEPA. The SIP shows through photochemical grid modeling and a weight of evidence analysis that, but for emissions emanating from Mexico, the control measures included in the SIP are adequate to attain the 2008 Ozone standard and maintain this status through the July 20, 2018, attainment date and into the future.

The ICAPCD is working cooperatively with counterparts from Baja California Department of Environmental Protection to implement emissions reductions strategies and projects for air quality improvements at the border. The two states strive to achieve these goals through local input from government officials and representatives from academia, environmental organizations, and the general public. The Imperial Valley-Mexicali Air Quality Task Force (AQTF) has been organized to address unique issues in the binational Mexicali/Imperial Valley air shed. This group promotes regional efforts to improve the air quality monitoring network, to inventory emissions, and to develop air pollution transport modelling, as well to create programs and strategies to improve air quality.

***Permits***

The Plant and Quarry operate within the jurisdiction of the ICAPCD under a Title V Operating Permit issued in accordance with the provisions of 40 CFR Part 70 and Rule 900 of the ICAPCD. Three active permits (Nos. 1992, 2456, and 2834) issued by the ICAPCD to operate stationary sources at the Quarry are incorporated into the Plant's and Quarry's Title V Operating Permit (V-2834). The V-2834 permit renewal application was submitted on April 18, 2016, and is currently under review by the ICAPCD for renewal purposes. Per ICAPCD Rule 115, permits issued by the ICAPCD shall require compliance with all applicable air pollution control regulations of federal, state, and local agencies. USG is required to comply with its Title V Operating Permit and all other applicable ICAPCD rules as amended.

## New Information

Since 2008, air quality regulations promulgated by the County SIPs have substantially reduced the diesel emissions from the equipment in use at the Plant and Quarry compared with the equipment assessed in the 2006 Draft EIR/EIS. These regulations require the following:

- Limits vehicle idling to no more than five consecutive minutes at one location, requires a written idling policy, and requires a disclosure when selling vehicles (California Code of Regulations Title 13, Section 2485; 2004 as amended);
- Requires all vehicles to be reported to ARB (Using the Diesel Off-Road Online Reporting System, DOORS) and labeled;
- Restricts the adding of older vehicles into fleets starting on January 1, 2014; and
- Requires fleets to reduce their emissions by retiring, replacing, or repowering older engines, or installing Verified Diesel Emission Control Strategies (VDECS; i.e., exhaust retrofits).

Consequently, the 2019 SEIS updated the emissions estimates of all proposed components of the USG Expansion/Modernization Project, including the new water pipeline and electrical line for the Quarry water supply. Based on the updated criteria air pollutant emissions estimates for the operation of the Quarry under the proposed expansion, the 2019 SEIS found that the proposed project would not generate total annual emissions that exceed the CEQA thresholds of significance.

The 2019 SEIS also estimated the criteria air pollutant emissions from mobile and fugitive sources and found that the mobile and fugitive emissions from the USG Expansion/Modernization Project, including emissions from both Quarry and Plant sources (e.g., Quarry mobile sources, locomotive operation, and construction of the proposed Well No. 3 and associated pipeline), would not generate total annual emissions that exceed the CEQA thresholds of significance.

## Significance Determination

Based on project revisions and changed circumstances that may create a new or increased significant impacts, the County has amplified and augmented the analysis contained in the 2008 EIR/EIS. This evaluation is provided in the following impact analysis.

### 4.1.4.4 *Subsequent Environmental Analysis*

#### **Impact 4.1-1: Conflict with or Obstruct Implementation of the Applicable Air Quality Plan**

##### **Quarry, Well No. 3, Pipeline**

The ICAPCD's 2017 8-Hour Ozone AQMD and 2017 PM<sub>10</sub> SIP are the applicable air quality plans for the portions of the project that are located in Imperial County. Consistency with an air quality plan is determined by whether the project would hinder implementation of control measures identified in the air quality plans or otherwise interfere with state's plans to attain and maintain applicable air quality standards, including as a result of unplanned population or employment growth.

The locations and proposed operations of the Quarry, Well No. 3, and associated pipeline would be substantively the same as that evaluated in the 2008 EIR/EIS. Thus, project emissions would be the same as those presented in the 2008 EIR/EIS. As stated previously, the 2008 EIR/EIS determined that project impacts would not exceed applicable ICAPCD thresholds of significance and would be less than significant.

Project emissions have actually been reduced compared to 2008 estimates due to advancements in fuel efficiency and control technologies. The proposed project changes would not result in any population or employment growth. Therefore, the proposed project would not conflict with or obstruct implementation of the ICAPCD air quality plans. The project would not result in any new or more severe impacts related to a conflict with the applicable air quality plans.

**Level of Significance:** Less than significant.

**Mitigation Measures:** None required.

### **Viking Ranch Restoration Site**

Emissions resulting from restoration of the Viking Ranch Restoration Site would be limited to short-term construction emissions and as demonstrated in Impact 4.1-2, would not exceed applicable thresholds. Furthermore, the proposed restoration activities would not include any development or otherwise result in growth and would not hinder implementation of the SDAPCD air quality plans.

**Level of Significance:** Less than significant.

**Mitigation Measures:** None required.

### **Old Kane Springs Road Preservation Site**

Emissions associated with preservation of the Old Kane Springs Preservation Site would be limited to regular maintenance truck trips and would be negligible. Thus, this project component would not hinder implementation of the SDAPCD air quality plans and would have no potential to cause unplanned growth.

**Level of Significance:** Less than significant.

**Mitigation Measures:** None required.

### **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**

The ICAPCD is currently designated nonattainment (moderate) for the federal and state 8-hour ozone standards and the federal PM<sub>2.5</sub> standard.

### **Quarry, Well No. 3, and Associated Pipeline**

Under the Quarry expansion, excavation operations onsite would extend for approximately 80 years and Quarry production would increase from approximately 1.13 million tons per year to 1.92 million tons per year. Criteria air pollutant emissions associated with the Quarry operations include stationary sources, fugitive dust sources, and mobile sources.

As described previously, the 2008 EIR/EIS determined that particulate matter emissions at both the Quarry and the well site/pipeline alignment would not exceed applicable thresholds and no mitigation was required. The 2008 EIR/EIS further determined that Quarry exhaust emissions would be potentially significant and provided Mitigation Measures 3.6-1a through 3.6-1c.

A comparison of the emission estimates presented in the 2008 EIR/EIS and the 2019 SEIS indicate that air quality regulations promulgated by the County SIPs since 2008 have reduced overall emissions from both stationary and mobile sources at the Quarry. For example, CARB passed regulations in 2007 for In-Use Off-Road Diesel-Fueled Vehicles to reduce NO<sub>x</sub>, diesel PM, and other criteria pollutant emissions from diesel-fueled vehicles driving off road. These regulations as updated through 2018, have substantially reduced the diesel emissions from the equipment in use at the Quarry, compared with the equipment assessed in the 2008 EIR/EIS. These regulations require the following:

- Limits vehicle idling to no more than five consecutive minutes at one location, requires a written idling policy, and requires a disclosure when selling vehicles (California Code of Regulations Title 13, Section 2485; 2004 as amended);
- Requires all vehicles to be reported to CARB (using the Diesel Off-Road Online Reporting System, DOORS) and labeled;
- Restricts the adding of older vehicles into fleets starting on January 1, 2014; and
- Requires fleets to reduce their emissions by retiring, replacing, or repowering older engines, or installing Verified Diesel Emission Control Strategies (VDECS; i.e., exhaust retrofits).

The 2019 SEIS air quality evaluation updated mobile equipment emissions utilizing the current fleet of vehicles, the engine Tier levels, and similar hours of operations as estimated in the 2008 EIR/EIS. Table 4.1-4, “Estimated Air Pollutant Emissions (Quarry, Well No. 3, and Associated Pipeline) Existing Conditions and Proposed Conditions,” presents both the emission estimates from the 2008 EIR/EIS (“existing”) and the 2019 SEIS emission estimates based on the 2018 fleet emission factors (“proposed”). The “Emission Net Change” row is the net emission increase or decrease between the existing conditions (2008) and the proposed conditions (2019). As shown, with the exception of CO, project emissions of criteria air pollutants would be lower than previously estimated in the 2008 EIR/EIS. Table 4.1-4 also provides the ICAPCD’s CEQA thresholds and states whether the net emissions exceed these thresholds. As shown, the 2019 SEIS emission estimates for the Quarry expansion, including development and operation of proposed Well No. 3 and associated pipeline, would not exceed the ICAPCD’s thresholds.

**Table 4.1-4  
 Estimated Air Pollutant Emissions (Quarry, Well No. 3, and Associated Pipeline)  
 Existing Conditions and Proposed Conditions (Tons per Year)**

Source	NO <sub>x</sub>		CO		PM <sub>10</sub>		PM <sub>2.5</sub>		VOC	
	Existing	Proposed	Existing	Proposed	Existing	Proposed	Existing	Proposed	Existing	Proposed
Quarry Stationary Sources	--	--	--	--	108.36	56.99	22.54	11.85	--	--
Quarry/Plant Mobile Equipment/ Trucks	57.75	18.54	22.11	36.33	6.02	0.62	6.02	0.57	4.03	1.24
Haul/Access Roads (PM or dust only)	--	--	--	--	92.88	58.05	19.32	12.07	--	--
Fugitive Dust Plus Blasting Emissions	0.03	0.05	0.11	0.18	121.95	160.88	25.37	33.46	--	--

Source	NO <sub>x</sub>		CO		PM <sub>10</sub>		PM <sub>2.5</sub>		VOC	
	Existing	Proposed	Existing	Proposed	Existing	Proposed	Existing	Proposed	Existing	Proposed
Onsite Vehicles	0.29	0.29	0.55	0.55	0.02	0.02	0.02	0.02	0.06	0.06
<b>Emissions Totals</b>	<b>58.07</b>	<b>18.88</b>	<b>22.77</b>	<b>37.06</b>	<b>329.23</b>	<b>276.54</b>	<b>73.27</b>	<b>57.97</b>	<b>4.09</b>	<b>1.30</b>
Emission Net Change	-39.19		14.29		-52.69		-15.3		-2.79	
CEQA Thresholds per ICAPCD	25		100		27		100		25	
<b>Significant Impact?</b>	<b>No</b>		<b>No</b>		<b>No</b>		<b>No</b>		<b>No</b>	

Source: BLM 2019 (Table 3.5-2 on page 3.5-8)

**Level of Significance Before Mitigation:** Less than significant.

**Mitigation Measures:** Implement the following existing mitigation measures (see Section 4.1.4 for the full text of each measure):

- 2008 EIR/EIS:
  - Mitigation Measures 3.6-1a
  - Mitigation Measures 3.6-1b
  - Mitigation Measure 3.6-1c

**Level of Significance After Mitigation:** Less than significant.

### Viking Ranch Restoration Site

Proposed restoration activities at the Viking Ranch site would include tree stump removal, grading, excavations, and revegetation of the site. These activities are expected to require the use of backhoes, a trencher, grader, dozer, and dump truck, as well as supply and water trucks. Once construction is completed, operational emissions would be limited to those associated with infrequent maintenance truck trips and would be negligible. Thus, the following analysis focuses on construction emissions.

According to the SDAPCD (2007), construction impacts predominantly result from two sources: (1) fugitive dust from surface disturbance activities, and (2) exhaust emissions resulting from the use of construction equipment. The predominant pollutant of concern during construction is particulate matter, since PM<sub>10</sub> is emitted as windblown (fugitive) dust during surface disturbance, and as exhaust of diesel-fired construction equipment (particularly as PM<sub>2.5</sub>). According to the 2021 HMMP (Dudek), fugitive dust may be generated during proposed berm demolition, filling of the diversion ditch, and site grading but would be minimized through water application for dust control during these activities. Other emissions of concern include other mobile combustion sources (on-road and off-road) associated with the project such as NO<sub>x</sub>, SO<sub>x</sub>, CO, PM<sub>10</sub>, and PM<sub>2.5</sub>.

The project’s construction-related emissions were modeled using the California Emissions Estimator Model (CalEEMod), Version 2022 version 1.1.4 and are included as Appendix C-2. CalEEMod allows the user to enter project-specific construction information, such as types, number, and horsepower of construction equipment, and number and length of off-site motor vehicle trips. As shown in Table 4.1-5, “Estimated Air Pollutant Emissions (Viking Ranch) (Unmitigated),” construction emissions for the project would result in

maximum daily emissions of approximately 24 pounds of NO<sub>x</sub>, 25 pounds of CO, 5 pounds of PM<sub>10</sub>, and 5 pounds of PM<sub>2.5</sub>. As discussed in Section 4.1.4.1, above, the SDAPCD has established recommended screening level thresholds of significance for regional pollutant emissions. The project estimates of maximum daily emissions would not exceed the thresholds of significance recommended by the SDAPCD. Regardless, standard mitigation for fugitive dust construction combustion equipment emissions would be required per Mitigation Measures 4.1-1a and 4.1-1b, below.

**Table 4.1-5  
Estimated Air Pollutant Emissions (Viking Ranch) (Unmitigated)**

Construction Phase	NO <sub>x</sub> <sup>1</sup>	CO <sup>1</sup>	SO <sub>2</sub> <sup>1</sup>	PM <sub>10</sub> <sup>1</sup>	PM <sub>2.5</sub> <sup>1</sup>
Site Preparation (2024)	17	16	<0.1	5	3
Grading (2025)	24	25	<0.1	5	3
Grading (2026)	21	24	<0.1	5	3
CEQA Thresholds per SDAPCD	250	550	250	100	55
Significant Impact?	No	No	No	No	No

Source: Benchmark Resources 2023

Notes:

1. Pounds (lbs) per day

**Level of Significance Before Mitigation:** Less than significant.

**Mitigation Measures:** Implement the following newly proposed mitigation measure:

**Mitigation Measure 4.1-1a:** The following standard mitigation measures for fugitive PM<sub>10</sub> control shall be implemented throughout project construction activities:

- a. All disturbed areas, including Bulk Material storage which is not being actively utilized, shall be effectively stabilized and visible emissions shall be limited to no greater than 20 percent opacity for dust emissions by using water, chemical stabilizers, dust suppressants, tarps or other suitable material such as vegetative ground cover.
- b. All on site and off-site unpaved roads will be effectively stabilized and visible emissions shall be limited to no greater than 20 percent opacity for dust emissions by paving, chemical stabilizers, dust suppressants and/or watering.
- c. All unpaved traffic areas one (1) acre or more with 75 or more average vehicle trips per day will be effectively stabilized and visible emissions shall be limited to no greater than 20 percent opacity for dust emissions by paving, chemical stabilizers, dust suppressants and/or watering.
- d. The transport of Bulk Materials shall be completely covered unless six inches of freeboard space from the top of the container is maintained with no spillage and loss of Bulk Material. In addition, the cargo compartment of all Haul trucks is to be cleaned and/or washed at delivery site after removal of Bulk Material.
- e. All track-Out or Carry-Out will be cleaned at the end of each workday or immediately when mud or dirt extends a cumulative distance of 50 linear feet or more onto a paved road within an urban area.
- f. Movement of Bulk Material handling or transfer shall be stabilized prior to handling or at point of transfer with application of sufficient water, chemical stabilizers or by sheltering or

*enclosing the operation and transfer line.*

- g. The construction of any new unpaved road is prohibited within any area with a population of 500 or more unless the road meets the definition of a Temporary Unpaved Road. Any temporary unpaved road shall be effectively stabilized, and visible emissions shall be limited to no greater than 20 percent opacity for dust emission by paving, chemical stabilizers, dust suppressants and/or watering.*

**Mitigation Measure 4.1-1b:** *The following standard mitigation measures for construction combustion equipment shall be implemented throughout project construction activities:*

- a. Use of alternative fueled or catalyst equipped diesel construction equipment, including all off-road and portable diesel-powered equipment.*
- b. Minimize idling time either by shuttling equipment off when not in use or reducing the time of idling to 5 minutes as a maximum.*
- c. Limit, to the extent feasible, the hours of operation of heavy-duty equipment and/or the amount of equipment in use.*
- d. Replace fossil fueled equipment with electrically driven equivalents (provided they are not run via a portable generator set).*

**Level of Significance After Mitigation:** Less than significant.

#### **Old Kane Springs Road Preservation Site**

The project does not propose any construction activities or regular use of the Old Kane Springs Road Preservation Site. Emission sources would be limited to infrequent maintenance truck trips and would result in negligible emission levels.

**Level of Significance:** Less than significant.

**Mitigation Measures:** None required.

#### **Impact 4.1-3: Expose Sensitive Receptors to Substantial Pollutant Concentrations**

Determination of whether project emissions would expose sensitive receptors to substantial pollutant concentrations is a function of assessing potential health risks. Sensitive receptors are facilities that house or attract children, the elderly, people with illnesses, or others who are especially sensitive to the effects of air pollutants. Hospitals, schools, convalescent facilities, and residential areas are examples of sensitive receptors. When evaluating whether a project has the potential to result in localized impacts, the nature of the air pollutant emissions, the proximity between the emitting facility and sensitive receptors, the direction of prevailing winds, and local topography must be considered.

#### **Quarry, Well No. 3, and Associated Pipeline**

The area surrounding the Quarry, well site, and proposed pipeline alignment is generally vacant, rural desert land with no sensitive receptors located within one mile of the project site. Thus, the project would not be expected to expose any sensitive receptors to substantial concentrations of pollutants. Regardless, the 2008 EIR/EIS assessed potential health risks associated with air emissions (see 2008 EIR/EIS Impacts 3.6-1

through 3.6-7). The 2008 EIR/EIS concluded that the project's estimated emissions would be below applicable ICAPCD significance thresholds and would be further reduced by existing regulations, such as CARB's comprehensive Diesel Reduction Plan, and by mitigation measures provided in the 2008 EIR/EIS, such as Mitigation Measures 3.6-1a through -1c.

As described previously, a comparison of the emission estimates presented in the 2008 EIR/EIS and the 2019 SEIS indicate that air quality regulations promulgated by the County SIPs since 2008 have reduced overall emissions from both stationary and mobile sources at the Quarry. Thus, the project would not result in any new impacts or worsen any existing impacts related to exposure of sensitive receivers to substantially pollutant concentrations.

**Level of Significance:** Less than significant.

**Mitigation Measures:** None required.

### **Viking Ranch Restoration Site**

The Viking Ranch Restoration Site is located at the edge of a small clustering of agricultural fields that is surrounded by open space of the Anza-Borrego Desert. There are no schools, hospitals, nursing homes or other known sensitive receptors within one half mile of the Viking Ranch Restoration Site. Within one mile, there are several small, isolated clusters of development among the surrounding agricultural fields to the west and south which may include some residences or farm worker housing. However, given that the project's estimated emissions would be below SDAPCD significance thresholds and their distance from the Viking Ranch site, these potential sensitive receptors would not be exposed to substantial pollutant concentrations.

**Level of Significance:** Less than significant.

**Mitigation Measures:** None required.

### **Old Kane Springs Road Preservation Site**

The Old Kane Springs Road Preservation Site would be preserved in its existing conditions. No construction or development is proposed at this site. Operation of the site would require only infrequent maintenance truck trips which were determined to generate negligible criteria air pollutants. This portion of the project would have no potential to expose sensitive receptors to substantial pollutant concentrations.

**Level of Significance:** Less than significant.

**Mitigation Measures:** None required.

### **Impact 4.1-4: Result in Other Emissions (Such as Those Leading to Odors) Adversely Affecting a Substantial Number of People**

Project activities are not expected to introduce significant sources of odors. The project does not involve odor-generating sources aside from direct exhaust emissions associated with Quarry operations and restoration activities that generally dissipate rapidly into the atmosphere as distance increased from the source. Furthermore, ICAPCD has not adopted construction-related thresholds of significance for odors. ICAPCD's operational threshold of significance is five confirmed odor complaints per year average over three years. There have been no such complaints against the Quarry.



The ICAPCD CEQA Guidelines (2017) provide screening distance criteria for a variety of land uses that have the potential to generate odors, such as wastewater treatment facilities, landfills, composting stations, feedlots, asphalt plants, and rendering plants. The proposed project does not involve installation or operation of any of the land use categories that might be expected to generate odors.

The project's potential odor impacts are less than significant based on the nature of project activities, ICAPCD's odor screening criteria, and ICAPCD's record of complaints for the existing asphalt concrete plant.

**Level of Significance:** Less than significant.

**Mitigation Measures:** None required.

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## SECTION 4.2: BIOLOGICAL RESOURCES

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## SECTION 4.2: BIOLOGICAL RESOURCES

This section of the draft subsequent environmental impact report (Draft SEIR) documents potential impacts of the project on biological resources, including special-status plants, wildlife, and invertebrate species and their habitat.

The information in this section is based on the following biological technical studies which were previously prepared to support the 2008 EIR/EIS and 2019 SEIS, as well as a habitat mitigation and monitoring plan prepared for the offsite mitigation sites:

- *Biological Resources Technical Report: United States Gypsum Company Expansion and Modernization Project* (Aspen Environmental Group 2019) (Appendix D-1, “SEIS Biological Resources Technical Report”)
- *Jurisdictional Delineation for United States Gypsum Company Plaster City Expansion/Modernization Project* (Hernandez Environmental Services 2016) (Appendix D-2, “2016 Jurisdictional Delineation”)
- *Section 7 Biological Opinion for the United States Gypsum Company Expansion/Modernization Project, Imperial County, California* (United States Fish and Wildlife Service 2019) (Appendix D-3, “Biological Opinion”)
- *Draft Habitat Mitigation and Monitoring Plan for the United States Gypsum Company Plaster City Expansion/Modernization Project, Ocotillo Wells, California* (Dudek 2021) (Appendix D-4, “Draft Habitat Mitigation and Monitoring Plan”)

### 4.2.1 Environmental Setting

This section discusses the existing biological resources conditions within and adjacent to the project site at both the time the 2008 EIR/EIS was prepared and at present. Methods for evaluating site conditions, including literature review and field surveys, are discussed first, which is followed by a description of the habitat types and species composition on the project site and each of the off-site mitigation sites.

#### 4.2.1.1 Regional Setting

The project site and Imperial County are in the Colorado Desert, the California portion of the larger Sonora Desert which encompasses lands around the Gulf of California and the delta of the Colorado River, including northwestern Mexico, southwestern Arizona, southeastern California (US) and Baja California (Mexico). The dominant physical feature of the Colorado Desert is the Salton Trough, an elongated depression that is separated from the Gulf of California by the Colorado River delta and extends northerly to the San Geronio Pass, north of Palm Springs. The dominant hydrologic feature is the Salton Sea located in the lowest portion of the Salton Trough. The Colorado Desert extends from the Colorado River westerly to the base of the Peninsular Ranges in western Imperial County/Eastern San Diego County. The Quarry site is located in the Fish Creek Mountains at the eastern base of the Peninsular Ranges.

Vegetation in the arid Colorado Desert is sparse desert shrubland dominated by creosote bush (*Larrea tridentata*) with white bursage (*Franseria ilicifolia*), burrobush (*Ambrosia dumosa*), brittlebush (*Encelia farinosa*), cheesebush (*Hymenoclea salsola*), pygmy cedar (*Peucephyllum schottii*), catclaw acacia (*Acacia greggii*), indigo bush (*Psorothamnus schottii*), smoketree (*Psorothamnus spinosus*) as well as several

varieties of cactus such as barrel cactus (*Ferocactus acanthodes*), beavertail cactus (*Opuntia basilaris*), silver cholla (*Opuntia echinocarpa*), and ocotillo (*Fouquieria splendens*).

Despite its harsh environment, the Colorado Desert supports a diverse wildlife population including both resident and migratory species of reptiles, birds, invertebrates, and mammals. Common wildlife include mule deer, bobcat, desert kangaroo rat, cactus mouse, black-tailed jackrabbit, Gambel's quail, and red-diamond rattlesnake. The vegetation described above also supports a variety of special-status wildlife species including Peninsular bighorn sheep, desert pupfish, flat-tailed horned lizard and barefoot banded gecko.

#### **4.2.1.2 Biological Resource Conditions at the Time of the 2008 EIR/EIS**

The following discussion is based entirely on the analysis provided in the 2008 EIR/EIS and its appendices which include a Biological Technical Report prepared in 2005 by White & Leatherman BioServices for the Quarry.

##### **Vegetation**

At the time the 2008 EIR/EIS was prepared, three special-status plant communities had been reported in the area by the California Natural Diversity Data Base (CNDDB): desert fan palm oasis, mesquite bosque, and transmontane alkali marsh.

Two biological field surveys had been conducted for the Quarry site at the time the 2008 EIR/EIS was prepared: the first by Lilburn Corporation in 1995, and the second by White & Leatherman BioServices in 2002. During these surveys, no special-status plants were observed at the Quarry, at the Well No. 3 site, or along the pipeline alignment (Imperial County 2006).

##### **Wildlife**

Based on literature reviews conducted for the 2008 EIR/EIS, biologists identified 27 special status species occurring or potentially occurring in the general region of the Quarry site. Of these, four were state- or federally-listed threatened or endangered species in 2008—desert pupfish (*Cyprinodon macularius*), desert tortoise (*Gopherus agassizii*), barefoot banded gecko (*Coleonyx switaki*), and peninsular bighorn sheep (*Ovis canadensis*)—and one, flat-tailed horned lizard (FTHL) (*Phrynosoma mcallii*), is a special status wildlife species protected by an interagency management agreement. The 2008 EIR/EIS determined there was no potential for desert pupfish to occur on the site due to the absence of any perennial surface water. Neither desert tortoise nor barefoot banded gecko was observed during site surveys and were determined by project biologists to be unlikely to occur on the project site. Portions of the Quarry are located within the critical habitat for Peninsular big-horned sheep. However, the 2008 EIR/EIS determines that as the Quarry and adjacent mountains have no permanent or long-lasting seasonal water source they do not serve as habitat for peninsular bighorn sheep. The 2008 EIR/EIS concluded that FTHL is likely to occur along the narrow-gauge railroad right-of-way as well as other habitat types. There have been several sightings near the proposed pipeline alignment as it traverses the West Mesa Management Area.

The 2008 EIR/EIS also identified a low probability for the occurrence of three special status invertebrate species: Carlson's dune beetle (*Anomala carlsoni*), Hardy's dune beetle (*A. hardyroum*), and Andrew's dune scarab beetle (*Pseudocotalpha andrewsi*).

Numerous bird species were either observed during site surveys or have the potential to occur on the site due to geographic range and presence of suitable habitat. These include two special status birds – black

tailed gnatcatcher (*Polioptila melanura*) and loggerhead shrike (*Lanius ludovicianus*) which were observed onsite during the 2002 site survey. Several raptor species, including the golden eagle and prairie falcon, are likely to occur during winter or migration and potential habitat is present for burrowing owls.

The 2008 EIR/EIS also identified several special status bat species likely to forage and/or roost on the site including pallid bat (*Antrozous pallidus*), California mastiff bat (*Eumops perotis californicus*), and California leaf-nosed bat (*Macrotus californicus*), pocketed free-tailed bat (*Nyctinomops femorosaccus*), spotted bat (*Euderma maculatum*), and Townsend's big-eared bat (*Plecotus townsendii pallescens*). No significant potential roosting sites were observed on the site during surveys.

American badger was also determined to be likely to occur on the Quarry site at least occasionally but are unlikely to live on the site year-round (Imperial County 2006).

#### **4.2.1.3 Biological Resource Conditions at Present**

The following discussion of biological resource conditions at the Quarry, Well No. 3 site, and associated pipeline alignment is based on the Biological Resources Technical Report prepared by Aspen Environmental Group in 2019 (Appendix D-1), the Jurisdictional Delineation prepared by Hernandez in 2016 (Appendix D-2), and the Biological Opinion issued by USFWS in 2019 (Appendix D-3). The discussion of biological resource conditions at the off-site mitigation sites is based on the Habitat Mitigation and Monitoring Plan (HMMP) prepared by Dudek in 2021 (Appendix D-4).

### **Quarry, Well No. 3 and Associated Pipeline**

#### **Vegetation Types**

According to Aspen (2019), the Quarry area is characterized by broad sandy wash and adjacent upland slopes and mountains. The wash slopes gently toward the northwest and is fed by several canyons in the Fish Creek Mountains (on the northeast) and Split Mountain (on the southwest). The wash is vegetated by several types of wash shrubland, and woodland as described below. The uplands are also vegetated by a variety of shrubland types. A total of seven vegetation types were mapped within the project area. Other land cover types including sparsely vegetated sandy wash and existing development were also mapped within the project area. Vegetation and cover types within the project area are described in the following paragraphs and mapped on Figure 4.2-1, "Project Site Vegetation and Landcover."

#### **Creosote bush scrub**

Creosote bush scrub is an upland vegetation type that is characterized by creosote bush (*Larrea tridentata*) which is the dominant shrub. Other species such as dyebush (*Psoralea emoryi*), desert straw (*Stephanomeria pauciflora*), and indigo bush (*Psoralea schottii*) are also present but in much lower numbers. It is most common in the uplands along the northwest portion of the project site.

#### **Creosote bush–white bursage scrub**

Creosote bush–white bursage scrub is an upland vegetation that is characterized by creosote bush and white bursage (*Ambrosia dumosa*) which co-dominate these areas. Several other species are present in these areas including (*Condea emoryi*), desert straw, ocotillo (*Fouquieria splendens*), and three species of cholla (*Cylindropuntia spp.*). Scattered catclaw (*Senegalia greggii*) are also present

in some of the smaller upland swales that originate in these areas and eventually change to catclaw acacia thorn scrub further downstream.

#### **Catclaw acacia thorn scrub**

Catclaw acacia thorn scrub is a wash vegetation that is dominated by catclaw. Other species such as desert lavender, smoke tree (*Psoralea argophylla*), cheesebrush (*Ambrosia salsola*), and sweetbush (*Bebbia juncea*). It is most common in the upper washes and in more isolated portions of the main wash that are slightly protected from scouring flows.

#### **Smoke tree woodland**

Smoke tree woodland is a wash vegetation that is dominated by smoke trees. Other species such as desert lavender, indigo bush, catclaw, desert willow (*Chilopsis linearis*), and cheesebrush (*Ambrosia salsola*) are also present. Several desert ironwood (*Olneya tesota*) were also present within the smoke tree woodlands along the Ocotillo pipeline alignment. It is most common in the large wash that flows through the lower elevations within the project site. It grows in the most active portion of the wash that is frequently scoured. Some areas mapped as smoke tree woodland have very little vegetative cover, primarily because of scouring floods that hit the area in 2014. Many of the dominant trees and shrubs survived but were buried or knocked over and are continuing to recover. Smoke tree woodland is ranked by CDFW as a sensitive natural community (CDFW 2010).

#### **Desert fir scrub**

Desert fir scrub is an upland vegetation type that grows on the gypsum outcrops within the project area. It is dominated by desert fir (*Peucephyllum schottii*) with other species such as flat-topped buckwheat (*Eriogonum plumatella*), and creosote bush also present but in much lower numbers. The areas mapped as this vegetation type do not match any of the vegetation types named or described in A Manual of California Vegetation (Sawyer et al. 2009, cited in Aspen 2019). Therefore, Aspen biologists named it to best match the naming convention used in Sawyer et al (2009).

#### **Allscale scrub**

Allscale scrub is dominated by allscale (*Atriplex polycarpa*) and is present along the Ocotillo pipeline alignment. It grows on fine sandy soils and old playalike habitats near the community of Ocotillo. Other species such as cheesebrush, dyebush, creosote bush, white bursage, and big galleta (*Hilaria rigida*). Fine wind-blown sands are present in several areas along the Ocotillo pipeline.

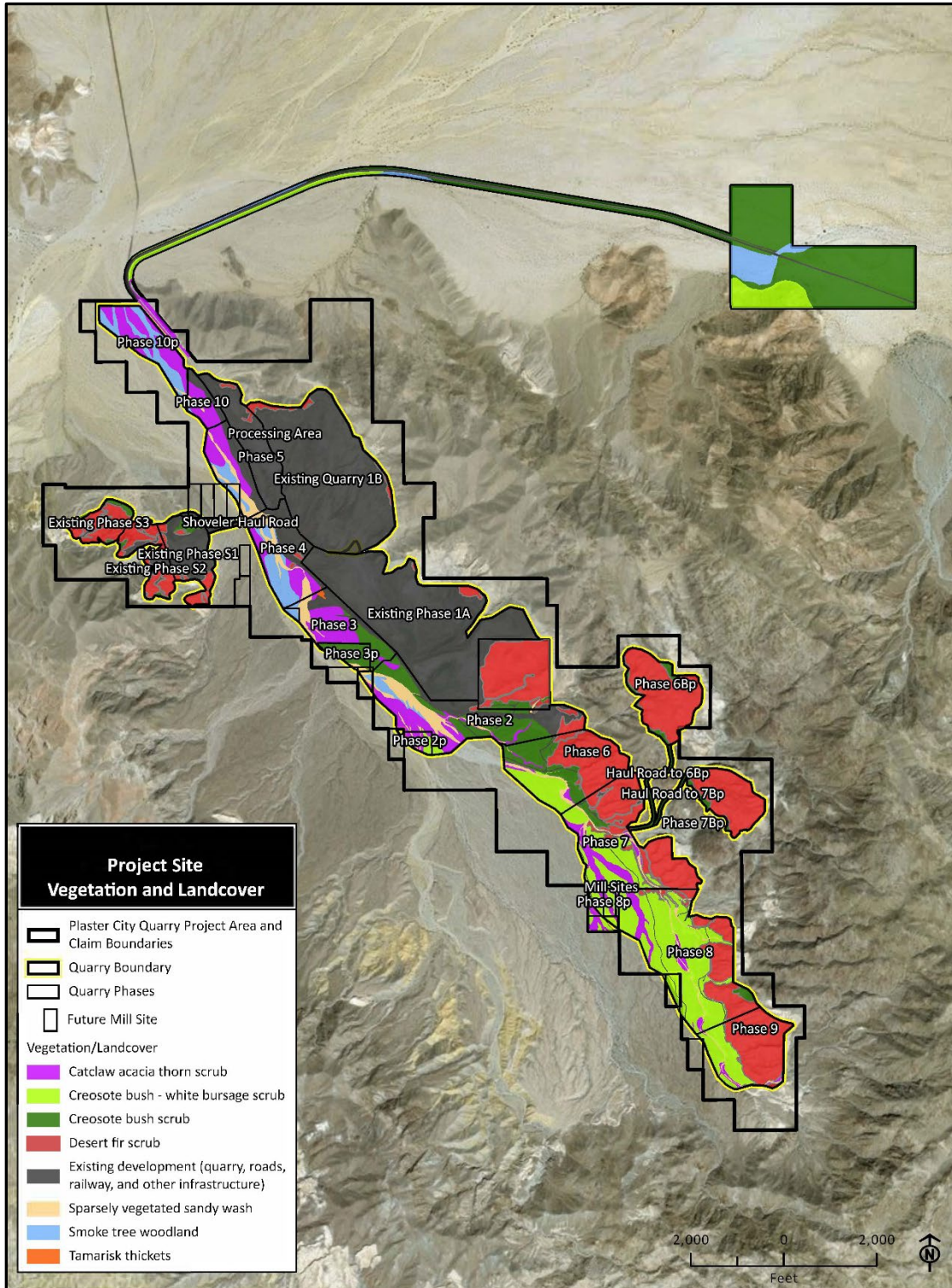
#### **Tamarisk thickets**

Tamarisk thickets was used to map one patch of vegetation dominated by saltcedar (*Tamarix ramosissima*) and athel tamarisk (*Tamarix aphylla*). Tamarisk thickets are present in a single location within the project area where flood waters in 2014 ponded and allowed these species to flourish.

#### **Sparsely vegetated sandy wash**

Sparsely vegetated sandy washes are present within the quarry, the northern pipeline alignments and along the Ocotillo pipeline alignment. It is used to map areas that are largely unvegetated washes with scattered shrubs such as sweetbush and cheesebrush. Seedling trees such as smoke tree and desert ironwood may be present but in very low numbers. These washes have a high abundance of spring annuals.





**SOURCE:** Aspen 2019; Figure 2

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

**Figure 4.2-1**  
**Project Site Vegetation and Landcover**

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### **Special Status Plant Species**

Table 3 of Appendix D-1 lists the 39 special-status plant species reported within the USGS 7.5-minute quads surrounding the project site. One of these species, San Diego button-celery (*Eryngium aristulatum* var. *parishii*) is both state and federally listed as endangered.

Six plants recognized by the BLM as sensitive have at least some potential to be present within the project site. Of these, none were observed and only two species, chaparral sand verbenas (*Albronia villosa* var. *aurita*) and Orcutt's aster (*Xylorhiza orcuttii*), have at least a moderate potential to be present and are discussed below (Aspen 2019).

Annual rock-nettle (*Eucnide rupestris*) is recognized by the CNPS as a California Rare Plant. This species was observed on the project site in the southeastern phases of the Quarry. The locations of field observations of Annual rock-nettle are shown on Figure 4.2-2, "Project Site Biological Resources." These and other species with at least a moderate potential to be present on the project site are described below.

### **Listed Threatened and Endangered Plant Species**

#### ***San Diego button-celery***

This plant occurs only in vernal pools in San Diego, Orange, and Riverside counties, inland as far as the In-Ko-Pah Gorge area. It is considered absent from the project site due to the lack of any suitable vernal pool habitat (Aspen 2019).

### **BLM Sensitive Plants**

#### ***Chaparral sand verbenas***

Chaparral sand verbenas is a BLM sensitive species and has a CRPR of 1B.1. It is a perennial herb in the four o'clock (*Nyctaginaceae*) family. It grows in the western Sonoran Desert, San Jacinto Mountains, and coastal sides of southern California mountains (CNPS 2018, cited in Aspen 2019). In the desert, it is found in desert shrublands on dunes, sandfields, and sandy washes. Chaparral sand-verbenas is an annual or perennial herb that tends to integrate with the common desert sand-verbenas (*A. villosa* var. *villosa*). Its distribution and identification are unclear in published reference works. The conservation concern is primarily for chaparral sand-verbenas occurrences in western Riverside County and other locations outside the desert where the variety is considered rare (Roberts et al. 2004, cited in Aspen 2019).

Chaparral sand verbenas was not observed within the project site during focused surveys, which were conducted during two years with below average rainfall. It has a moderate potential to be present along the northern pipeline alignment following a year with higher-than-average rainfall.

#### ***Orcutt's aster***

Orcutt's aster is a BLM sensitive species and has a CRPR of 1B.2. It is a woody perennial in the aster (*Asteraceae*) family that blooms from March to April. It grows in the western Sonoran Desert from the Salton Sea in the east to Anza Borrego State Park in the west, north to near Salton City and south to near Interstate 8. It is a woody perennial that is present year-round and flowers in the spring. It is most commonly found in arid canyons and nearly barren slopes in areas vegetated by creosote-bush scrub (Baldwin et al. 2012, cited in Aspen 2019). Several of the records also note that it grows on sandy, clay, alkali, and gypsum substrates (CNPS 2018, cited in Aspen 2019).

Orcutt's aster was not observed during focused surveys of the project site. It has a moderate potential to be present within all three components of the project site as a waif from upstream populations that are known to occur within 0.75 miles of the project site.

### **Other Special-status Plant Species**

Several other special-status plant species ranked by CNPS and CDFW have at least a moderate potential to be present. These include several plants ranked as a CRPR 2 species and CRPR 4 species. These species, with at least a moderate potential to be present, are described below.

#### ***Annual rock-nettle***

Annual rock-nettle (*Eucnide rupestris*) has a CRPR of 2B.2. It is an annual herb in the stick-leaf (*Loasaceae*) family and blooms from December through April. It is found in Sonoran Desert scrub at elevations from about 400 to 2,000 feet in California (Imperial and San Diego counties), Arizona, and northern Mexico. In California, it has been documented growing on gypsum soils. However, further south into Mexico it does not seem to show any soil affinity and has been observed on volcanic soils as well as more typical granitic substrates (SEINET 2018, cited in Aspen 2019).

Annual rock-nettle was observed within the project during focused surveys. Dozens of plants were growing on eroded gypsum cliffs, in adjacent gypsum bedrock, and downstream in sandy washes. All observations were in the southeastern phases of the quarry including Phases 6 through 9. Additional plants are not expected in other portions of the project site.

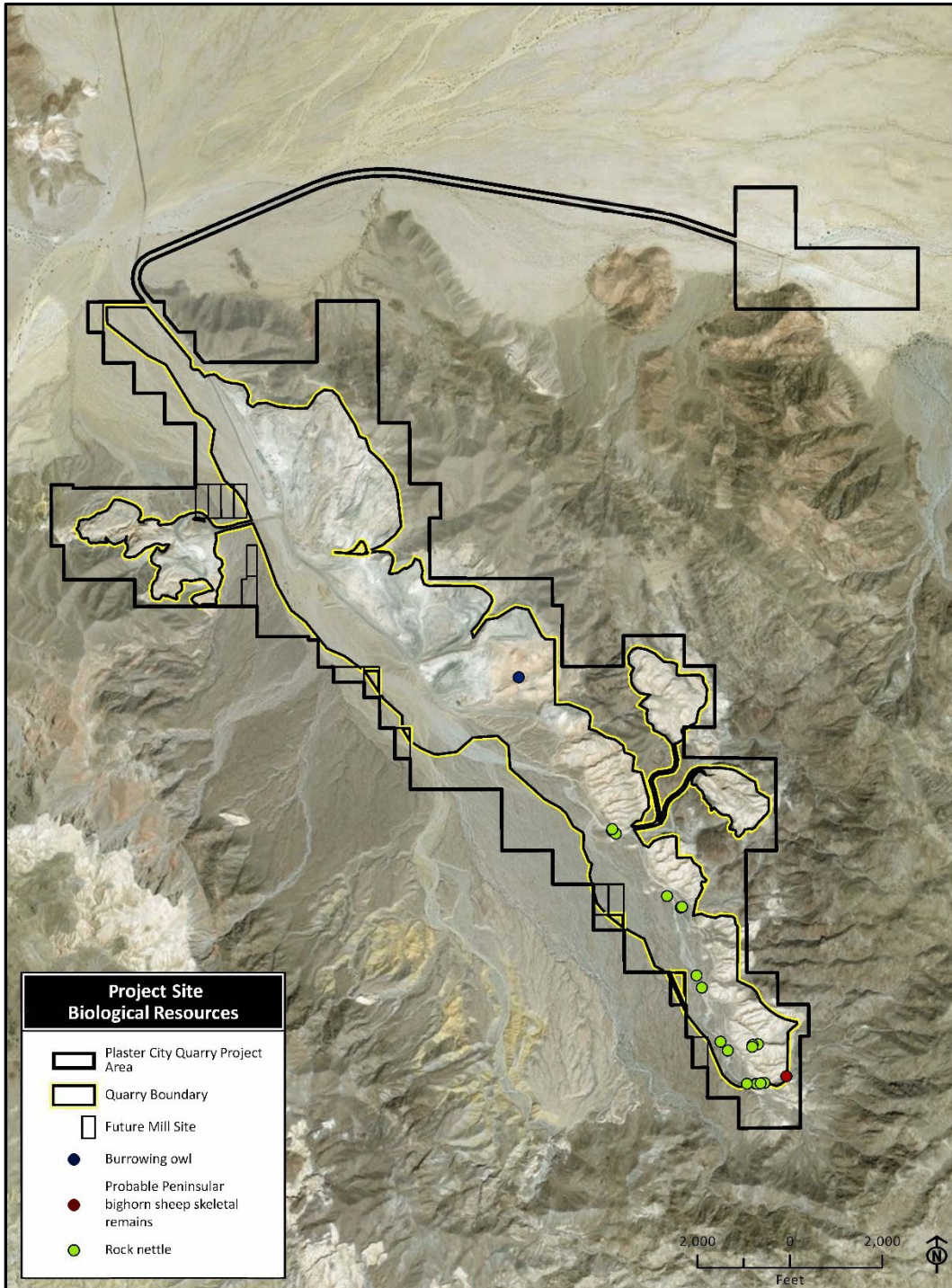
#### ***Harwood's milk vetch***

Harwood's milk vetch (*Astragalus insularis* var. *harwoodii*) has a CRPR of 2B.2. It is an annual herb in the pea (*Fabaceae*) family that blooms from March to April (CNPS 2018, cited in Aspen 2019). It grows in sandy, windblown soils throughout much of the western Sonoran Desert from near Anza Borrego State Park in the south, to the Whipple Mountains in the north and east into Arizona (CDFW 2018, cited in Aspen 2019). It is an annual that requires adequate rainfall to trigger germination. It is known from several records in the immediate vicinity of the existing pipeline near Plaster City and was documented in 2017 within about 0.5 miles of the proposed pipeline alignment (CCH 2018 and Calflora 2018, cited in Aspen 2019).

Harwood's milk vetch was not observed during focused surveys of the project area, which were conducted during two years with below average rainfall. It has a high potential to be present in fine sand accumulations within all three components of the project area in a year with higher-than-average rainfall.

#### ***Brown turbans***

Brown turbans (*Malperia tenuis*) has a CRPR of 2B.3. It is an annual herb in the aster (*Asteraceae*) family and blooms from February through April (CNPS 2018, cited in Aspen 2019). It is found in sandy or gravelly areas of Sonoran Desert scrub at elevations from about 50 to 1,100 feet in California (Imperial and San Diego counties) and Baja California, Mexico. It is known from numerous locations in the vicinity of the project area (CCH 2018, cited in Aspen 2019).



**SOURCE:** Aspen 2019; Figure 3

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

**Figure 4.2-2**  
**Project Site Biological Resources**

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Dozens of plants were observed within Phases 7 through 9, primarily on rocky slopes and flats adjacent to the sandy washes. Several plants were also observed along the proposed pipeline near the entrance gate to the quarry. Additional plants are likely to be present in similar habitats within the project area in a year with higher-than-average rainfall. It also has a high potential to be present along the existing pipeline although it was not observed during the surveys.

### **Hairy blazingstar**

Hairy blazingstar (*Mentzelia hirsutissima*) has a CRPR of 2B.3. It is an annual herb in the stick-leaf (*Loasaceae*) family and blooms from March to May (CNPS 2018, cited in Aspen 2019). It is found on rocky substrates and talus in the Sonoran Desert at elevations up to about 2,000 feet in California (Imperial and San Diego counties) and in Baja California, Mexico. It was documented in 2017 within about 0.5 miles of the proposed pipeline alignment (CCH 2018 and Calflora 2018, cited in Aspen 2019).

Hairy blazingstar was not observed during the focused surveys of the project area, which were conducted during two years with below average rainfall. It has a high potential to be present within the Quarry and along the proposed pipeline alignment in a year with higher-than-average rainfall.

### **Narrow-leaf sandpaper-plant**

Narrow-leaf sandpaper-plant (*Petalonyx linearis*) has a CRPR of 2B.3. It is a shrub in the stick-leaf (*Loasaceae*) family and blooms from March to May (CNPS 2018, cited in Aspen 2019). It is found on sandy and rocky substrates in a variety of habitats throughout the Sonoran Desert. It was documented on gypsum soil in 2015 just south of the project area. Narrow-leaf sandpaper-plant was reported from the project area in an earlier report (White and Leatherman 2005, cited in Aspen 2019) although it was not observed during the recent surveys and may no longer be present. It has a high potential to be present in the quarry and has a moderate potential to be present within the proposed pipeline alignment.

Four special-status plants with a California Rare Plant Rank (CRPR) of 4 were observed during the surveys: winged cryptantha (*Cryptantha holoptera*), Wolf's opuntia (*Cylindropuntia wolfii*), Thurber's pilostyles (*Pilostyles thurberi*), and Coulter's lyrepod (*Lyrocarpa coulteri*). Winged cryptantha and Coulter's lyrepod were both observed at several locations in the upper wash within Phases 6 through 9. Dozens of Wolf's opuntia were observed on upland terraces within Phases 7 through 9. Thurber's pilostyles were observed growing on dyebush along the proposed pipeline.

Four additional special-status plants with a CRPR of 4 have at least a moderate potential to be present: Salton milkvetch (*Astragalus crotalariae*), ribbed cryptantha (*Cryptantha costata*), Utah vine milkweed (*Funastrum utahense*), and slender-lobed four o'clock (*Mirabilis tenuiloba*). These plants are ranked as CRPR 4 species (i.e., a "watch list," not indicating rarity) and none are listed as threatened or endangered.

### **Special Status Wildlife Species**

Table 4 in Appendix D-1 lists the special-status wildlife species reported within the USGS 7.5-minute quads surrounding the project site. The state and federally listed Peninsular bighorn sheep is present in the area. Two candidates for state listing, flat-tailed horned lizard, and Townsend's big-eared bat, may also occur. Loggerhead shrike, San Diego desert woodrat, and burrowing owl, all California Species of

Special Concern, have been observed on the project site. The locations of field observations of burrowing owl and peninsular bighorn sheep remains are shown on Figure 4.2-2. These and other species with at least a moderate potential to be present on the project site are described below.

### **Listed Threatened or Endangered Wildlife**

#### ***Peninsular bighorn sheep***

The Peninsular bighorn sheep (*Ovis canadensis nelsoni* DPS) (PBS) is federally listed as endangered, State-listed as threatened and designated as a "fully protected animal" by the California Fish and Game Code. Under the federal Endangered Species Act listing (USFWS 2009, cited in Aspen 2019) "Peninsular bighorn sheep" refers to the regional Distinct Population Segment (DPS) of desert bighorn sheep (or Nelson's bighorn sheep). Under the 1971 California Endangered Species Act listing, Peninsular bighorn sheep refers to the subspecies *Ovis canadensis cremnobates*, although that subspecies is no longer recognized in more recent literature. Regardless of nomenclature, both listing designations refer to the same animals: the bighorn sheep population found in the Peninsular Ranges of southern California and southward into Baja California. This population is recognized as genetically isolated from other populations located farther to the north and east. PBS inhabit the desert slopes of the Peninsular ranges from Riverside County south to Baja California, Mexico, including the Fish Creek Mountains, where the Plaster City Quarry is located. PBS biology, life history, and conservation status are described by the US Fish and Wildlife Service (USFWS 2011a, cited in Aspen 2019) in its 5-year review. A few key aspects of its life history are seasonal movements and habitat use, reliance on surface water availability, and metapopulation geography.

The decline of PBS is attributed to combined effects of disease and parasitism; low lamb recruitment; habitat loss, degradation, and fragmentation; non-adaptive behavioral responses associated with residential and commercial development; and high predation rates.

The USFWS (2000, cited in Aspen 2019) has prepared a Recovery Plan for PBS, identifying 9 Recovery Regions, extending from the northernmost Recovery Region 1 on the desert-facing slopes of the San Jacinto Mountains (about 50 miles north of the Plaster City Quarry), to the southernmost Recovery Region 9 extending from the Coyote Mountains (about 10 miles south of the quarry expansion area) south to the international border (the range of the animals within Recovery Region 9 extends southward through the Coyote Mountains, across Interstate 8, and across the international border into Mexico). The Plaster City Quarry is located within Recovery Region 8 (Vallecito Mountains). The estimated numbers of Peninsular bighorn sheep in Recovery Regions 8 and 9 increased during the period from 1998 to 2016 (USFWS 2011a; Colby and Botta 2017, cited in Aspen 2019). CDFW (Colby and Botta 2017, cited in Aspen 2019) estimated the Region 8 and Region 9 populations at 163 and 256 animals, respectively.

The behavioral response of desert bighorn sheep (including PBS) to human activity is considered to be highly variable and dependent upon many factors, including: (1) the type of activity, (2) an animal's previous experience with humans, (3) size or composition of the bighorn sheep group, (4) location of the bighorn sheep relative to elevation of the activity, (5) distance to escape terrain, and (6) distance to the activity (USFWS 2011a, p. 14, cited in Aspen 2019). Responses can range from cautious curiosity to immediate flight or abandonment of habitat, as well as disruption of normal social patterns and resource use. In some cases, Nelson's bighorn sheep have become acclimated to



quarrying activities. For example, in local resident Nelson's bighorn sheep the northern San Bernardino Mountains have become acclimated to limestone quarrying and make regular use of inactive quarries and even active quarries during inactive hours (personal observations and communications with quarry staff by Scott D. White).

There are several research publications on Nelson's bighorn sheep activity in the vicinity of mining operations. None of these papers addresses PBS; however, the following three address Nelson's bighorn sheep populations in arid habitats in California or Arizona that are comparable to the Plaster City Quarry site. The summary that follows is based on these three publications, particularly the discussion by Bleich and coauthors (2009, cited in Aspen 2019), which is the most recent of the three, comparing and contrasting their own study results with the others and with broader Nelson's bighorn sheep literature.

- Panamint Mountains, California (Oehler et al., 2005)
- Silver Bell Mountains, Arizona (Jansen et al., 2007)
- San Bernardino Mountains, California (Bleich et al., 2009)

Bleich and coauthors (2009, cited in Aspen 2019) state that “the characteristic that best defines mountain sheep habitat is the presence of escape terrain,” and that many habitat studies have found that juxtaposition of escape terrain with valuable water or food sources has been important. They identify potential mining-related habitat benefits and deterrents, as follows: Mining can enhance escape terrain by removing vegetation (i.e., improving visibility) and creating steeper topography, especially if the improved escape terrain is near valuable food or water sources. However, mining-related disturbance could outweigh the benefits of improved escape terrain if it causes sheep to avoid the quarry areas. They found that Nelson's bighorn sheep in the San Bernardino Mountains limestone mining areas generally avoided roads (human disturbance) but did not avoid mined areas and in fact favored them over random locations.

Bleich and coauthors (2009, cited in Aspen 2019) cite several publications indicating that Nelson's bighorn sheep can habituate to disturbance, and are frequently observed on or near active mines, stating “we speculate that such disturbance is of minimal concern to sheep when it is consistent in nature and occurs in highly predictable locations.” In the Panamint Mountains study, Oehler and coauthors found that proximity to active mining did not affect home ranges, diet composition, or demographic indices, and that Nelson's bighorn sheep activity in the mining area was not affected by frequency of blasting or mine productivity.

The USFWS designated critical habitat for PBS in 2009. Much of the proposed Quarry expansion area, as well as the southern and western currently active quarry areas, are within designated critical habitat (see Figure 4.2-3, “Peninsular Bighorn Sheep Critical Habitat”). In its critical habitat designation, the USFWS (2009, cited in Aspen 2019) described “primary constituent elements” (PCEs) essential to the conservation of Peninsular bighorn sheep. The 5 PCEs are paraphrased below:

- Moderate to steep, open slopes and canyons, that provide space for sheltering, predator detection, rearing of young, foraging and watering, mating, and movement within and between ewe groups;

- Presence of a variety of forage plants, including shrubs that provide a primary food source year-round, grasses, and cacti that provide a source of forage in the fall, and forbs that provide a source of forage in the spring;
- Steep, rugged, slopes (60 percent slope or greater) that provide secluded space for lambing and terrain for predator evasion;
- Alluvial fans, washes, and valley bottoms that provide important foraging areas where nutritious and digestible plants can be more readily found during times of drought and lactation, and that provide and maintain habitat connectivity by serving as travel routes between and within ewe groups, adjacent mountain ranges, and important resource areas (e.g., foraging areas and escape terrain); and
- Intermittent and permanent water sources that are available during extended dry periods and provide relatively nutritious plants and drinking water.

On the whole, the USG claims and the surrounding slopes and canyon provide all PCEs identified above. Intermittent or permanent water is available from a natural rock tinaja water source located in the Fish Creek Mountains south of the Quarry. Several additional water sources are located about one to three miles west of the Quarry, within Anza Borrego Desert State Park (Colby and Botta 2017, cited in Aspen 2019).

Open slopes and canyons, as well as steep rugged slopes, are largely found above or in between the active quarry areas and the gypsum deposits proposed for future quarrying. Alluvial fans and washes, recognized as important foraging areas, are found throughout the area, including the large unnamed alluvial wash where below-grade quarrying would occur.

The proposed Quarry expansion would take place on two landforms: gypsum outcrops located above the level of the alluvial wash, and below-grade gypsum deposits, located beneath the alluvial wash. The planned expansion areas are located within larger claims, which also include more extensive upland and alluvial topography. In terms of the PCEs, the gypsum outcrops provide limited habitat value because of their sparse vegetation cover and minimal plant species diversity (predominantly desert fir, which is not identified as a PBS food plant). In addition, the surfaces of the undisturbed outcrops are covered by a crusted clay material that collapses underfoot, possibly affecting its habitat value for sheltering, predator detection, rearing of young, foraging and watering, mating, and movement within and between ewe groups (the first PCE).

The existing alluvial wash habitat located in the expansion areas planned for below-grade mining provides the high diversity of food plants identified in the second and fourth PCEs and may provide habitat connectivity within the canyon (per the fourth PCE), although most evidence of PBS movement in the area is found on the steep slopes and ridges, rather than in the canyon.

CDFW conducts regular monitoring of radio-collared Peninsular bighorn sheep throughout the area. The annual reports identify several “ewe groups” within each Recovery Region; each ewe group comprises a few adult female Peninsular bighorn sheep and their offspring. There are four identified ewe groups in Recovery Region 8 (Colby and Botta 2017, cited in Aspen 2019). The Quarry is located between the mapped home ranges of Vallecito Mountains ewe group and the Fish Creek Mountains ewe group. Suitable and occupied PBS habitat occurs to the west, northwest, south, and east of the Quarry, but not to the north. CDFW radio collar data provided by R. Botta (see Figure 4.2-4, “Fish

Creek Mountains Radio Collared Ewe Locations”) show numerous PBS occurrences around the Quarry, around Split Mountain (west of the Quarry) and the Fish Creek Mountains (east, south, and southeast of the Quarry).

Ewes with young lambs have been reported within about one mile of the project site.

The existing Quarry and planned expansion areas are located along the eastern (Phases 1 through 10) and western (Phases S1, S2, and S3) slopes above a broad alluvial wash between the home ranges of two ewe groups whose core ranges are in the steeper mountains to the east and west. The two home ranges are in steep topography above the active quarry and planned expansion areas. At the narrowest point the overlap where the two ewe groups share territories (and, thus, biological connectivity) is about 4,000 feet wide, ranging in elevation between about 800 and 1,800 feet above MSL, with a few peaks above 2,100 feet above MSL. The existing Quarry and planned expansion area may limit potential east west movement across the canyon, although the animals seem to avoid the canyon floor (even to the south of the active Quarry area). Proposed Quarry development would not prevent continued geographic contact between the two ewe groups south of the planned Quarry expansion areas.

Peninsular bighorn sheep give birth mainly in late winter through early spring (February - April). Lambing is the period from one month before birth until weaning (at about 4 to 6 months of age). Births can occur over much of the winter or spring, so lambing activity can extend from January through August, but lambing season is generally identified as the period from 1 January through 30 May. During pregnancy and lactation, ewes require high-protein forage, as found on deeper more productive soils of alluvial fans and canyon bottoms but retreat to better escape terrain late in pregnancy and to give birth.

Lambing areas are associated with ridge benches or canyon rims adjacent to steep slopes or escarpments. The Fish Creek Mountains surrounding the project site provide suitable habitat components for lambing habitat and appear to be used by radio-collared females (ewes) during lambing season.

Peninsular bighorn sheep also occasionally move across valleys (not generally considered suitable habitat for most activities) between disjunct habitat areas. These movements can supplement small subpopulations with new members and provide for gene flow among multiple small groups. This pattern of partially isolated sub-populations with occasional demographic and genetic movement among them is known as a metapopulation. The proposed project would not prevent long-distance movement among distant sub-populations.

Peninsular bighorn sheep have been observed, albeit infrequently, at the existing Quarry site and the proposed Quarry expansion areas. During biological surveys conducted for the Biological resources Technical Report (Aspen 2019; Appendix D-1), PBS signs such as tracks, scat (feces), and “beds” (i.e., cleared areas for resting or sleeping) were commonly observed on upland slopes above the proposed Quarry expansion areas, especially near the southern end of the proposed Quarry areas, and less often observed in the unnamed alluvial wash.

Skeletal remains of an apparent bighorn sheep were also observed near the southern end of the proposed Quarry areas (Figure 4.2-2). PBS tracks were also observed commonly near the active Quarry area in 2014, following a year of heavy rainfall and subsequent ponding within the Quarry. Due to the ponding, USG pumped water from the Quarry, and multiple sheep tracks indicated the animals had repeatedly crossed the wide wash (from the west) to reach the water discharge.

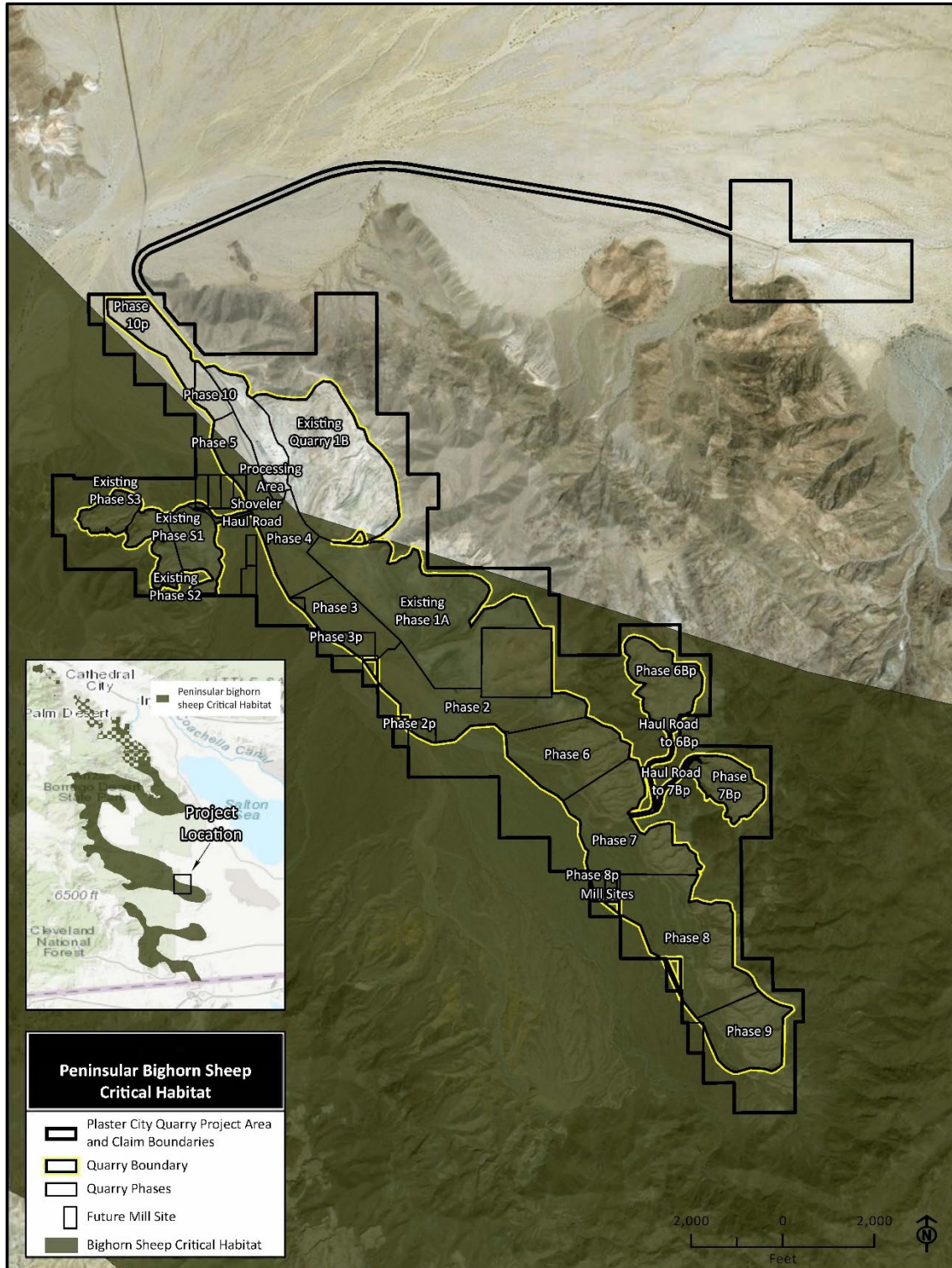
California Department of Parks and Recreation unpublished data also include PBS occurrences in the project area: sign was observed in the Shoveler claims area on the west part of the project site, and at the narrow-gauge rail line where a sheep evidently crossed from west to east north of the USG processing area and went into the Fish Creek Mountains above the existing Quarry. Finally, an individual PBS was documented on the project site in 2006. In early August, Quarry staff saw an animal in the Shoveler claims area at the west part of the project site; over the next few days, it was seen twice more near the processing area (though the workers did not get good views). Finally, on August 7, 2006, the remains of a dead immature male PBS were found at the Shoveler claims area. The USG Quarry Manager contacted Anza-Borrego Desert State Park. A Park officer investigated the site and disposed of the remains. There was no evidence of predation (e.g., by mountain lion) or major injury and the cause of death is unknown.

The CDFW has only recently begun to understand ewe group structure and seasonal movements within the Fish Creek Mountains (FCM). CDFW observed 15 PBS, including 1 lamb, 1 yearling ewe, 6 ewes and 4 rams in the FCM during the 2016 aerial survey. However, during more recent ground telemetry monitoring upwards of 30 sheep have been observed.

There is no abundance estimate for the FCM ewe group alone. Because PBS move between the Fish Creek Mountains and Vallecito Mountains by way of Split Mountain, CDFW's surveys of the two mountain ranges are combined. For the 2016 aerial survey the total Vallecito and FCM adult ewe estimate was 79, the adult ewe/yearling ewe estimate was 101 and the adult and yearling ewe and ram estimate was 163. Given the increase in the PBS population over the last 10+ years and CDFW's improved understanding of ewe group structure, CDFW hopes to estimate PBS abundance by individual ewe groups. Doing so will depend on funding availability.

To date, CDFW has data from 3 GPS-collared ewes. Thus far, the core use area is in a large north-south running drainage on the eastern side of the Fish Creek Mountains (east of the ridgeline above the Quarry). As of 2017, the distribution and movement patterns had not changed significantly in the Vallecito and FCM ewe groups.

There are only a few known water sources within the Fish Creek Mountains, including the north/south trending canyon at the northeast end of the FCM ewe group's home range. In summer 2016, the lower tinaja was checked and found to be dry; however, CDFW GPS data show this canyon to be the most heavily used during the summer months. As of 2017, numerous tinajas in the FCM have been dry for the past few years (prior to above-average rainfall in 2019). If recurring drought conditions continue these water sources may no longer meet the needs of PBS within FCM and water enhancement projects may be warranted.

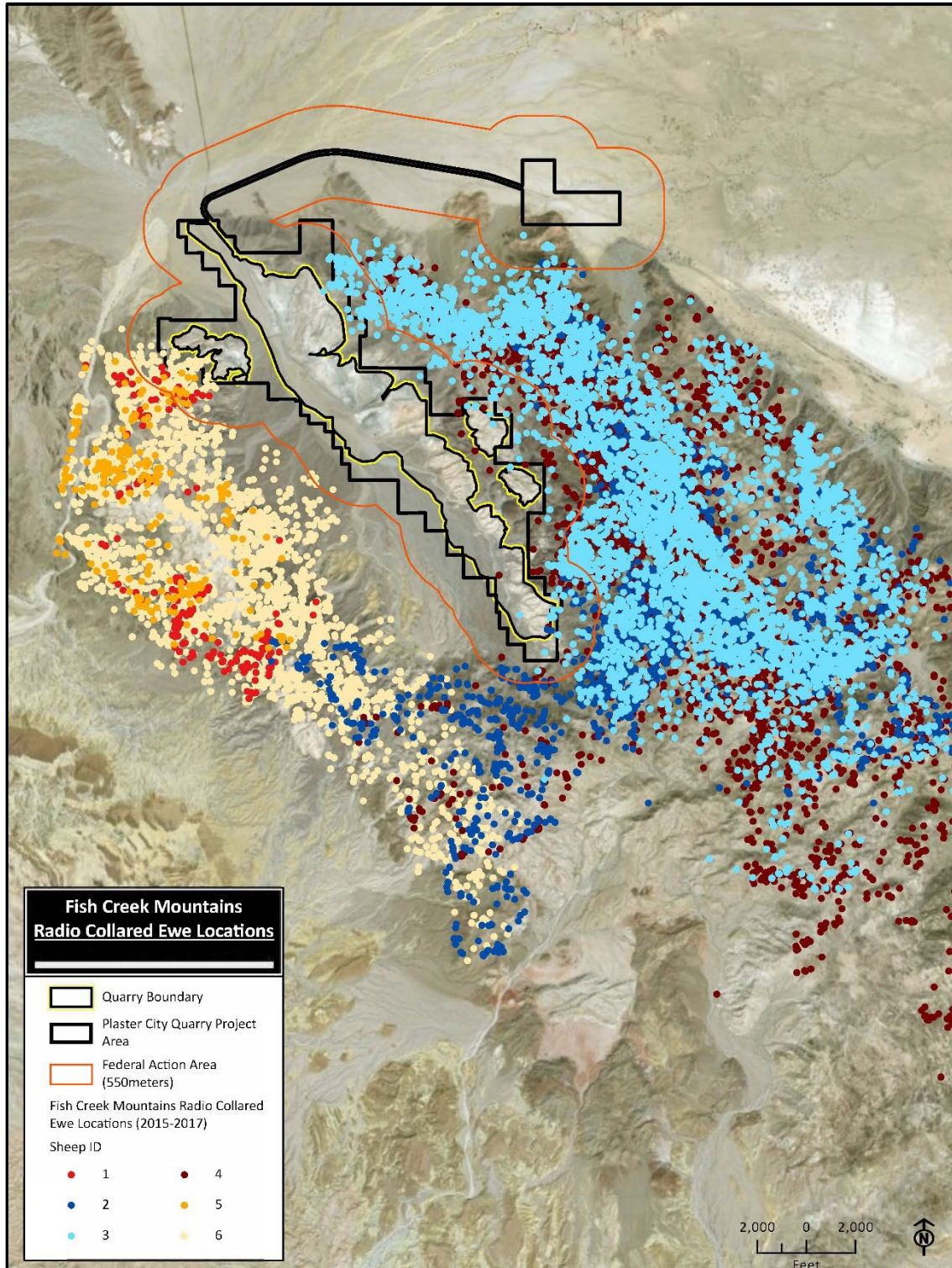


SOURCE: Aspen 2019; Figure 4

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

**Figure 4.2-3**  
**Peninsular Bighorn Sheep Critical Habitat**

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SOURCE: Aspen 2019; Figure 5

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

**Figure 4.2-4**  
**Fish Creek Mountains Radio Collared Ewe Locations**

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### **Swainson's hawk**

Swainson's hawk (*Buteo swainsoni*) is listed as threatened by CDFW and is recognized as sensitive by the BLM. It is a hawk that preys on small mammals, birds, large insects, reptiles, and amphibians. Swainson's hawks usually hunt from perches such as fence posts and low trees, or from vantage points on the ground. This species is most commonly found over open plains and prairies in the Great Plains and relatively arid areas of western North America. It builds rather flimsy nests in shrubs and trees along wetlands and drainages and in windbreaks in fields and around farmsteads. They nest in the San Joaquin, Owens, and western Antelope Valleys of California. The primary wintering grounds for this species is in Argentina. They migrate through southern California every spring and fall. Suitable foraging habitat for this species is present throughout the project area.

### **Barefoot banded gecko**

This summary is based on reviews by Stebbins (2003, cited in Aspen 2019) and CDFG (2005, cited in Aspen 2019). The barefoot banded gecko (*Coleonyx switaki*) is a state-listed threatened species and a BLM sensitive species. It is not listed under the federal ESA. Its documented geographic range extends from San Diego and Imperial counties south to central Baja California, Mexico. It occurs in rock outcrops and boulder strewn slopes and canyons. It is rarely observed because of its steep, poorly accessible habitat, and because it spends most of its time in rock crevices or below ground. Due to its behavior and inaccessible habitats, its range in southern California may be more extensive than shown by documented occurrences. For example, Stebbins (2003, cited in Aspen 2019) reported it as far north as State Highway 74 in the Santa Rosa Mountains, Riverside County. The nearest known occurrences to the project site are within Anza Borrego Desert State Park and in the Coyote Mountains. The principal threats to barefoot banded geckos appear to be collecting live animals for the reptile hobbyist trade, and consequent habitat destruction (e.g., prying rock crevices apart). Barefoot banded geckos are unlikely to occur on the quarry site or pipeline alignments. The gypsum outcrops do not provide suitable boulders or crevices. The surrounding metamorphic rock outcrops and perhaps the alluvial wash may offer marginal habitat such as boulders and crevices. There is no suitable habitat in the proposed pipeline alignment. Barefoot banded geckos were not found during field surveys conducted for the 2008 EIR/EIS or during recent field surveys in a portion of the gypsum quarry conducted in compliance with Mitigation Measure 3.5-1e of the 2008 EIR/EIS and current CDFW survey protocol (CDFG 2011, cited in Aspen 2019).

### **Desert pupfish**

Desert pupfish (*Cyprinodon macularius*) are absent from the project site due to the absence of perennial surface water. However, desert pupfish occurs lower in the watershed, several miles downstream from the quarry. Critical habitat at San Felipe Creek, Carrizo Wash, and Fish Creek Wash and occupied habitat at San Sebastian Marsh are located about 7 miles northeast of proposed Quarry Well No. 3, 11 miles northeast of the Quarry, about 20 miles north of the Plaster City Plant, and about 24 miles north of the proposed wells near Ocotillo.

Historically, desert pupfish were widespread and common in shallow water of stream margins, marshes, springs, and slow-flowing reaches of major rivers in the lower Gila River and Colorado River watersheds in Arizona, California, Baja California, and Sonora Mexico. They are exceptionally hardy, surviving in a broad range of water chemistry and temperature regimes, but they are vulnerable to competition and predation by non-native species. The desert pupfish is endangered due to habitat loss and the introduction of non-native competitors and predators (e.g., Tilapia) into

its habitat (Minckley et al. 1991; USFWS 1986; Moyle 2002, all cited in Aspen 2019). Dam construction on several of its river and tributary habitats in Arizona and on the Colorado River inundated some occurrences and dewatered others. Surface water diversions have eliminated habitat in some areas, and lowered water tables due to groundwater pumping and groundwater use by invasive shrubs (*Tamarix ramosissima*) have eliminated other occurrences (USFWS 1986, 1993; CDFG 2005, all cited in Aspen 2019). Agricultural pollution may threaten some occurrences. In California, desert pupfish populations persist in native populations, at San Sebastian Marsh and upstream in San Felipe Creek and tributaries (Imperial County), at Salt Creek (Riverside County), and in shoreline pools and irrigation ditches around the Salton Sea (USFWS 1993, cited in Aspen 2019). They also persist in irrigation canals near the Salton Sea and in a few introduced “refugia” sites, including three in Anza Borrego Desert State Park.

The USFWS designated critical habitat for desert pupfish at San Sebastian Marsh and along portions of its tributaries, San Felipe Creek, Carrizo Wash, and Fish Creek Wash in Imperial County (USFWS 1986, cited in Aspen 2019). In the critical habitat designation, the USFWS listed several activities that could adversely modify critical habitat, including withdrawal of water, either directly or indirectly, from San Sebastian Marsh. In addition, the USFWS (1993, cited in Aspen 2019) published a Desert Pupfish Recovery Plan with recommendations for land management and recovery.

### **BLM Sensitive Species**

#### ***Flat-tailed horned lizard***

The flat-tailed horned lizard (*Phrynosoma mcalli*) is recognized as a sensitive species by the BLM and is a CDFW Species of Special Concern. The flat-tailed horned lizard has been proposed for federal listing several times but in each case the USFWS determined that listing was not warranted (USFWS 2011b, cited in Aspen 2019). Although not federally listed, an interagency management strategy and conservation agreement for the flat-tailed horned lizard was established in 1997 and remains in place (Flat-tailed Horned Lizard Interagency Coordinating Committee 2003, cited in Aspen 2019); its signatory agencies include the Bureau of Land Management and El Centro Naval Air Command. Together, these agencies manage several large reserves, including the West Mesa Management Area. A portion of the existing narrow gauge rail line crosses the West Mesa Management Area, but none of the project components are located within it. The West Mesa Management Area is located approximately 2 miles north of the proposed replacement pipeline alignment and about 5 miles east of the proposed new pipeline alignment (Flat-tailed Horned Lizard Interagency Coordinating Committee 2003, cited in Aspen 2019).

The flat-tailed horned lizard’s historic range extends throughout much of southeastern California, southwestern Arizona, northwestern Sonora and northeastern Baja California, Mexico. Populations are becoming isolated from one another by development. They occur almost exclusively in windblown sand dunes and partially stabilized sand flats. They overwinter by burying themselves in loose sand at depths to 8 inches (20 cm). They also bury themselves in sand to escape predators and to escape extreme high temperatures during their summer activity period (Flat-tailed Horned Lizard Interagency Coordinating Committee, 2003) Flat-tailed horned lizard was not observed during the surveys. They were observed in the immediate vicinity of the proposed pipeline alignment in 2016 and 2017 (inaturalist 2018, cited in Aspen 2019). They have a high potential to be present along both pipeline alignments and only a moderate potential to be present in the washes at the downstream end of the quarry.

The USFWS (2011b, cited in Aspen 2019) determined that flat-tailed horned lizard populations within Management Areas 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 USFWS evaluated the conservation efforts implemented under the Rangeland Management Strategy and recognized that these efforts reduce threats and “promote actions that benefit the flat-tailed horned lizard throughout its range.” The USFWS states that “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.”

#### **Colorado Desert fringe-toed lizard**

Colorado Desert fringe-toed lizard (*Uma notata*) is recognized as a sensitive species by the BLM and is a CDFW Species of Special Concern. It lives in fine, loose, wind-blown sand, primarily in desert dunes and sandy washes. Their range in California includes the Sonoran Desert from Anza Borrego State Park to the Arizona and Mexico borders in Imperial and San Diego counties.

Suitable windblown habitat is present along both pipeline alignments. There are recent records of Colorado Desert fringe-toed lizard within about 5 miles of the proposed pipeline (inaturalist 2018, cited in Aspen 2019). It has the highest potential for occurrence along the proposed pipeline where the habitat is intact and has relatively little disturbance. There is minimally suitable habitat and very few records near the existing pipeline, therefore it has a low potential to be present. No suitable habitat is present within the quarry.

#### **Golden eagle**

Golden eagle (*Aquila chrysaetos*) is federally protected under the Bald and Golden Eagle Protection Act (BGEPA), recognized as sensitive species by the BLM, and considered a fully protected species by CDFW. They are year-round residents throughout most of their range in the western U.S. In the southwest, they are more common during Winter when eagles that nest in Canada migrate south into the region. They breed from late January through August, mainly during late Winter and early Spring in the California deserts. In the desert, they generally nest in steep, rugged terrain, often on sites with overhanging ledges, cliffs, or large trees that are used as cover. Golden eagles are wide-ranging predators, especially outside of the nesting season, when they have no need to return daily to tend eggs or young at their nests. Foraging habitat consists of open terrain including grasslands, deserts, savanna, and early successional forest and shrubland habitats. They prey primarily on rabbits and rodents, but will take other mammals, birds, reptiles, and some carrion.

Golden eagle home ranges in the Mojave Desert ranged from 1.7 to 1,369 square miles, and averaged 119 square miles (Braham et al. 2015, cited in Aspen 2019). In any given year, eagles may initiate nesting behavior at one nest, without any activity at the other nests. Eagles may complete breeding by laying eggs and raising chicks or may abandon the nest without successfully raising young. In any given year, all or most nests in a territory may be inactive, but eagles may return in future years to nest at previously inactive sites.

Marginally suitable nesting habitat is present within the project area and there is a low potential for nesting. Numerous cliffs were observed within 0.5 miles of the project area and are likely to provide suitable nesting habitat. Suitable foraging habitat is present throughout the project area and there is a high potential for golden eagles to forage throughout.

### **Burrowing owl**

Burrowing owl (*Athene cunicularia*) is a CDFW Species of Special Concern and recognized as sensitive by the BLM. It inhabits arid lands throughout much of the western U.S. and southern interior of western Canada (Poulin et al., 2011, cited in Aspen 2019). In this portion of its range, some owls are migratory, while some are year-round residents. Burrowing owls prefer flat, open annual or perennial grassland or gentle slopes and sparse shrub or tree cover. However, they are routinely found in desert shrub communities, including those that are present in the project area. Burrowing owls are unique among the North American owls in that they nest and roost in abandoned burrows, especially those created by ground squirrels, kit fox, desert tortoise, and other wildlife. Burrowing owls have a strong affinity for previously occupied nesting and wintering habitats. Burrowing owls often return to burrows used in previous years, especially if they were successful at reproducing there in previous years (Gervais et al. 2008, cited in Aspen 2019). The breeding season in southern California generally occurs from February to August with peak breeding activity from April through July (Poulin et al. 2011, cited in Aspen 2019).

A single burrowing owl was observed during surveys of the project area in October 2014. Given the timing of the survey and that the owl was unpaired, this was likely a dispersing or wintering individual. Subsequent surveys of the project area conducted during the breeding season did not detect any burrowing owls. However, suitable burrowing owl nesting habitat and foraging habitat is present throughout the project area. This species is considered to have moderate potential to nest in the project area.

### **Bats**

Five special-status bat species recognized as sensitive by the BLM have at least a moderate potential to forage over the project area: California leaf-nosed bat (*Macrotus californicus*), pallid bat (*Antrozous pallidus*), Townsend's big-eared bat (*Corynorhinus townsendii*), spotted bat (*Euderma maculatum*), and Western mastiff bat (*Eumops perotis californicus*). Pocketed free-tailed bat (*Nyctinomops femorosaccus*) also has at least a moderate potential to be present but is not recognized by the BLM as sensitive but is recognized as a CDFW Species of Special Concern. The pallid bat, Western mastiff bat, and California leaf-nosed bat forage in open areas over grasslands, agricultural areas, and other shrublands and roost in a variety of habitats including buildings, rock crevices, and caves. Townsend's big-eared bat roosts primarily in caves and abandoned mines (Harvey et al. 2011, cited in Aspen 2019). The spotted bat forages on moths in the desert during winter months and roosts in deep crevices in cliffs (CDFW 2018, cited in Aspen 2019). The gypsum cliffs and other cliffs and outcrops immediately adjacent to the quarry provide suitable roosting habitat for most of these species. In addition, the entire project site provides suitable foraging habitat for these bats.

### **Other Special-status Wildlife**

#### **Loggerhead shrike**

The loggerhead shrike (*Lanius ludovicianus*) is a CDFW Species of Special Concern. It is a widespread species in the United States and throughout California. It prefers open habitats with scattered shrubs, trees, posts, fences, utility lines, or other perches. It most often occurs in open canopied forest and woodland habitats. It nests in well-concealed microsites in densely foliated trees or shrubs (Miller 1931; Bent 1950, cited in Aspen 2019). It feeds on large insects, but will also take small birds, mammals, amphibians, reptiles, fish, carrion, and various invertebrates. Loggerhead

shrikes often impale their prey on thorns, barbed wire, or other sharp objects. Loggerhead shrike was present within the quarry during nesting season and likely nested there. It has a high potential to be present along the pipeline alignments.

### ***Black-tailed gnatcatcher***

The black-tailed gnatcatcher (*Poliioptila melanura*) is recognized as a watch list species by CDFW. It is a small songbird that nests in desert shrublands, typically in areas with thickets of mesquites, palo verdes, or acacias. They occur from the deserts of southern California east through Texas and south into Mexico. Black-tailed gnatcatchers were observed nesting within the quarry during surveys in the spring of 2016. They were nesting in habitat mapped as catclaw acacia thorn scrub. Suitable nesting habitat is present throughout the project area with the highest potential for occurrence within the quarry and along the proposed pipeline.

### ***American badger***

American badger (*Taxidea taxus*) is a CDFW Species of Special Concern. Badger natural history is summarized by Brehme et al. (2012, cited in Aspen 2019). They were once widespread throughout open grassland habitats of California. They are now uncommon, permanent residents throughout most of the State. They are found in open shrubland, forest, and herbaceous habitats with friable soils. In the southwest, badgers are typically associated with creosote bush and sagebrush shrublands. Badgers are fossorial, digging large burrows in dry, friable soils and use multiple dens and cover burrows within their home range. Badgers move among burrows daily, although they can use a den for a few days at a time. Badger home range sizes are dependent upon prey availability and other habitat characteristics. In general, home ranges are several hundred acres in size. They feed mainly on small mammals, especially ground squirrels, pocket gophers, rats, mice, and chipmunks. Badgers also prey on birds, eggs, reptiles, invertebrates, and carrions. The diet shifts seasonally and yearly depending upon prey availability.

The gypsum outcrops and the alluvial areas of the planned quarry expansion areas provide unsuitable or poorly suitable habitat for digging and burrowing (the gypsum outcrops consist of bedrock overlain by relatively thin layers of weathered, clay-like gypsum material; the alluvium has very high rock content).

The two pipeline routes provide suitable burrowing substrates, although their proximity to roads, OHV activity, and the narrow-gauge rail line may dissuade badgers from using those areas. No American badger or its sign was observed during the surveys. Suitable foraging habitat is present throughout the project site and badgers have a moderate to high potential to occur occasionally, but relatively low probability of denning in the project site.

### ***Desert kit fox***

Desert kit fox (*Vulpes macrotis arsipus*) is protected under Title 14, Section 460, California Code of Regulations, as well as the California Fish and Game Code (Sections 4000-4012), which defines kit fox as a protected furbearing mammal. Both regulations prohibit the take of the species. Desert kit fox is an uncommon to rare permanent resident of arid regions of southern California. Kit fox occur in annual grasslands, or grassy open, arid stages of vegetation dominated by scattered herbaceous species. Kit fox preys on rabbits, ground squirrels, kangaroo rats, and various species of insects, lizards, and birds (Zeiner et al. 1990, cited in Aspen 2019). Desert kit fox is primarily nocturnal, and

inhabits open, flat areas with patchy shrubs. Friable soils are necessary for the construction of dens, which are used throughout the year for cover, thermoregulation, water conservation, and pup rearing.

No kit fox or kit fox sign was observed during the surveys. As described above for American badger, suitable foraging habitat is present throughout the project site and kit foxes have a moderate to high potential to occur occasionally, but relatively low probability of denning in the project site.

### **Prairie falcon**

Prairie falcon (*Falco mexicanus*) is a watch list species in California. It breeds throughout much of arid western North America. They prey on a variety of small mammals, birds, reptiles, and some large insects. They nest almost exclusively on ledges of cliffs and rock escarpments or, occasionally, in stick nests built on the ledges by ravens or other raptors. There are a few regional breeding records (e.g., at Anza-Borrego Desert State Park [Unitt 1984, cited in Aspen 2019]) and nesting prairie falcons may forage over very wide ranges (Johnsgard 1990, cited in Aspen 2019). Almost all prairie falcon sightings in the region are made during winter or migration seasons. Suitable nesting habitat is present in the project area, and they have a moderate potential to utilize the habitat. They are likely to occasionally forage within the project site.

### **Other Raptors**

Several special-status birds of prey are found seasonally in the region, especially during winter and migration: sharp-shinned hawk (*Accipiter striatus*), ferruginous hawk (*Buteo regalis*), northern harrier (*Circus cyaneus*), and merlin (*Falco columbarius*). Suitable winter or migratory season foraging habitat for these raptors is widely available throughout the region. These species, if present, may forage within the project area but would not nest because of a lack of suitable habitat.

### **Native birds**

Most birds, including their nestlings and eggs, are protected under the California Fish and Game Code Sections 3503, 3503.5, and 3513, and the federal Migratory Bird Treaty Act. Most of these species have no other special conservation status. Fifteen bird species have been recorded on the site during field surveys (see Appendix D-1). Suitable foraging and nesting habitat for protected bird species, as well as “stopover” habitat for migratory songbirds, is found throughout the project area (Aspen 2019).

### **Aquatic Jurisdictional Resources**

The Quarry is located in an elongated valley along an unnamed wash and on the lower hillsides of the northeastern Fish Creek Mountains. The alluvial wash slopes at a gradient of about 2 percent generally toward the northwest. The slopes of the Fish Creek Mountains to the northeast and Split Mountain to the southwest drain into this wash, via unnamed washes and small washlets, and by sheet flow. Surface runoff drains to the north across the alluvial fan into Fish Creek Wash, through a system of braided tributaries across the bajada to San Felipe Creek and San Sebastian Marsh, and then to the Salton Sea. The alluvial wash has a series of braided channels that evidently are scoured and redirected by infrequent flash flooding. In some areas, the channels are deeply incised to bedrock.

The jurisdictional delineation (Hernandez 2016) determined that a total of 139 acres of non-wetland waters of the state are present within the Quarry expansion area.

### Well No. 3 Site and Pipeline

The proposed pipeline alignment crosses open desert shrubland on the alluvial slope and immediately adjacent to slopes northward from the Quarry, and along the desert bajada to the proposed new well site.

The pipeline alignment supports common desert wildlife species and is expected to support other species not observed during the surveys, such as those identified in the Quarry expansion areas. The area is also expected to support flat-tailed horned lizard (*Phrynosoma mcallii*) and Colorado desert fringe-toed lizard (*Uma notata*), with suitable windblown sand habitat present for the species.

According to the 2019 SEIS, there are no jurisdictional wetlands present within the proposed pipeline alignment. However, there are a few drainage courses along the alignment that would likely meet criteria as state jurisdictional ephemeral stream channels, subject to permitting under Section 16013 of the Fish and Game Code, and possibly as waters of the US subject to permitting under Section 404 of the Federal Clean Water Act (Imperial County 2019).

### Viking Ranch Restoration Site

The following discussion is based primarily on the Habitat Mitigation and Monitoring Plan (HMMP; Dudek 2021; Appendix D-4) prepared for the project which identifies two offsite mitigation sites to offset anticipated impacts to non-wetland waters of the state including the Viking Ranch Restoration Site (Viking Ranch site). The HMMP provides a summary of existing conditions at the Viking Ranch site and provides guidelines for compensatory mitigation design, installation, maintenance, and monitoring.

#### Vegetation

Dominant vegetation habitat within the Viking Ranch Restoration Site is desert saltbush scrub, disturbed habitat, and Sonoran creosote bush scrub. The existing vegetation is highly disturbed due to the site’s previous use as an orchard and consists of a mixture of sparse, scattered, patchy, or remnant vegetation. At the time of the biological survey, tree chippings were compiled into windrows or spread evenly as groundcover. Tree stumps and larger branches were observed on site. Windblown sand and sediment had covered tree chippings in some areas, especially the northwest section.

Four native vegetation communities and two land cover types were mapped by Dudek biologists within the site. These vegetation communities and land cover types are described in Table 4.2-1, “Vegetation Communities and Land Cover Types within the Viking Ranch Restoration Site,” and the following text. Their spatial distributions are presented in Figure 2-4, “Old Kane Springs Road Preservation Site.” As shown, the dominant vegetation types are disturbed habitat, Sonoran creosote bush scrub, and desert saltbush scrub.

**Table 4.2-1  
 Vegetation Communities and Land Cover Types within the Viking Ranch Restoration Site**

Vegetation Class	Vegetation Type	Total (Acres)
Disturbed and Developed Areas	Disturbed Habitat	49.0
	Orchards and Vineyards	1.9
<b>Disturbed and Developed Areas Subtotal</b>		<b>50.9</b>
Scrub and Chaparral	Sonoran Creosote Bush Scrub <sup>1</sup>	53.2
	Sonoran Wash Scrub <sup>1</sup>	1.4

Vegetation Class	Vegetation Type	Total (Acres)
	Desert Saltbrush Scrub <sup>1</sup>	35.0
<b>Scrub and Chaparral Subtotal</b>		<b>89.6</b>
Riparian and Bottomland Habitat	Mesquite Bosque <sup>1</sup>	19.5
<b>Riparian and Bottomland Habitat Subtotal</b>		<b>19.5</b>
<b>Total<sup>2</sup></b>		<b>160</b>

Source: Oberbauer et al. 2008, cited in Dudek 2021

**Notes:**

1. Considered special status by the County (2010)
2. Totals may not sum due to rounding.

**Disturbed Habitats**

Disturbed habitats are areas that have been physically disturbed and are no longer recognizable as a native or naturalized vegetation association (Oberbauer et al. 2008, cited by Dudek 2021). These areas may continue to retain soil substrate. If vegetation is present, it is almost entirely composed of nonnative vegetation, such as ornamentals or ruderal exotic species.

Disturbed habitat was identified by Dudek biologists primarily in the eastern portion of the Viking Ranch site and is characterized by the disturbed soils and lines of wood chip mulch and the predominance of Russian-thistle (*Salsola paulsenii*, *S. tragus*) with some Mediterranean schismus (*Schismus barbatus*). There is no significant shrub cover, but occasional patches of plicate tiqulia (*Tiqulia plicata*) and desert dicoria (*Dicoria canescens*) are present in some areas (Dudek 2021).

**Orchards and Vineyards**

Orchards and vineyards are usually artificially irrigated and dominated by one (or sometimes several) non-native tree or shrub species. Understory growth of orchards and vineyards often include short grasses and other herbaceous plants between the rows of trees or vines (Oberbauer et al. 2008, cited in Dudek 2021). Although orchards and vineyards are of limited value to most native plants and animals, they can provide nesting and perching sites for several bird species.

On the Viking Ranch site, orchards and vineyards are mapped along the southern boundary in the eastern portion where a window of horsetail trees (*Casuarina equisetifolia*) has been planted. The edges of the orchard in the eastern portion of the site include giant reed (*Arundo donax*), saltcedar (*Tamarix ramosissima*) and honey mesquite (*Prosopis glandulosa var. torreyana*) (Dudek 2021).

**Sonoran Creosote Bush Scrub**

Sonoran creosote bush scrub is an upland vegetation type that is dominated by creosote bush (*Larrea tridentata*) and may include white bur-sage (*Ambrosia dumosa*), brittlebush (*Encelia farinosa*), and ocotillo (*Fouquieria splendens ssp. splendens*). Shrubs are generally widely spaced; the ground layer is generally dominated by bare ground with seasonal ephemeral herbs (Oberbauer et al. 2008, cited by Dudek 2021).

Sonoran creosote scrub dominates the southwestern portion of the Viking Ranch site and also occurs in the northeastern and northwestern corners. The Sonoran creosote scrub on site is dominated by creosote and includes the following associated species: four-wing saltbush (*Atriplex canescens*), desert dicoria, and white bur-sage. The understory is dominated by sparse Mediterranean schismus, but some areas include cryptantha (*Cryptantha spp.*). Overall, the community is sparse with less



than 15 percent of total vegetative cover. Disturbance of this community is evident with tree chippings patchily distributed throughout (Dudek 2021).

### **Sonoran Wash Scrub**

Sonoran wash scrub is a desert wash vegetation community located in the drier parts of desert streams. This community is generally dominated or co-dominated by leafy burrobush (*Ambrosia monogyra*), desert-lavender (*Condea emoryi*), and/or chuperosa (*Justicia californica*). Other associated species include catclaw acacia (*Senegalia greggii*), desert willow (*Chilopsis linearis ssp. arcuata*), dalea (*Psoralea spp.*), ironwood (*Olneya tesota*), and/or mesquite (*Prosopis glandulosa*) (Oberbauer et al. 2008, cited by Dudek 2021).

Sonoran wash scrub occurs in a wash in the northeastern corner of the Viking Ranch site. According to Dudek biologists (2021), this community is co-dominated on the site by desert dicoria and creosote bush with smoke tree (*Psoralea spinosus*). Other species with less cover include desert willow, leafy burrobush, many-fruit saltbush (*Atriplex polycarpa*), and plicate tiqulia. Overall, vegetation density is relatively low with less than 10 percent cover. The community is disturbed with evidence of tree chippings in clumps throughout (Dudek 2021).

### **Desert Saltbush Scrub**

Desert saltbush scrub is typically strongly dominated by a single saltbush (*Atriplex spp.*) species with some succulent species. This community occurs in areas with high alkalinity and/or salinity (Oberbauer et al. 2008, cited by Dudek 2021).

Desert saltbush scrub occurs in the northwestern and southeastern portions of the project site. On site, this community is generally dominated by many-fruit saltbush. Associated species include creosote bush, desert dicoria, smoke tree, honey mesquite, arrow weed (*Pluchea sericea*), barbwire Russian-thistle (*Salsola paulsenii*), white bur-sage, cryptantha, and four-wing saltbush. In the southern portion of the site, this open community is codominated by big saltbush (*Atriplex lentiformis*), many-fruit saltbush, and desert-holly (*Atriplex hymenelytra*) and moderately disturbed by Russian-thistle, Mediterranean schismus, and mustard (*Sisymbrium spp.*). There is also evidence of past orchard use within the desert saltbush scrub on site (i.e., soil disturbance and tree chippings). Overall, the community is sparse with low cover of shrubs.

### **Mesquite Bosque**

Mesquite bosque is a drought-deciduous streamside thorn forest dominated by mesquite with scattered saltbush and open understories dominated by annual and perennial grasses. This community is generally maintained by frequent flooding or fire (Oberbauer et al. 2008). On site, mesquite bosque occurs in a swath that extends from the northwestern quadrant to the southeastern corner of the site. This community on site is generally dominated by mesquite and many-fruit saltbush. Some smoke tree, tamarisk (*Tamarix spp.*), creosote, and desert willow are also present at low cover. The understory generally consists of scattered Mediterranean schismus. Overall, the community is relatively open with less than approximately 20 percent vegetation cover. Much of the mesquite bosque is mapped within the floodplain on site.

**Wildlife**

A general biological survey and habitat assessment for sensitive species was conducted on the Viking Ranch site by Dudek biologists on October 17, 2019. Fifteen species of wildlife were observed during the survey. The results of the habitat assessment are summarized below. Additional information on the existing wildlife species on the Viking Ranch site are provided in Appendix H of Appendix D-4.

No special-status amphibians or reptiles were observed or have high potential to occur on the Viking Ranch site. Flat-tailed horned lizard (*Phrynosoma mcallii*; FTHL) has a low potential to occur based on the status of the habitat.

Two special-status birds were observed within the Viking Ranch site, black-tailed gnatcatcher (*Poliioptila melanura*) and loggerhead shrike (*Lanius ludovicianus*). Additionally, Swainson's hawk has a high potential to forage within the Viking Ranch site. However, there is insufficient nesting habitat present.

One special-status mammal was observed within the Viking Ranch site, San Diego black-tailed jack. The site contains an open and disturbed area, which this species prefers. No other special-status mammals have high potential to occur in the Viking Ranch site. Peninsular bighorn sheep (*Ovis Canadensis nelsoni*; PBS) habitat (i.e., areas classified by USFWS as Essential Habitat) occurs adjacent to the Viking Ranch site boundaries and has a similar composition of dominant plant species. However, the potential PBS foraging habitat within the Viking Ranch site is considered degraded and low quality (Dudek 2021).

**Aquatic Jurisdictional Resources**

A jurisdictional wetland delineation was conducted in 2016 to determine the presence and extent of jurisdictional aquatic features on the Viking Ranch site (Dudek 2021; see Appendix E of Appendix D-4).

Pursuant to the federal Clean Water Act, ACOE and RWQCB, jurisdictional areas include those supporting all three wetlands criteria described in the ACOE manual: hydric soils, hydrology, and hydrophytic vegetation. Areas regulated by the RWQCB are generally coincident with the ACOE but can also include waters of the state that may be regulated, pursuant to the state Porter Cologne Act.

A predominance of hydrophytic vegetation, associated with a stream channel, was used to delineate CDFW-regulated riparian areas. Streambeds under the jurisdiction of CDFW were delineated using the Cowardin method of waters classification, which defines waters boundaries by a single parameter (i.e., hydric soils, hydrophytic vegetation, or hydrology) (Cowardin et al. 1979, cited in Dudek 2021).

Features that convey or hold water are regulated by multiple agencies. Federal, state, and local agencies have different definitions and terminology for these types of features. Water-dependent resources regulated by ACOE, RWQCB, CDFW, and the County are collectively referred to as jurisdictional aquatic resources herein. Terminology used in this document to distinguish each jurisdictional aquatic resource according to the agency that regulates the resource is as follows:

- ACOE and RWQCB: "Wetland" and "non-wetland waters." Wetland waters of the United States and non-wetland waters of the United States are subject to regulation by ACOE and RWQCB, pursuant to the Clean Water Act. Within the mitigation site, ACOE waters of the United States, and RWQCB waters of the United States overlap, and therefore are combined under one term: "non-wetland waters".

- CDFW: “Riparian areas” and “streambeds.” Lakes, rivers, and streambeds, including any associated riparian habitat, are subject to regulation by CDFW, pursuant to the California Fish and Game Code. Within the mitigation site, CDFW streambeds are synonymous with ACOE and RWQCB non-wetland waters.

San Diego County’s Resource Protection Ordinance (RPO) (County of San Diego 2012) identifies environmental resources, including wetlands, present within the County, and provides measures to preserve these resources. The RPO defines wetlands as lands that have one or more of the following attributes: (1) lands that periodically support a predominance of hydrophytes (plants whose habitat is water or very wet places); (2) lands in which the substratum is predominantly undrained hydric soil; or (3) lands where an ephemeral or perennial stream is present and whose substratum is predominantly non soil, and where such lands contribute substantially to the biological functions or values of wetlands in the drainage system. County-regulated wetlands would be identified where a predominance of hydrophytic vegetation is associated with a stream channel.

Results of the jurisdictional delineation for the Viking Ranch site are shown in Table 4.2-2, “Viking Ranch Restoration Site Jurisdictional Aquatic Resources.” There are approximately 53.12 acres of RWQCB jurisdictional non-wetland waters present within a braided channel, ephemeral channels, and floodplain on the Viking Ranch site. However, the condition of these jurisdictional areas remains highly modified from the historic agricultural use including remnant windrows of chipped trees and topographic modifications that alter the normal braided water flows across the Viking Ranch site.

**Table 4.2-2  
 Viking Ranch Restoration Site Jurisdictional Aquatic Resources**

General Vegetation Community/Land Cover Category	Vegetation Type	Jurisdictional Resource Type			Acres <sup>1</sup>
		Braided Channel	Ephemeral Channel	Floodplain	
Disturbed or Developed Areas	Disturbed Habitat	-	0.04	-	0.04
	Orchards and Vineyard	-	0.44	-	0.44
<b>Disturbed or Developed Areas Subtotal</b>		<b>-</b>	<b>0.48</b>	<b>-</b>	<b>0.48</b>
Riparian and Bottomland Habitat	Mesquite Bosque	0.23	-	14.92	15.15
<b>Riparian and Bottomland Habitat Subtotal</b>		<b>0.23</b>	<b>-</b>	<b>14.92</b>	<b>15.15</b>
Scrub and Chaparral	Desert Saltbush	0.10	0.04	-	0.14
	Sonoran Creosote Bush Scrub	0.09	0.02	35.89	36.00
	Sonoran Wash Scrub	1.35	-	-	1.35
<b>Scrub and Chaparral Subtotal</b>		<b>1.54</b>	<b>0.06</b>	<b>35.89</b>	<b>37.49</b>
<b>Total RWQCB Non-Wetland Waters and CDFW Streambeds<sup>1</sup></b>		<b>1.77</b>	<b>0.54</b>	<b>50.81</b>	<b>53.12</b>

Source: Oberbauer et al. 2008, cited in Aspen 2019

**Notes:**

1. Totals may not sum due to rounding.

**Old Kane Springs Road Preservation Site**

The following discussion is based on the HMMP (Dudek 2021; Appendix D-4) for the off-site mitigation sites, including the Old Kane Springs Road Preservation Site (Old Kane Springs site).

### Vegetation

Two native vegetation communities were mapped by Dudek biologists within the Old Kane Springs site: (1) Sonoran mixed woody scrub, and (2) desert dry wash woodland. These vegetation communities are described below and summarized in Table 4.2-3, “Vegetation Communities within the Old Kane Springs Road Preservation Site.” Their spatial distributions are presented in Figure 2-2c, “Site Location—Old Kane Springs Road Preservation Site.” These vegetation communities follow the Draft Vegetation Communities of San Diego County (Oberbauer et al. 2008, cited in Dudek 2021).

**Table 4.2-3**  
**Vegetation Communities within the Old Kane Springs Road Preservation Site**

Vegetation Class	Vegetation Type	Total (Acres)
Scrub and Chaparral	Sonoran Mixed Woody Scrub <sup>1</sup>	50.55
Riparian and Bottomland Habitat	Desert Dry Wash Woodland <sup>1</sup>	60.08
<b>Total<sup>2</sup></b>		<b>119.63</b>

Source: Oberbauer et al. 2008, cited by Dudek 2021

**Notes:**

1. Considered special status by the County (2010)
2. Totals may not sum due to rounding.

### Sonoran Mixed Woody Scrub

Sonoran Mixed Woody Scrub is described as a Colorado desert community with mixed woody species occurring on well-drained slopes and alluvial fans, usually at the base of mountains. The three most characteristic species of this community also dominate this vegetation community on site: creosote bush, white bursage and ocotillo (Oberbauer et al. 2008, cited in Dudek 2021). This community occurs outside of the well-defined alluvial fans/drainages on the site.

### Desert Dry Wash Woodland

Desert Dry Wash Woodland is described as an open to dense, drought-deciduous riparian scrub woodland 30-60 feet tall that is typically dominated by ironwood, desert willow) or blue palo verde (*Parkinsonia florida*). It occurs in sandy, gravelly washes and arroyos of the lower Mojave and Colorado deserts. These washes typically have braided channels that are substantially rearranged with every surface flow event (Oberbauer et al. 2008, cited in Dudek 2021).

On site, this community is dominated by ironwood and occupies the main alluvial fan/wash in the center of the site. Scattered creosote bush shrubs occur within this community, along with white bursage (Dudek 2021).

### Wildlife

A general biological survey and habitat assessment for sensitive species was conducted on the Old Kane Springs site on September 1, 2021, by Dudek biologists (see Appendix D-4). Additional information on the existing wildlife species on the Old Kane Springs site are provided in Appendix M of Appendix D-4.

Seven species of wildlife were observed during the biological survey of the Old Kane Springs site. Two species of birds were observed including bushtit (*Psaltriparus minimus*), and mourning dove (*Zenaida macroura*). One invertebrate species, dainty sulphur (*Nathalis iole*) and two reptile species, sidewinder (*Crotalus cerastes*) and tiger whiptail (*Aspidoscelis tigris*) were also observed. In addition, two mammals

were recorded on site including desert kangaroo rat (*Dipodomys deserti*) and San Diego black-tailed jackrabbit (*Lepus californicus bennettii*). No amphibian species were recorded during the surveys.

No special-status amphibians, reptiles, or birds were observed within the Old Kane Springs site or have high potential to occur on the site. Flat-tailed horned lizard (*Phrynosoma mcallii*; FTHL) has a moderate potential to occur based on the habitat present at the site.

One special-status mammal was observed within the Old Kane Springs site, San Diego black-tailed jack. The site contains an open and disturbed area, which this species prefers. No other special-status mammals have high potential to occur on the Old Kane Springs site. Peninsular bighorn sheep (*Ovis Canadensis nelson*; PBS) habitat (i.e., areas classified by USFWS as Essential Habitat) occurs adjacent to the Old Kane Springs site boundaries. The composition of dominant plant species is similar to adjacent habitat.

### **Aquatic Jurisdictional Resources**

A jurisdictional wetland delineation was conducted for the Old Kane Springs Road site to determine the presence and extent of jurisdictional aquatic features on the project site (Dudek 2021; see Appendix E of Appendix D-4). During the jurisdictional delineation survey, the site was walked by Dudek biologists and evaluated for evidence of fluvial indicators such as drainage swales, mud cracks, drift, wracking, cut banks, and sediment transportation and sorting. The extent of potential jurisdictional aquatic resources was determined by mapping the areas with fluvial characteristics and topography showing evidence of consistent flow patterns and hydrologic connectivity (Dudek 2021).

Since no hydrophytic vegetation and/or associated wetlands were present on the Viking Ranch site, streambed and non-wetland waters mapping was the focus of the delineation. These features, hereafter referred to simply as “non-wetland waters,” were delineated from bank to bank, using the top of the bank as the boundaries of the channel (Dudek 2021).

### **Non-wetland Waters of the State**

Overall, the site landscape drains water in an easterly direction, mainly through a large alluvial fan/wash consisting of numerous braided low-flow channels within the desert dry wash woodland vegetation community. This wash was mapped from bank to bank to include all low-flow channels within its banks as one large non-wetland water. Additionally, several smaller non-wetland waters flowing through the upland Sonoran mixed woody scrub were mapped adjacent to or connecting to the wash; these features had well-defined banks (albeit smaller and less pronounced than those associated with the larger wash) and stood out from the surrounding upland vegetation community. All aquatic features on the Viking Ranch site deemed to be potentially jurisdictional by Dudek biologists are shown on Figure 2-4.

Non-wetland waters on site are ephemeral meaning they only flow during storm events. These features were mapped because they had evidence of flow and hydrology indicators, such as bed and bank, drift deposits, sediment sorting, and/or mud cracks. These features are classified as non-wetland waters and are likely regulated by RWQCB and CDFW as waters of the state (Dudek 2021).

## Swales

Several potential swale features without well-defined banks may present on site; these include areas of occasional surface sheet flow with slight topographic depressions and occasional, but often inconsistent, fluvial indicators that may not be subject to regulation by any of the agencies. These features were not mapped under the scope of this delineation but may be considered jurisdictional upon agency review; they can be added to the map using aerial signatures at a later date if needed.

Results of the jurisdictional delineation are summarized in Table 4.2-4, “Jurisdictional Resources within the Old Kane Springs Road Preservation Site,” and on Figure 2-5, “Plaster City Quarry Plan.” There are approximately 60.99 acres of RWQCB-jurisdictional non-wetland waters present both inside and outside of alluvial fan/wash and outside of alluvial fan wash.

**Table 4.2-4**  
**Jurisdictional Resources within the Old Kane Springs Road Preservation Site**

Type	Jurisdiction	Acres
Non-Wetland Waters of the State (Within Alluvial Fan/Wash)	CDFW and RWQB	59.76
Non-Wetland Waters of the State (Outside of Alluvial Fan/Wash)	CDFW and RWQB	1.23
<b>Total ACOE/RWQB Non-Wetland Waters and CDFW Streambeds<sup>1</sup></b>		<b>60.99</b>

Source: Dudek 2021

**Notes:**

1. Totals may not sum due to rounding

## 4.2.2 Regulatory Setting

### 4.2.2.1 Federal

#### Federal Endangered Species Act

The FESA (16 USC 1531-1544) provides protection for federally listed endangered and threatened species and their habitats. An “endangered” species is a species in danger of extinction throughout all or a significant portion of its range. A “threatened” species is one that is likely to become endangered in the foreseeable future throughout all or a significant portion of its range. Other special-status species include proposed species and species of concern. Proposed species are those that have been officially proposed (in the *Federal Register*) for listing as threatened or endangered. Species of concern are species for which not enough scientific information has been gathered to support a listing proposal, but still may be appropriate for listing in the future after further study. A delisted species is one whose population has reached its recovery goal and is no longer in jeopardy. The USFWS administers the FESA. A project may obtain permission to take federally listed species in one of two ways: (1) a Section 10 Habitat Conservation Plan (HCP) issued to a private party; or (2) a Section 7 Biological Opinion (BO) from the USFWS or the National Oceanic and Atmospheric Administration (NOAA) issued to another federal agency that funds or permits an action (such as the USACE issuance of a permit under CWA Section 404). Under either section of the ESA, adverse impacts to federally listed species must be avoided, minimized, or mitigated to the satisfaction of the USFWS and/or NOAA.

#### Bald and Golden Eagle Protection Act

The Bald and Golden Eagle Protection Act (16 USC 668-668D, 54 Stat. 250) prohibits the take, possession, sale, or transport of bald eagles and golden eagles and their parts, eggs, or nests without a permit issued by the USFWS.

### **Migratory Bird Treaty Act**

Raptors (birds of prey), passerine birds, and other migratory avian species are protected by a number of state and federal laws. The Migratory Bird Treaty Act (16 USC 703-712) establishes special protection for migratory birds by regulating hunting or trade in migratory birds. Furthermore, this Act prohibits anyone to take, possess, buy, sell, purchase, or barter any migratory bird listed in 50 CFR Section 10.13, including feathers or other parts, nests, eggs, or products, except as allowed by implementing regulations (50 CFR Part 21). The definition of “take” includes any disturbance that causes nest abandonment and/or loss of reproductive effort (e.g., killing or abandonment of eggs or young), and such activity is potentially punishable by fines and/or imprisonment.

### **Clean Water Act (Section 404/401 Jurisdiction)**

The USACE regulates discharge of dredged or fill material into waters of the United States under Section 404 of the federal CWA (33 USC 1251–1376). “Discharge of fill material” is defined as the addition of fill material into waters of the United States, including, but not limited to, the following: placement of fill that is necessary for the construction of any structure, or impoundment requiring rock, sand, dirt, or other material for its construction; site-development fills for recreational, industrial, commercial, residential, and other uses; causeways or road fills; fill for intake and outfall pipes and subaqueous utility lines (33 CFR Section 323.2[f]). In addition, Section 401 of the CWA (33 USC 1341) requires any applicant for a federal license or permit to conduct any activity that may result in a discharge of a pollutant into waters of the United States to obtain a certification that the discharge will comply with the applicable effluent limitations and state water quality standards.

Waters of the United States include a range of wet environments such as lakes, rivers, streams (including some intermittent streams), mudflats, sandflats, wetlands, sloughs, and wet meadows. The USACE typically considers USGS 7.5-minute quadrangle map “blue line” drainages to be jurisdictional waters. Boundaries between jurisdictional waters and uplands are determined in a variety of ways depending on which type of water is present. Methods for delineating wetlands and nontidal waters are described below.

- Wetlands are defined as “those areas that are inundated or saturated by surface or groundwater at a frequency and duration sufficient to support and under normal circumstances do support, a prevalence of vegetation typically adapted for life in saturated soil conditions” (33 CFR Section 328.3[b]). Presently, to be a wetland, a site must exhibit three wetland criteria: hydrophytic vegetation, hydric soils, and wetland hydrology existing under the “normal circumstances” for the site.
- The lateral extent of non-tidal waters is determined by delineating the ordinary high water mark (33 CFR Section 328.4[c][1]). The ordinary high water mark is defined by the USACE as “that line on shore established by the fluctuations of water and indicated by physical characteristics such as clear, natural line impressed on the bank, shelving, changes in the character of the soil, destruction of terrestrial vegetation, the presence of litter and debris, or other appropriate means that consider the characteristics of the surrounding areas” (33 CFR Section 328.3[e]). The Clean Water Act regulations were just revised in June 2020, and may be revised again in the next 1-2 years.

#### **4.2.2.2 State**

##### **California Endangered Species Act**

Similar to the ESA, the CESA (California Fish and Game Code Sections 2050–2116), along with the Native Plant Protection Act (Fish and Game Code Sections 1900–1913), authorizes the California Fish and Game Commission to designate, protect, and regulate the taking of special-status species in California. CESA defines “endangered” as those species which are “in serious danger of becoming extinct throughout all, or a significant portion, of its range....” (Fish and Game Code Section 2062). Species State-listed as threatened are those not presently threatened with extinction, but which are “likely to become an endangered species in the foreseeable future in the absence of special protection and management efforts....” (Fish and Game Code Section 2067).

Section 2080 of the Fish and Game Code prohibits the taking of State-listed plants and animals. Any projects that may adversely affect species that are State listed as threatened or endangered or candidate species must formally consult with CDFW. CDFW can issue incidental take permits under Section 2081 of CESA. The County’s approval of the project does not eliminate the applicant’s obligation to comply with Fish and Game Code Section 2080. In other words, compliance with CESA does not automatically occur based on the County’s approvals or the completion of CEQA. Before and during implementation of the project, consultation with CDFW is required to ensure that project implementation does not result in unauthorized “take” of a State-listed species.

##### **CDFW Species of Concern**

In addition to species formally listed under the ESA and CESA, species of special concern receive consideration by CDFW and local lead agencies during the CEQA process. Species that may be considered for review are included on a list of species of special concern, developed by CDFW. It tracks species in California whose breeding populations in California may be decreasing or face local extirpation. To avoid the future need to list these species as endangered or threatened, CDFW recommends consideration of these species, which do not as yet have any legal status, during analysis of the impacts of projects.

##### **Lake or Streambed Alteration**

Under Section 1602 of the California Fish and Game Code, a private party must notify CDFW if a project will “substantially divert or obstruct the natural flow of, or substantially change or use any material from the bed, channel, or bank of, any river, stream, or lake, or deposit or dispose of debris, waste, or other material containing crumbled, flaked, or ground pavement where it may pass into any river, stream, or lake.” If an existing fish or wildlife resource may be substantially adversely affected by the activity, CDFW may propose reasonable measures to protect those resources. If these measures are agreeable to the party, they may enter into an agreement with CDFW identifying the approved activities and associated mitigation measures.

##### **Executive Order W-59-93**

California Executive Order W-59-93 (Order), signed by Governor Pete Wilson in 1993, along with implementing regulations and a draft wetlands policy, prescribes an overall state goal of no net loss of wetlands. The Order states the following three objectives for the State of California’s comprehensive wetlands policy:



1. To ensure no overall net loss and long-term net gain in the quantity, quality, and permanence of wetlands acreage and values in California in a manner that fosters creativity, stewardship, and respect for private property.
2. To reduce procedural complexity in the administration of State and Federal wetlands conservation programs.
3. To encourage partnerships to make restoration, landowner incentive programs, and cooperative planning efforts the primary focus on wetlands conservation.

The Order directs that all agencies of the state shall conduct their activities consistent with their existing authorities, in accordance with these three objectives.

### **Porter-Cologne Water Quality Control Act**

The Porter-Cologne Water Quality Control Act (Division 7 of the California Water Code) [Section 13000 et seq.] was enacted to establish a regulatory program to protect water quality and beneficial uses of all waters of the State of California. It created the State Water Resources Control Board (SWRCB) and nine RWQCBs to plan, implement, manage, and enforce water quality protection and management. The RWQCBs are empowered by the Porter-Cologne Water Quality Control Act to require compliance with State and local water quality standards. The project site is located within the SFBRWQCB and is regulated by the SFBRWQCB. The National Pollutant Discharge Elimination System (NPDES) permitting program is administered by the SWRCB. To obtain a NPDES permit under the General Permit for stormwater, applicants must prepare and submit a notice of intent with the SWRCB and development of a stormwater pollution prevention plan (SWPPP) and monitoring program that incorporates applicable BMPs.

### **401 Water Quality Certification and Wetlands Program**

The 401 Water Quality Certification and Wetlands Program is responsible for regulating discharges of dredged or fill material to waters of the state. The SWRCB and the RWQCBs have the authority to regulate these discharges under Section 401 of the CWA and the Porter-Cologne Water Quality Control Act (Porter-Cologne), described above.

### **State Wetland Definition and Procedures for Discharges of Dredged or Fill Material to Waters of the State**

On April 2, 2019, the State Water Board adopted the State Wetland Definition and Procedures for the Discharge of Dredged or Fill Material to Waters of the State (Procedures). The Procedures consist of four major elements: 1) a wetland definition; 2) a framework for determining if a feature that meets the wetland definition is a water of the state; 3) wetland delineation procedures; and 4) procedures for the submittal, review and approval of applications for Water Quality Certifications and Waste Discharge Requirements for dredge or fill activities. The Procedures became effective May 28, 2020. Applicants proposing to discharge dredged or fill material into waters of the state are required to comply with the Procedures unless an exclusion applies, or the discharge qualifies for coverage under a General Order.

On December 18, 2020, the Sacramento Superior Court issued a decision that prohibited the State Water Resources Control Board (“SWRCB”) from implementing California’s new wetlands and “waters of the state” protection program, and limited SWRCB’s application of the regulatory program to only waters already protected under the federal Clean Water Act.

### **Waste Discharge Requirements Program**

Waste discharges that can be exempted from the California Code of Regulations (CCR) requirements are issued waste discharge requirements (WDRs) by the Water Boards and are regulated by the State Water Board WDR Program. Typical discharge types include domestic or municipal wastewater, and industrial wastewater. State regulations addressing the treatment, storage, processing, or disposal of waste are contained in Title 27, CCR, Section 20005 et seq. (hereafter Title 27). Discharges that qualify for exemption from Title 27 must be consistent with the exemptions provided in Title 27 Section 20090.

### **CEQA Guidelines**

CEQA Guidelines Section 15065 requires a mandatory finding of significance for projects that have the potential to substantially degrade or reduce the habitat of a fish or wildlife species, and to fully disclose and mitigate impacts to special-status resources. Although threatened and endangered species are protected by specific federal and State statutes, described above, the CEQA Guidelines Section 15380(d) provides that a species not listed on the federal or State list of protected species may be considered rare or endangered if the species can be shown to meet certain specified criteria for the region or locality.

#### **4.2.2.3 Local**

### **Imperial County General Plan**

The goals, objectives, and policies in the *Imperial County General Plan* are intended to inform decision makers, the general public, public agencies, and those doing business in the County of the County's position on land use-related issues and to provide guidance for day-to-day decision-making. The following objectives and policies contained within the *Imperial County General Plan Conservation Element* pertain to biological resources and the proposed project:

#### ***Conservation and Open Space Element***

**Goal 1:** Environmental resources shall be conserved for future generations by minimizing environmental impacts in all land use decisions and educating the public on their value.

**Objective 1.4:** Ensure the conservation and management of the County's natural and cultural resources.

**Objective 1.6:** Promote the conservation of ecological sites and preservation of cultural resource sites through scientific investigation and public education.

**Goal 2:** The County will integrate programmatic strategies for the conservation of critical habitats to manage their integrity, function, productivity, and long-term viability.

**Objective 2.4:** Use the CEQA and NEPA process to identify, conserve and restore sensitive vegetation and wildlife resources.

#### ***Water Element***

**Goal 2:** Protection of Surface Waters. Long-term viability of the Salton Sea, Colorado River, and other surface waters in the County will be protected for sustaining wildlife and a broad range of ecological communities.

**Objective 2.2:** A balanced ecology associated with the riparian and ruderal biological communities important as breeding and foraging habitats for native and migratory birds and animals occurring within the County.

**Objective 2.3:** Preservation of riparian and ruderal habitats as important biological filters as breeding and foraging habitats for native and migratory birds and animals.

### **San Diego County General Plan**

The goals and policies of the *San Diego County General Plan* provide direction to future growth and development in the county. The following goals and policies from the *San Diego County General Plan Conservation Element* relate to biological resources and apply to proposed actions at the Viking Ranch Restoration Site and Old Kane Springs Road Preservation Site, located in unincorporated San Diego County.

#### ***Conservation and Open Space Element***

**Goal COS-1:** Inter-Connected Preserve System. A regionally managed, inter-connected preserve system that embodies the regional biological diversity of San Diego County.

**COS-1.3:** Management. Monitor, manage, and maintain the regional preserve system facilitating the survival of native species and the preservation of healthy populations of rare, threatened, or endangered species.

**COS-1.9:** Invasive Species. Require new development adjacent to biological preserves to use non-invasive plants in landscaping. Encourage the removal of invasive plants within preserves.

**Goal COS-3:** Protection and Enhancement of Wetlands. Wetlands that are restored and enhanced and protected from adverse impacts.

**COS-3.1:** Wetland Protection. Require development to preserve existing natural wetland areas and associated transitional riparian and upland buffers and retain opportunities for enhancement.

**COS-3.2:** Minimize Impacts of Development. Require development projects to:

- Mitigate any unavoidable losses of wetlands, including its habitat functions and values; and
- Protect wetlands, including vernal pools, from a variety of discharges and activities, such as dredging or adding fill materials, exposure to pollutants such as nutrients, hydromodification, land and vegetation clearing, and the introduction of invasive species.

### 4.2.3 Significance Criteria and Analysis Methodology

#### 4.2.3.1 Significance Criteria

##### 2008 EIR/EIS Significance Criteria

The 2008 EIR/EIS evaluated the project's biological resources impacts using the following significance criteria:

The project would have a significant impact on vegetation if it would result in disturbance that would lead to:

- A substantial reduction in the population of a special-status species;
- A substantial reduction in habitat plant species and vegetative cover;
- Removal of any wetland/riparian habitat; or
- Loss of adequate water supply to wetland or riparian habitat.

The project would have a significant impact on wildlife if it would result in disturbance that would lead to:

- A substantial reduction in the population of a special status species;
- A substantial reduction in habitat for a special status species;
- Removal of any wetland/riparian habitat through direct removal, filling, hydrological interruption or other means;
- Substantial interference with the movement of wildlife species or migratory wildlife corridors, or impede the use of native wildlife nursery sites; or
- Conflict with the provisions of an adopted Habitat Conservation Plan, Natural Community Conservation Plan, BLM Wildlife Management Plan, or other local, state or regional habitat conservation plan or recovery plan.

##### CEQA Appendix G Significance Criteria

Based on Appendix G of the CEQA Guidelines, the proposed project would have a significant impact to biological resources if it would:

- a) have a substantial adverse effect, either directly or through habitat modifications, on any species identified as a candidate, sensitive, or special-status species in local or regional plans, policies, or regulations, or by the CDFW or USFWS;
- b) have a substantial adverse effect on any riparian habitat or other sensitive natural community identified in local or regional plans, policies, regulations or by the CDFG (now CDFW) or USFWS;
- c) have a substantial adverse effect on state or federally protected wetlands (including, but not limited to, marsh, vernal pool, coastal, etc.) through direct removal, filling, hydrological interruption, or other means;
- d) interfere substantially with the movement of any native resident or migratory fish or wildlife species or with established native resident or migratory wildlife corridors, or impede the use of native wildlife nursery sites;
- e) conflict with any local policies or ordinances protecting biological resources, such as a tree preservation policy or ordinance; and

- f) conflict with the provisions of any adopted habitat conservation plan, Natural Community Conservation Plan, or other approved local, regional, or state habitat conservation plan.

#### **4.2.3.2 Analysis Methodology**

The biological resources that were identified and analyzed in the 2008 EIR/EIS were updated using information from recent literature reviews and field surveys conducted in support of the 2019 SEIS. Aspen Environmental Group (2019; Appendix D-1) reviewed available literature to identify special-status plants, plant communities and wildlife known in the vicinity of the Quarry, Well No. 3 site, and associated pipeline alignment. The CNDDDB was reviewed for the presence of special status species in the areas of the project components.

Biological field surveys were conducted in October 2014, April and October 2016, and March and April 2017, by biologists with appropriate experience related to the special-status wildlife and plant species present in the project area. Surveys were conducted throughout the proposed Quarry expansion phases, well site, and pipeline alignment following the Survey Protocols for Special Status Plants developed by BLM California State Office specifically for projects subject to BLM policy, NEPA, and the ESA.

The analysis of potential project impacts to biological resources on the Viking Ranch Restoration Site and the Old Kane Springs Road Preservation Site is based on the *Draft Habitat Mitigation and Monitoring Plan* (Dudek 2021; Appendix D-4) which summarizes the findings of the general biological surveys, habitat assessments, and jurisdictional wetland delineations conducted on the mitigation sites.

#### **4.2.4 Project Impacts and Mitigation Measures**

##### **4.2.4.1 2008 EIR/EIS Impact Analysis**

Under the 2008 EIR/EIS, impacts to biological resources were determined to be less than significant with mitigation or less than significant.

##### **Impacts to Plant Species**

The 2008 EIR/EIS concluded that, based on habitat and geographic and elevational ranges, no listed threatened or endangered plant species would be affected at the Quarry, at Well No. 3, or along the pipeline alignment. In addition, large tracts of similar vegetation and habitat are protected in the adjacent Anza Borrego Desert State Park to the west and BLM-managed wilderness land to the east. Finally, under SMARA, a revegetation plan must be prepared and implemented as part of a reclamation plan for an operating quarry. Revegetation efforts would use local seeds and plants and salvaged topsoil from the site. The revegetation plan required under SMARA would act as mitigation for any potentially significant impacts by revegetating disturbed areas of the Quarry with native plants. For these reasons, the 2008 EIR/EIS concluded that the potential for the Quarry expansion and development of Well No. 3 and the associated pipeline to result in the loss of special status plant species or substantial loss of desert shrubland habitat would be less than significant. Mitigation Measures 3.5-1a and 3.5-1b were provided in the 2008 EIR/EIS to ensure implementation of the revegetation plan for the Quarry.

***Mitigation Measure 3.5-1a: Revegetation: Consistent with the California Surface Mining and Reclamation Act (SMARA), USG shall implement the revegetation plan. In general, revegetation should be designed to restore habitat and cover for wildlife use in conformance with SMARA.***

*Revegetation should be concurrent with closure of individual Quarry areas; wherever ongoing Quarry operation may eliminate access to closed upper Quarry benches, those benches should be revegetated while access is still available.*

**Mitigation Measure 3.5-1b:** *Phasing of Quarry development and closure: Wherever possible, USG shall begin revegetation of Quarry areas to restore native habitat values concurrently or in advance of opening new Quarry areas.*

### Impacts to Wildlife Species

The 2008 EIR/EIS found that Quarry expansion and well/pipeline development could impact multiple special-status wildlife species including migratory birds, peninsular bighorn sheep, and the barefoot banded gecko. The 2008 EIR/EIS includes the following mitigation measures to reduce potential impacts from Quarry expansion to the special-status wildlife species:

**Mitigation Measure 3.5-1c:** *Migratory birds: In order to avoid potentially fatal impacts on birds protected under the Migratory Bird Treaty Act and the California Fish and Game Code, USG shall survey the area prior to grading and brush removal of previously undisturbed habitat.*

**Mitigation Measure 3.5-1d:** *Peninsular bighorn sheep: USG, in coordination with the BLM, shall initiate formal consultation with the US Fish and Wildlife Service under Section 7 of the Federal Endangered Species Act and implement the terms and conditions of the incidental take statement authorizing the project. The consultation process will result in the development of a Biological Opinion by the U.S. Fish and Wildlife Service (USFWS) that will: (1) provide a statement about whether the proposed project is “likely or not likely to jeopardize” the continued existence of the species, or result in the adverse modification of critical habitat; (2) provide an incidental take statement that authorizes the project; and (3) identifies mandatory reasonable and prudent measures to minimize incidental take, along with terms and conditions that implement them.*

*Mining shall be conducted only as approved in the Plan of Operation and the Mine Reclamation Plan. Reclamation shall be conducted concurrently with mining and it shall be initiated within each phase as soon as is feasible. Reclamation shall include slope contouring and revegetation with native plant species as specified in the Reclamation Plan. USG shall instruct its employees and other visitors to the mine to avoid peninsular bighorn sheep. Access to undisturbed lands by humans on foot shall be restricted, and usually would include only biologists and mining personnel. USG shall establish a training program, including new-employee orientation and annual refresher, to educate employees regarding bighorn sheep and the importance of avoidance. USG shall not allow domestic animals (cattle, sheep, donkeys, dogs, etc.) onto the mine site or any lands under USG control. Training for mine employees shall include instructions to report observations of domestic animals to the quarry’s environmental manager. Upon receiving any such reports, the environmental manager shall contact the appropriate authorities for removal of domestic animals.*

**Mitigation Measure 3.5-1e:** *Barefoot banded gecko: Suitable habitat occurs throughout much of the Quarry area. Prior to expanding existing quarries or developing new quarries, focused barefoot banded gecko surveys shall be conducted to determine whether the species is present or absent from any proposed new disturbance areas. Surveys would be carried out in cooperation with the CDFG and field biologists would be required to hold Memoranda of Understanding with the CDFG*

*to search for this species. If the species is present, then consultation with CDFG under Section 2081 of CESA to “take” barefoot banded gecko must be completed prior to land disturbance.*

*Regarding the development of Well No. 3 and the association pipeline, the 2008 EIR/EIS found that, with the exception of the flat-tailed horned lizard, impacts to all other special-status wildlife species were found to be less than significant; the flat-tailed horned lizard was observed basking on the rails of the narrow-gauge line. The BLM and other cooperating agencies have implemented a Flat-tailed Horned Lizard Rangewide Management Strategy (2003 Revision) that would minimize adverse impacts and mitigate for residual impacts throughout the flat-tailed horned lizard’s geographic range. The 2008 EIR/EIS includes the following mitigation measure to address potential impacts to the Flattailed Horned Lizard:*

**Mitigation Measure 3.5-2:** *USG comply with the Flat-tailed Horned Lizard Rangewide Management Strategy, as revised, Standard Mitigation Measures when constructing Quarry Well #3 and the Quarry pipelines.*

### **Impacts to Fish Species**

The 2008 EIR/EIS also evaluated the potential for the Quarry expansion to interfere with surface flows and groundwater recharge and thereby adversely affect discharge in San Felipe Creek, and the potential for operation of Well No. 3 to adversely affect the discharge of San Felipe Creek Spring and Fish Creek Spring. San Felipe Creek, San Felipe Creek Spring, and the Fish Creek Spring support the habitat for a population of desert pupfish (*Cyprinodon macularius*), an endangered species. The Quarry hydrologic evaluation estimated that the Quarry expansion area (845 acres) accounts for 0.05 percent of the total volume attributed to precipitation within the pupfish’s drainage area. The evaluation estimated the drawdown in the springs due to the operation of Well No. 3 would be several thousandths of a foot (approximately 1 millimeter) and therefore would have a less than significant impact on desert pupfish.

Based on the limited contribution of runoff from the Quarry to San Felipe Creek, the 2008 EIR/EIS concluded that, even if activities in the new Quarry areas were to prevent all rainfall from either recharging the groundwater basin or contributing to surface flows, the impact on surface water and groundwater would be negligible compared with other watershed processes and are not likely to have meaningful adverse impacts on pupfish. The Well No. 3 hydrologic evaluation noted that, prior to 1984, flow from San Felipe Creek Spring and Fish Creek Spring only occurred intermittently. Since 1984, however, flow from these two springs had occurred year-round. Water-quality data and the timing of the change in flow from intermittent to year-round indicate that the discharges at San Felipe Creek Spring and Fish Creek Spring were due to increased rates of irrigation to the west. Excess irrigation water percolates to the shallow aquifer and raises the water table. Both San Felipe Creek Spring and the Fish Creek Spring support the habitat for a population of Desert pupfish. The evaluation estimated the drawdown in the springs due to the operation of Well No. 3 would be several thousandths of a foot (approximately 1 millimeter) and therefore would have a less than significant impact on desert pupfish. No mitigation was required.

### **Impacts to Protected Wetlands**

The 2008 EIR/EIS evaluated potential impacts to wetlands and other aquatic features as a part of the evaluation of impacts to vegetation. Mitigation Measure 3.5-1f was provided to address potential impacts to streambeds, which may be jurisdictional features.

**Mitigation Measure 3.5-1f:** Agency contacts for impacts to streambeds: Prior to any new disturbances on the alluvial wash portion of the project area, USG shall contact the CDFG and the US Army Corps of Engineers to determine whether either agency holds jurisdiction over the wash through Sections 1601-3 of the California Fish and Game Code or Section 404 of the Federal Clean Water Act, respectively.

#### 4.2.4.2 2019 SEIS Impact Analysis

The 2019 SEIS further evaluated the proposed project under the National Environmental Policy Act (NEPA) and determined that it could result in impacts to peninsular bighorn sheep behavior, desert kit fox and American badger, flat-tailed horned lizard, and nesting birds, including borrowing owls. The following additional mitigation measures were provided in the 2019 SEIS to address these potential impacts:

**Mitigation Measure 3.4-5:** *Integrated Weed Management Plan.* USG will prepare and implement an integrated weed management plan to control invasive weeds including tamarisk (*Tamarix*) and fountain grass (*Pennisetum*) in cooperation with the BLM and County of Imperial. The plan will include procedures to help minimize the introduction of new weed species, an assessment of the invasive weed species known within the area associated with the Proposed Action, and procedures to control their spread on site and to adjacent offsite areas. This plan will be submitted to the BLM and County of Imperial for review and approval prior to the start of construction and will be implemented for the life of the Proposed Action.

**Mitigation Measure 3.4-6:** *Mining Activity Monitoring and Reporting.* Prior to the beginning of any Quarry expansion activities, USG will identify a Designated Biologist and may additionally identify one or more Biological Monitors to support the Designated Biologist. The Designated Biologist and Biological Monitors will be subject to the approval of the BLM and USFWS. The Designated Biologist will be in direct contact with BLM and USFWS.

The Designated Biologist or Biological Monitor will have the authority and responsibility to halt any project activities that are in violation of the conservation and mitigation measures. To avoid and minimize effects to biological resources, the Designated Biologist and/or Biological Monitor will be responsible for the following:

- The Designated Biologist will notify BLM's Authorized Officer and USFWS at least 14 calendar days before the initiation of Quarry expansion of new ground-disturbing activities.
- The Designated Biologist or Biological Monitor will conduct pre-construction clearance surveys and will be on-site during any Quarry expansion activities or other new ground-disturbing activities (e.g., clearing spoils stockpile areas) and will be responsible for ensuring that no Quarry expansion activities are conducted while PBS are within a 0.25-mile radius of the activity.
- The Designated Biologist or Biological Monitor will immediately notify BLM's Authorized Officer and USFWS in writing if USG does not comply with any conservation measures including, but not limited to, any actual or anticipated failure to implement conservation measures within the periods specified.
- The Designated Biologist or Biological Monitor will visit the Quarry site periodically (no less than once per month) throughout the life of the project to administer the Worker Education



Awareness Program (WEAP) and ensure compliance with the plans and programs listed below.

- The Designated Biologist will submit an annual compliance report no later than January 31 of each year to BLM's Authorized Officer throughout the life of the project documenting the implementation of these programs/plans as well as compliance/non-compliance with each conservation measure: (1) Integrated Weed Management Plan; (2) WEAP; (3) Reclamation Plan; (4) Wildlife Mortality Reporting Program; and (5) PBS Monitoring Plan.

**Mitigation Measure 3.4-7: WEAP.** Prior to project approval, USG will develop a WEAP, to be implemented upon final approval by BLM and USFWS. The WEAP will be available in English and Spanish. The WEAP will be presented to all workers on the project site throughout the life of the project. Multiple sessions of the presentation may be given to accommodate training all workers. Wallet-sized cards summarizing the information will be provided to all construction, operations, and maintenance personnel. The WEAP will be approved by the BLM, USFWS, and CDFW, and will include the following: (1) Descriptions of special-status wildlife of the region, including PBS, and including photos and how to identify adult and sub-adult male and female PBS; (2) The biology and status of special-status species of the area, including PBS; (3) A summary of the avoidance and minimization measures and other conservation measures; (4) An explanation of the PBS observation log (see PBS-2), including instruction on correctly filing data; (5) An explanation of the flagging or other marking that designates authorized work areas; and (6) Actions and reporting procedures to be used if any wildlife, including PBS is encountered.

**Mitigation Measure 3.4-8: Wildlife Impact Avoidance and Minimization Measures.** USG will implement the following measures throughout the life of the project (e.g., Plant and Quarry operations).

- To the extent feasible, initial site clearing for Quarry expansion, pipeline construction, or other activities (e.g., clearing spoils stockpile areas) will be conducted outside the nesting season (January 1 through August 31) to avoid potential take of nesting birds or eggs.
- The Designated Biologist or Biological Monitor will conduct pre-construction clearance surveys no more than seven days prior to initial site clearing for Quarry expansion or pipeline construction. To the extent feasible, special-status wildlife (e.g., reptiles) will be removed from "harm's way" prior to site clearing. If an active bird nest, including active burrowing owl burrows are present, the biologist in consultation with CDFW will mark a suitable buffer area around the nest and project activities will not proceed within the buffer area until the nest is no longer active.
- For project activities in windblown sand habitats on pipeline routes, the Designated Biologist or Biological Monitor shall be present in each area of active surface disturbance throughout the work day. The Designated Biologist or Biological Monitor will survey work areas immediately prior to ground-disturbing activities and will examine areas of active surface disturbance periodically (at least hourly when surface temperatures exceed 85° F) for the presence of flat-tailed horned lizard or Colorado Desert fringe-toed lizard. In addition, all potential wildlife hazards (e.g., open pipeline trenches, holes, or other deep excavations)

shall be inspected for the presence of any wildlife, particularly including the flat-tailed horned lizard or Colorado Desert fringe-toed lizard, prior to backfilling.

- *The Designated Biologist or Biological Monitor will be on-site during any Quarry expansion activities or other new ground-disturbing activities (e.g., clearing spoils stockpile areas) and will be responsible for ensuring that no Quarry expansion activities are conducted while PBS are within a 0.25-mile radius of the activity.*
- *Speed limits along all access roads will not exceed 15 miles per hour.*
- *Avoid or minimize night lighting by using shielded directional lighting pointed downward, thereby avoiding illumination of adjacent natural areas and the night sky.*
- *The boundaries of all areas to be newly disturbed (including Quarry expansion areas, staging areas, access roads, and sites for temporary placement of construction materials and spoils) will be delineated with stakes and flagging prior to disturbance. All disturbances, vehicles, and equipment will be confined to the flagged areas. The Biological Monitor will be on the site to ensure that no ground-disturbing activities occur outside the staked area during initial Quarry expansion or ground disturbance.*
- *Spoils will be stockpiled only within previously disturbed areas, or areas designated for future disturbance (including spoils areas designated in the PoO).*
- *No potential wildlife entrapments (e.g., trenches, bores) will be left uncovered overnight. Any uncovered pitfalls will be excavated to 3:1 slopes at the ends to provide wildlife escape ramps. Covered pitfalls will be covered completely to prevent access by small mammals or reptiles.*
- *To avoid wildlife entrapment (including birds) all pipes or other construction materials or supplies will be covered or capped in storage or laydown area, and at the end of each work day in construction, Quarrying and processing/handling areas. No pipes or tubing of sizes or inside diameters ranging from 1 to 10 inches will be left open either temporarily or permanently.*
- *No anticoagulant rodenticides, such as Warfarin and related compounds (indandiones and hydroxycoumarins), may be used within the project site, on off-site project facilities and activities, or in support of any other project activities.*
- *Avoid wildlife attractants. All trash and food-related waste shall be placed in self-closing raven-proof containers and removed regularly from the site to prevent overflow. Workers shall not feed wildlife. Water applied to dirt roads and construction areas for dust abatement shall use the minimal amount needed to meet safety and air quality standards to prevent the formation of puddles, which could attract wildlife. Pooled rainwater or floodwater within quarries will be removed to avoid attracting wildlife to the active work areas.*
- *Any injured or dead wildlife encountered during project-related activities shall be reported to the Designated Biologist, Biological Monitor, CDFW, or a CDFW-approved veterinary facility as soon as possible to report the observation and determine the best course of action. For special-status species, the Designated Biologist or Biological Monitor shall notify the BLM, USFWS, and/or CDFW, as appropriate, within 24 hours of the discovery.*

**Mitigation Measure 3.4-9: Burrowing Owl Avoidance.** *If an active burrowing owl burrow is observed within a work area at any time of year, the Designated Biologist or Biological Monitor, in coordination with BLM, will designate and flag an appropriate buffer area around the burrow where project activities will not be permitted. The buffer area will be based on the nature of project activity and burrowing owl activity (i.e., nesting vs. wintering). The Designated Biologist or Biological Monitor will continue to monitor the site until it is confirmed that the burrowing owl(s) is no longer present. If avoidance of quarrying or pipeline construction within the buffer area is infeasible, Burrowing Owls may be excluded from an active wintering season burrow in coordination with CDFW and in accordance with the CDFW's Staff Report on Burrowing Owl Mitigation (March 2012), including provision of replacement burrows prior to the exclusion.*

**Mitigation Measure 3.4-10: Critical Habitat.** *To minimize impacts to PBS designated critical habitat, USG will conduct 1:1 on-site reclamation as specified in the Mining and Reclamation Plan for all project disturbance areas. Additionally, USG will acquire or set aside an area of designated critical habitat away from the Quarry's operations for long-term wildlife habitat conservation, to minimize the loss of designated critical habitat within the Quarry. The habitat acquisition measure will be applicable for public lands directly affected by the Proposed Action. The acquired lands will consist of native desert vegetation within designated PBS critical habitat. Acquisition lands may include claim areas that are not disturbed by the mining project. Any lands proposed for acquisition to minimize the loss of critical habitat will be subject to review and approval by the BLM and Wildlife Agencies.*

**Mitigation Measure 3.4-11: PBS Monitoring and Reporting.** *USG will support the CDFW PBS monitoring and reporting program within the federal action area by funding the purchase of radio collars and the capture of ten (10) PBS in the Fish Creek and Vallecito Mountains Ewe Group areas, to provide location monitoring data over a ten-year period. The funding amount will be \$157,115 (cost provided by CDFW), to be transferred to the CDFW program via a means agreed up by USG, BLM, and CDFW.*

**Mitigation Measure 3.4-12: PBS Avoidance and Minimization.** *USG will implement the following measures throughout the life of the project.*

- *New ground-disturbing activities (i.e., initial Quarry development, Quarry expansion, clearing for spoils deposition, or road construction in previously undisturbed areas) in designated critical habitat will not occur within PBS lambing season (January 1 through June 30) as defined in the Recovery Plan, except with prior approval by the Wildlife Agencies.*
- *The Designated Biologist or Biological Monitor will be on-site during any Quarry expansion activities or other new ground-disturbing activities and will walk the perimeter of the Quarry expansion area and view surrounding habitat with binoculars, stopping work if PBS are within a 0.25-mile radius of the activity.*
- *If a PBS enters an active work area, all heavy equipment operations will be halted until it leaves. Quarry staff may not approach the animal. If the animal appears to be injured or sick, USG will immediately notify USFWS and BLM.*
- *Fencing installed anywhere within the Quarry area will be standard temporary construction fencing, silt fencing, or chain-link fence at least 7 feet tall. Any proposed permanent fencing*

*design will be submitted for BLM and USFWS review and approval to confirm that the fence design is not likely to pose a threat to PBS.*

**Mitigation Measure 3.4-13. Future Quarry Phasing Notification and Review.** *USG will notify the BLM, CDFW, and USFWS 90 days prior to initiating future mining activities in the four phases nearest to the highest PBS occurrence and habitat connectivity areas (phases 6Bp, 7Bp, 8, and 9). Upon notification, the agencies will coordinate with USG to review PBS occurrence and activity in the vicinity obtained during the intervening years, as well as relevant documentation of Nelson's bighorn sheep behavior near other mining operations. PBS avoidance and minimization measures may be revised as needed to conform to new information.*

#### **4.2.4.3 Substantial Project Changes**

##### **Project Revisions**

The proposed Quarry expansion, and the proposed Well No. 3 and associated pipeline, are substantially in the same location and same configuration as the features that were evaluated in the 2008 EIR/EIS and 2019 SEIS. Therefore, any minor revisions would not create a new or increase a significant impact related to biological resources. However, the restoration of the Viking Ranch site and preservation of the Old Kane Springs Road site are proposed in response to mitigation required by the 2019 SEIS, and these are new actions under the proposed project.

##### **Changed Circumstances**

Since the 2008 EIR/EIS was prepared, there have been changes to applicable regulations, plans or policies/management goals that affect biological resource management. In 2009, the USFWS published the final designation of critical habitat for peninsular bighorn sheep, replacing the original critical habitat designation published in 2001. The planned Quarry expansion area is located within designated critical habitat. The footprint of the existing Quarry (as of 2009) was excluded from critical habitat.

##### **New Information**

An updated Jurisdictional Delineation (Hernandez Environmental Services 2016), updated Biological Resources Technical Report (Aspen Environmental Group 2019), and Update on Groundwater Conditions Memorandum (Todd Groundwater 2019) were completed for the USG Expansion/Modernization Project as part of the 2019 SEIS. The Biological Resources Technical Report reflects the additional data gathered by biological field surveys conducted in October 2014, April and October 2016, and March and April 2017, by biologists with appropriate experience related to the special-status plant and wildlife species of the area. The report indicates that Quarry expansion and development of Well No. 3 and the associated pipeline could result in impacts to peninsular bighorn sheep behavior, desert kit fox and American badger, flat-tailed horned lizard, and nesting birds, including borrowing owls. Avoidance and minimization measures were recommended to address potential impacts to these species. These measures include the recommendation that USG acquire or set aside an area of designated critical habitat away from the Quarry's operations for long term wildlife habitat conservation in order to minimize the loss of designated critical habitat within the Quarry. The report notes that the acquisition of compensation habitat will be subject to review and approval by the BLM and wildlife agencies (e.g., CDFW). This compensation habitat recommendation was included as Mitigation Measure 3.4-10 in the 2019 SEIS.

The Jurisdictional Delineation identified a total 325.79 acres of unnamed streambeds within the Quarry area and found that the expansion of quarrying activities would result in impacts to approximately 134.08 acres of CDFW, USACE, and RWQCB jurisdictional drainages. The Jurisdictional Delineation noted that Well No. 3 and the water supply pipeline would result in filling of all ephemeral streambeds and washes within the waterline/powerline area, and that these activities would result in impacts to 0.21 acres of CDFW, USACE, and RWQCB jurisdictional drainages. No wetland habitat was identified to occur at the Quarry, Well No. 3, or pipeline alignment. Little to no vegetation was observed to occur within any of the drainages evaluated. The Jurisdictional Delineation recommended avoidance and minimization measures to address potential impacts to wildlife, vegetation, and habitat that could occur during the disturbance of drainages during project construction. An Update on Groundwater Conditions memorandum conducted an analysis that indicates that current Quarry operations are not the cause of the recent decline in flows at San Felipe Creek. The memorandum notes that no changes have occurred in the local groundwater basin that alter the findings in the 2008 EIR/EIS.

### **Significance Determination**

Based on project revisions, changed circumstances, and new information that may create a new or increased significant impact, the County has amplified and augmented the analysis contained in the 2008 EIR/EIS. This evaluation is provided in the following impact analysis.

#### **4.2.4.4 Subsequent Environmental Analysis**

##### **Impact 4.2-1: The Project Could Have Substantial Adverse Effects on Special-Status Plant Species or Plant Communities**

#### **Quarry, Well No. 3, and Associated Pipeline**

The Biological Technical Memorandum (Aspen 2019; Appendix D-1) presents the findings of new biological field surveys conducted for the Quarry site and expansion area, well site, and associated pipeline alignment in 2014, 2016, and 2017.

#### ***General Vegetation Impacts***

According to Aspen (2019), seven vegetation and land cover types were mapped within the area of the proposed Quarry expansion and well/pipeline development. Vegetation, cover types, and acreages of each vegetation and cover type within this area are shown in Appendix L of Appendix D-1. The anticipated effects of the proposed project on plant species that were discussed in the 2008 EIR/EIS and the required mitigation measures have not changed. Quarry phasing and on-site reclamation as specified in the site's approved reclamation plan would minimize the overall effects on vegetation and reduce them over time. Potential vegetation effects were further addressed by 2019 SEIS Mitigation Measure 3.4-10 which requires PBS critical habitat conservation.

Project activities could result in the spread of invasive weeds or to the introduction of new weed species in the area which could degrade habitat for special-status plants. SEIS Mitigation Measure 3.4-5 would require preparation and implementation of an Integrated Weed Management Plan to prevent or control the spread of invasive weeds.

**Impacts to Special-Status Plant Species**

According to Aspen (2019; Appendix D-1), no state or federally listed plants were observed during the surveys or have potential to be present in the Quarry expansion area. One BLM Sensitive Plant, Orcutt’s woody aster (*Xylorhiza orcuttii*) may have moderate potential to occur due to the presence of gypsum soils, but it was not observed during protocol surveys and is not expected. No other BLM Sensitive Plants have potential to occur. Several special-status plants with a CRPR of 2B or 4 (CRPR definitions are found in Appendix L of Appendix D-1) were observed. While these species are not protected by state or federal policy, their occurrences are tracked by the CNDDDB. Wiggins’ croton (*Croton wigginsii*) is a state-listed special-status plant that occurs primarily at the Algodones Dunes area about 50 miles east of the Quarry. It has been reported near the Plaster City Plant but not near the Quarry. The Quarry expansion component of the project may affect occurrences of Thurber’s pilostyles (*Pilostyles thurberi*), brown turbans (*Malperia tenuis*), Coulter’s lyrepod (*Lyrocarpa coulteri*), and annual rock-nettle (*Eucnide rupestris*) as described in Appendix L of Appendix D-1. These species are widely distributed regionally, their conservation status does not preclude disturbing them, there is extensive undisturbed and protected habitat in the local mountains (including wilderness areas and State Park lands), and the project’s effect would be confined to the local individuals impacted. Although no mitigation for special-status plant species is required, implementation of SEIS Mitigation Measure

This would also conserve habitat for multiple other plant and wildlife species.

**Level of Significance Before Mitigation:** Potentially significant.

**Mitigation Measures:** Implement the following existing mitigation measures (see Section 4.2.4 for the full text of each measure):

- 2008 EIR/EIS:
  - MM 3.5-1a (Revegetation)
  - MM 3.5-1b (Concurrent Reclamation)
- 2019 SEIS:
  - MM 3.4-5 (Integrated Weed Management Plan)
  - MM 3.4-10 (PBS Critical Habitat Conservation)

**Level of Significance After Mitigation:** Less than significant.

**Viking Ranch Restoration Site**

Proposed restoration activities on the Viking Ranch site could adversely affect multiple vegetation communities that are considered special status by the County of San Diego (2010). As shown in Table 4.2-1, above, the Viking Ranch site contains approximately 53.2 acres of Sonoran Creosote Bush Scrub, 1.4 acres of Sonoran Wash Scrub, 35.0 acres of Desert Saltbush Scrub, and 19.5 acres of Mesquite Bosque. Each of these vegetation communities is considered special status by the County of San Diego (Dudek 2021).

Restoration activities could result in temporary impacts to vegetation communities. However, the Mitigation Work Plan for the Viking Ranch site outlined in the HMMP (Dudek 2021; Appendix D-4) includes numerous measures that would be implemented during restoration activities to minimize impacts to native vegetation including temporary fencing to protect areas outside of the disturbance area, implementation of interim weed

control measures, and biological monitoring and worker training. Revegetation would be implemented using a native seed mix to ensure re-establishment of native plant species in graded areas. Once completed, the restored Viking Ranch site would exhibit more natural hydrologic conditions. Reestablishment of braided stream flow patterns connected with adjacent properties would better support desert plant communities compared to existing conditions. Restoration activities would be carried out in accordance with the HMMP and under supervision of the project biologist in consultation with USFWS and CDFW.

As noted above, four of the vegetation communities identified on the site are identified by the San Diego County RPO as “sensitive habitat lands” which are lands that either (1) include populations of sensitive species or (2) contain unique vegetation communities. The RPO prohibits grading, grubbing, clearing and any other use damaging to sensitive habitat lands. Exceptions can be made when all feasible measures necessary to protect and preserve the sensitive habitat lands are required as a condition of permit approval and where mitigation provides an equal or greater benefit to the affected species. As described above the HMMP provides measures to protect site vegetation and require revegetation of graded areas with a native seed mix. Once completed, restoration would have an overall beneficial effect on the sensitive habitat lands on the Viking Ranch site. Therefore, the project would be consistent with the requirements for sensitive habitat lands contained in the County RPO and no mitigation would be required.

**Level of Significance:** Less than significant.

**Mitigation Measures:** None required.

#### **Old Kane Springs Road Preservation Site**

There are no proposed physical activities on the Old Kane Springs Road Preservation Site. Thus, no impacts to vegetation or special status plant species are anticipated and no mitigation is required.

**Level of Significance:** No impact.

**Mitigation Measures:** None required.

#### **Impact 4.2-2: The Project Could Have Substantial Adverse Effects on Special-Status Wildlife Species**

##### **Quarry, Well No. 3 Site, and Associated Pipeline**

The Biological Technical Memorandum (Aspen 2019; Appendix D-1) presents the findings of new biological field surveys conducted for the Quarry site and expansion area, well site, and associated pipeline alignment in 2014, 2016, and 2017.

##### ***General Wildlife Effects***

Most wildlife would vacate the area to avoid moving equipment, and equipment operators would avoid clearly visible wildlife (such as large mammals). However, quarrying or well/pipeline construction could cause injury or mortality in small mammals and reptiles, particularly during initial grading or site clearing work. Food or water could attract wildlife or feral dogs into the work area, putting wildlife at risk. Wildlife could be struck by vehicles or become trapped in trenches or materials (e.g., pipes) stored onsite.

**Level of Significance Before Mitigation:** Potentially significant.

**Mitigation Measures:** Implement the following existing mitigation measures (see Section 4.2.4 for the full text of each measure):

- 2008 EIR/EIS:
  - MM 3.5-1d (Peninsular Bighorn Sheep)
- 2019 SEIS:
  - MM 3.4-6 (Mining Activity Monitoring and Reporting)
  - MM 3.4-7 (Worker Education Awareness Program)
  - MM 3.4-8 (Wildlife Impact Avoidance and Minimization Measures)

**Level of Significance After Mitigation:** Less than significant.

### **Special-Status Wildlife**

The proposed project could directly or indirectly affect special-status wildlife through injury or mortality or through habitat loss or degradation. With implementation of the mitigation measures provided here, the project is not expected to significantly impact Peninsular bighorn sheep, desert kit fox, America badger, barefoot banded gecko, nesting birds (including burrowing owl) or other special-status wildlife. The planned quarry expansion areas are within designated PBS critical habitat, and the project would directly affect critical habitat, although the planned expansion areas show little evidence of PBS usage.

Initial site clearing activities could cause take of special-status reptile (e.g., flat-tailed horned lizard), bird (e.g., burrowing owl), or mammal (e.g., American badger) species if the animals or their active nests or dens are present during the clearing. However, mitigation measures identified below would avoid or minimize these effects. A hydrology analysis indicates that the project would not affect off-site desert pupfish habitat (Bookman-Edmonston 2002a, 2002b, cited in Aspen 2019).

Pre-construction clearance surveys and clearly delineated work areas are required by SEIS Mitigation Measure 3.4-6 to minimize or avoid direct impacts of special status species. In addition, habitat effects could be offset through any habitat compensation that may result from federal ESA consultation with the USFWS (SEIS Mitigation Measure 3.4-10 and 3.4-13). Note that any habitat compensation for PBS may also provide suitable nesting or foraging habitat for one or more other special-status species of the area, depending on specific habitat characteristics. Potential impacts are described further for each special-status species in the following paragraphs.

### **Peninsular Bighorn Sheep**

PBS is federally listed as endangered, state listed as threatened, and designated as a “fully protected animal” by the California Fish and Game Code. PBS is recognized as genetically isolated from other populations located farther to the north and east.

Potential project impacts to PBS are categorized below, into habitat impacts, potential for injury or mortality, disruption of behavior, interruption of access to foraging areas, reproduction and lambing activities, and habitat fragmentation and connectivity.

The project would affect suitable and occupied PBS habitat located adjacent to the existing disturbance area and would occur in phases over the 73-year mining authorization (80-year estimate



for mining and final reclamation). In general, mining will proceed from currently active quarry areas in the north toward future phases in the south. Site-specific mining will depend on multiple factors such as gypsum characteristics in various parts of the quarry, blending needs for production, and market conditions. This total habitat effect is diminished because (1) quarry areas would be reclaimed after completion of mining in each area, so that the previously mined areas would be under reclamation as new areas are developed and mined; (2) former quarry areas, even without reclamation, can serve several habitat values for PBS, including escape terrain, sheltering, and bedding; (3) the habitat value of upland gypsum outcrops appears to be relatively low, based on PBS location data (Figure 4.2-4), probably due to minimal forage availability and crusted clay surface; and (4) excluding the gypsum outcrops, habitat (e.g., topography and vegetation) in the planned quarry expansion area is similar to habitat throughout Recovery Region 8 (USFWS 2000b, cited in Aspen 2019); there are no known special habitat resources such as surface water sources or lambing areas within the active or planned quarry expansion areas.

Future quarrying would directly affect two habitat types: upland gypsum outcrops and alluvial wash. The upland gypsum outcrops appear to have minimal habitat value, based on vegetation, topography, soil conditions, and PBS location data. The alluvial wash habitat likely supports higher-quality PBS forage, although it is mostly not adjacent to escape terrain due to presence of gypsum outcrops located between the alluvial wash and the upslope escape terrain. PBS locations indicate only infrequent occurrence in the alluvial wash areas. Mining activities would remove forage plants and other habitat components from the alluvial mining areas, and would significantly alter the outcrop quarry areas, possibly creating steep slopes and benches that may serve as escape terrain (Bleich et al. 2009, cited in Aspen 2019). The total area of planned disturbance to the alluvial wash is approximately 400 acres, mapped primarily as creosote bush scrub, creosote bush – white bursage scrub, catclaw acacia thorn scrub, and smoketree woodland. Upon completion of mining, each below-grade quarry area will be reclaimed to a condition suitable for use as foraging.

The new pipeline construction and pipeline replacement components of the project are not expected to affect PBS habitat.

The potential PBS direct habitat impacts would be minimized, offset, or reduced over time through implementation of the following measures (see Section 4.2.4 for the full text of each measure):

- 2008 EIR/EIS:
  - MM 3.5-1d (Peninsular Bighorn Sheep)
- 2019 SEIS:
  - MM 3.4-5 (Interim Weed Management Plan)
  - MM 3.4-10 (Peninsular Bighorn Sheep Habitat Mitigation)

Mining and reclamation have little potential for causing direct injury or mortality to PBS. There exists a possibility of transportation accidents (truck and train) as well as blasting accidents. Truck and train traffic and blasting have occurred on the site since 1921 and these activities are visible to PBS from sufficient distances to allow avoidance by PBS. Given the apparent avoidance of active quarry areas by PBS (Figure 4.2-4), the probability of injury or death is small. In addition, if the project were to attract or introduce domestic livestock or feral dogs to the site, those animals could either transmit

livestock diseases to PBS, or prey on PBS. The potential for injury or mortality would be minimized or avoided through implementation of the following measures (see Section 4.2.4 for the full text of each measure):

- 2008 EIR/EIS:
  - MM 3.5-1d (Peninsular Bighorn Sheep)
- 2019 SEIS:
  - MM 3.4-6 (Mining and Construction Activity Monitoring and Reporting)
  - MM 3.4-7 (Worker Education Awareness Program)
  - MM 3.4-8 (Wildlife Impact Avoidance and Minimization Measures (including 15 mph speed limit))
  - MM 3.4-11 (Peninsular Bighorn Sheep Monitoring and Reporting)
  - MM 3.4-12 (Peninsular Bighorn Sheep Avoidance and Minimization Measures)

Human presence, lighting, dust, construction noise, blasting, noise and vibrations from heavy equipment, may affect PBS behavior in the quarry vicinity. Quarry noise or disturbance impacts may cause PBS to avoid upland habitat adjacent to the planned mining areas that PBS currently use as escape terrain, foraging, or movement among local ewe groups. A number of studies have been conducted to evaluate bighorn sheep responses to human activities (e.g., Hicks and Elder 1979; Keller and Bender 2007; Papouchis et al. 2001, all cited in Aspen 2019) and generally conclude that bighorn sheep increase their distance to humans, especially when they are approached, but the effects of disturbance are temporary. Additionally, PBS appear to acclimate to ongoing activities such as mining (Bleich, 2009 and references cited therein, cited in Aspen 2019) and fluctuating levels of mining activity, including blasting, did not appear to affect Nelson's bighorn sheep in the Panamint Mountains (Oehler et al. 2005; Bleich et al. 2009, cited in Aspen 2019).

Urban Crossroads (2018, cited in Aspen 2019) prepared a study of quarrying noise at the USG Plaster City Quarry, consisting of long-term (one-hour) measurements from several locations in the existing and planned quarry areas, short-duration noise levels within short distances of quarrying equipment, and short-duration measurement of blasting noise. Urban Crossroads recorded operational levels ranging from 30.8 dBA 3 near the southern end of the planned quarry expansion (about 2 miles from the current activity) to 47.7 dBA in the vicinity of ongoing operations where background noise sources include electrical equipment, people talking, truck engines starting, truck movements, and truck horns sounding for safety purposes. These correspond to faint (below 40 dBA) or moderately loud (above 40 dBA) levels. Short-duration measurement of equipment noise, such as truck pass-by, truck unloading, and crusher activity ranged from 67.7 dBA to 88.2 dBA at 50-foot distances, corresponding to loud or very noisy levels. Blasting measured over a 1-second duration registered 128.7 dBZ 4 at a distance of 425 feet, corresponding to 134.9 dBZ at a standard 50-foot distance. The most likely behavioral response by PBS will be to temporarily avoid active quarrying or materials processing areas, including nearby undisturbed habitat. PBS location data (Figure 4.2-4) include many data points in the immediate vicinity of the active quarry area, consistent with literature reports indicating acclimation to quarrying activities including blasting. Implementation of the proposed Quarry expansion, quarry production and quarrying activities may increase. The Urban Crossroads analysis indicates only a minimal increase in overall noise levels from increased quarry

production. Consistent with the behavior of Nelson's bighorn sheep as quarry production increased and decreased in the Panamint Mountains (Oehler et al. 2005; Bleich et al. 2009, cited in Aspen 2019), the level of overall disturbance to PBS is not expected to change.

The proposed well and pipeline construction is unlikely to affect PBS behavior due to the location along the existing narrow-gauge rail line, where PBS occurrence is rare. If PBS are in the vicinity during construction, then the construction activities would likely affect PBS behavior as described above for quarry activities.

The potential to disrupt PBS behavior would be minimized primarily through implementation of the following measures (see Section 4.2.4 for the full text of each measure):

- 2008 EIR/EIS:
  - MM 3.5-1d (Peninsular Bighorn Sheep)
- 2019 SEIS:
  - MM 3.4-6 (Mining Activity Monitoring and Reporting)
  - MM 3.4-7 (Worker Education Awareness Program)
  - MM 3.4-8 (Wildlife Impact Avoidance and Minimization Measures)
  - MM 3.4-11 (Peninsular Bighorn Sheep Monitoring and Reporting)
  - MM 3.4-12 (Peninsular Bighorn Sheep Avoidance and Minimization Measures)

Mining and reclamation will disrupt portions of the site for at least 80 years, causing habitat loss, disturbance, and potential behavioral effects described above. Mining-related disturbance may cause PBS to avoid accessing foraging habitat within the alluvial wash, if the disturbance is located between regularly-used slope habitat and the alluvial foraging area. Nonetheless, extensive upland and alluvial habitats are available in the surrounding area. The potential extent of interrupted access to foraging areas in the vicinity of the quarry cannot be quantified.

Proposed well and pipeline construction are not expected to affect PBS access for foraging habitat.

The potential to interrupt PBS access to foraging habitat would be minimized primarily through implementation of the following measures (see Section 4.2.4 for the full text of each measure):

- 2008 EIR/EIS:
  - MM 3.5-1d (Peninsular Bighorn Sheep)
- 2019 SEIS:
  - MM 3.4-6 (Mining Activity Monitoring and Reporting)
  - MM 3.4-7 (Worker Education Awareness Program)
  - MM 3.4-8 (Wildlife Impact Avoidance and Minimization Measures)
  - MM 3.4-11 (Peninsular Bighorn Sheep Monitoring and Reporting)
  - MM 3.4-12 (Peninsular Bighorn Sheep Avoidance and Minimization Measures)

Peninsular bighorn sheep lambs and yearlings have been observed in the Fish Creek Mountains east of the quarry. Based on data indicating year-round PBS occupancy, lambing activity (i.e., birth

and nursing) presumably occur in the Fish Creek Mountains. GPS location data suggest the most likely lambing area is the north-south trending canyon east of the quarry. Future quarry phases 6Bp, 7Bp, 8, and 9 are nearest to the presumed lambing habitat. Although there are no expected impacts to reproduction and lambing activities, the project includes a requirement that new ground-disturbing activities (i.e., initial quarry development) and blasting may not take place during lambing season (Jan 1- May 30), except with the approval of USFWS and CDFW. This requirement is identified in 2019 SEIS Mitigation Measure 3.4-12 (Peninsular Bighorn Sheep Avoidance and Minimization Measures).

Continuing and expanded quarry operations would tend to dissuade most terrestrial animals, including PBS, from crossing the active quarry areas. Future mining in the southern end of the planned quarry expansion areas (Phases 8 and 9) is near a habitat linkage between occupied habitat to the east and west of the planned quarry expansion area. This linkage is about 4,000 feet wide. Based on location data (Figure 4.2-3), PBS regularly use habitat immediately adjacent to the active quarrying areas (Phases 1A, 1B, S1, S2, and S3). Based on these activity patterns, PBS are expected to continue to occupy the upland slopes south of Phases 8 and 9. Quarry areas undergoing reclamation would be accessible to PBS, although their localized behavioral response to the previously active quarry areas is unknown. Nelson's bighorn sheep populations in other areas regularly use inactive quarries for routine activities (Bleich, 2009; San Bernardino National Forest, 2014 and citations therein, all cited in Aspen 2019). Throughout the life of the project, surrounding undeveloped open space would continue to provide access to PBS throughout nearly all of the habitat currently in use by PBS.

Proposed well and pipeline construction are not expected to affect biological connectivity for PBS. Construction activities may temporarily dissuade terrestrial animals from using the area. But surrounding undeveloped open space would continue to provide adequate travel routes around these sites.

The potential to affect biological connectivity would be minimized primarily through implementation of the following measures (see Section 4.2.4 for the full text of each measure):

- 2008 EIR/EIS:
  - MM 3.5-1d (Peninsular Bighorn Sheep)
- 2019 SEIS:
  - MM 3.4-8 (Wildlife Impact Avoidance and Minimization Measures)
  - MM 3.4-11 (Peninsular Bighorn Sheep Monitoring and Reporting)
  - MM 3.4-12 (Peninsular Bighorn Sheep Avoidance and Minimization Measures)

In conclusion, the proposed project has the potential to adversely affect PBS through habitat modification, direct injury and mortality, inhibiting, disruption of behavior, interruption of access to foraging areas, and habitat fragmentation. However, implementation of the mitigation measures provided in both the 2008 EIR/EIS and the 2019 SEIS would reduce all potential impacts to PBS to a level that is less than significant.

**Level of Significance Before Mitigation:** Potentially significant.

**Mitigation Measures:** *Implement the following existing mitigation measures (see Section 4.2.4 for the full text of each measure):*

- 2008 EIR/EIS:
  - MM 3.5-1d (*Peninsular Bighorn Sheep*)
- 2019 SEIS:
  - MM 3.4-5 (*Interim Weed Management Plan*)
  - MM 3.4-6 (*Mining Activity Monitoring and Reporting*)
  - MM 3.4-7 (*Worker Education Awareness Program*)
  - MM 3.4-8 (*Wildlife Impact Avoidance and Minimization Measures*)
  - MM 3.4-10 (*Peninsular Bighorn Sheep Habitat Mitigation*)
  - MM 3.4-11 (*Peninsular Bighorn Sheep Monitoring and Reporting*)
  - MM 3.4-12 (*Peninsular Bighorn Sheep Avoidance and Minimization Measures*)

*Implement the following newly proposed mitigation measure:*

**Mitigation Measure 4.2-2a:** *Minimize Temporary Use Areas: During pipeline construction the need for temporary use areas would be minimized by using the USG private parcels on either end of the alignment for staging and equipment and material storage. Materials would be transported to the project areas as needed for immediate use.*

**Level of Significance After Mitigation:** Less than significant.

### **Desert Pupfish**

The project would not directly affect suitable aquatic habitat for desert pupfish. Desert pupfish occurs at San Sebastian Marsh, which is lower in the Fish Creek watershed, about 7 miles northeast of the nearest USG facilities. Potential effects of the project on desert pupfish, if any, would be indirect impacts to surface water availability in off-site desert pupfish habitat. Groundwater extraction was identified as a threat in the desert pupfish listing (USFWS 1986, cited in Aspen 2019) and in the recovery plan (USFWS 1993, cited in Aspen 2019). It is still considered a threat; especially at occurrences outside California (USFWS 2010, cited in Aspen 2019). The potential link between groundwater extraction and off-site aquatic habitat availability to desert pupfish depends on the rate or volume of extraction and groundwater passage within the affected basin or basins. Reduced groundwater level at a given well location could lead to reduced surface water at a spring or seep, depending on the amount of draw-down and the hydrologic link between the well site and the aquatic habitat. Hydrologic studies prepared by Bookman-Edmonson (2002a; 2002b, cited in Aspen 2019) and Dudek (2018; Appendix D-1) address the Quarry and well site, indicating that neither component of the project would affect occupied pupfish habitat. These studies are described in the following paragraphs.

Hydrologists preparing the analysis have concluded that no impacts would occur to basin water supplies or to San Felipe Creek from project implementation. The analysis shows a drainage area contributing to the San Felipe Creek of 965,388 acres with a volume calculated on annual average precipitation of 583,883 acre-feet of water. The Quarry, including the planned expansion area,

contributes 396 acre-feet of water to the basin (0.07 percent by volume). This surface drainage would continue uninterrupted with all drainage from the Quarry directed to the wash.

Hydrogeologists also addressed the possible impacts of withdrawing approximately 26 acre-feet per year of well water from the same basin for use at the Quarry. A calculated draw down of the proposed well at maximum capacity would have a draw down at Fish Creek and San Felipe Creek Springs of approximately 1 millimeter. This is a conservative estimate because values produced by the Theis equation are for drawdowns in confined aquifers. However, the aquifer in the well area is unconfined, and drawdowns will be much less than those for a confined aquifer. Pumping 26 acre-feet per year from an unconfined aquifer would not produce drawdowns that are noticeable at distances of 1,000 feet or less.

Additionally, the location of the San Jacinto Fault, a probable groundwater barrier between the well and the Fish Creek and San Felipe Creek springs, would most likely prevent a cone of depression extending beyond the fault. Thus, the extraction of water from proposed Well No. 3 at capacity would not have a detectable impact directly or cumulatively on habitat supporting the desert pupfish.

Additionally, recent significant loss of surface water in the occupied habitat is believed to be linked to seismic activity (Poff 2017, cited in Aspen 2019) or cessation of nearby irrigation due to conversion of agricultural lands to a solar facility (Todd Groundwater 2018, cited in Aspen 2019).

**Level of Significance:** Less than significant.

**Mitigation Measures:** None required.

### **Barefoot Banded Gecko**

The barefoot banded gecko is not expected to occur on the site. However, due to its cryptic nature and inaccessible habitats, it may be more widespread than currently understood. If barefoot banded geckos were to occur on a future mining site, potential impacts would be similar to those described for general wildlife (above), especially the potential for injury or mortality by vehicle crushing. Most potential impacts would be minimized through measures identified for general wildlife impacts (above).

Due to its status as a CESA-listed threatened species and a BLM sensitive species, additional mitigation measures were included in the 2008 EIR/EIS and 2019 SEIR. Implementation of these existing mitigation measures would reduce this impact to a less than significant level.

**Level of Significance Before Mitigation:** Potentially significant.

**Mitigation Measures:** *Implement the following existing mitigation measures (see Section 4.2.4 for the full text of each measure):*

- 2008 EIR/EIS:
  - MM 3.5-1d (*Peninsular Bighorn Sheep*)
  - MM 3.5-1e (*Barefoot banded gecko*)

- 2019 SEIS:
  - MM 3.4-5 (Interim Weed Management Plan)
  - MM 3.4-6 (Mining Activity Monitoring and Reporting)
  - MM 3.4-7 (Worker Education Awareness Program)
  - MM 3.4-8 (Wildlife Impact Avoidance and Minimization Measures)

Implement new Mitigation Measure 4.2-2a, see above.

**Level of Significance After Mitigation:** Less than significant.

#### **Flat-tailed horned lizard**

A suitable habitat for flat-tailed horned lizard is present along several parts of the proposed pipeline alignment. Potential impacts would be similar to those described for general wildlife (above), especially the potential for injury or mortality by vehicle crushing. Although not state or federally listed, an interagency management strategy and conservation agreement for the flat-tailed horned lizard was established in 1997 and remains in place (Flat-tailed Horned Lizard Interagency Coordinating Committee, 2003). To minimize potential impacts to flat-tailed horned lizard, Mitigation Measure 3.5-2 was included in the 2008 Final EIR/EIS, and an additional recommended measure (routine inspection of wildlife hazards such as open trenches) was incorporated into 2019 SEIS Mitigation Measure 3.4-8 to further minimize impacts to FTHL. The full text of the measures may be found in Section 4.2.4.

**Level of Significance Before Mitigation:** Potentially significant

**Mitigation Measures:** Implement the following existing mitigation measures (see Section 4.2.4 for the full text of each measure):

- 2008 EIR/EIS:
  - MM 3.5-1e (Barefoot banded gecko)
- 2019 SEIS:
  - MM 3.4-8 (Wildlife Impact Avoidance and Minimization Measures)

**Level of Significance After Mitigation:** Less than significant

#### **Special-Status Bats**

Several special-status bats could forage over the site or possibly roost in rock crevices within planned quarry expansion areas. Impacts to foraging habitat would be minimal and would be mitigated through measures identified above under Vegetation and Habitat Impacts. Potential impacts to roosts could cause injury or mortality to special-status bats. This potential impact would be avoided or minimized through Mitigation Measure 3.4-8 (Wildlife Impact Avoidance and Minimization Measures).

**Level of Significance Before Mitigation:** Potentially significant.

**Mitigation Measures:** Implement the following existing mitigation measures (see Section 4.2.4 for the full text of each measure):

- 2019 SEIS:
  - MM 3.4-8 (Wildlife Impact Avoidance and Minimization Measures)

**Level of Significance After Mitigation:** Less than significant.

#### **Desert Kit Fox and American Badger**

Both species could use the Quarry or pipeline alignment, although they were not observed during field surveys. Potential direct impacts to American badger and desert kit fox include mechanical crushing of individuals or burrows by vehicles and construction equipment, habitat loss, and noise and disturbance to surrounding habitat. Mitigation measures identified under general wildlife impacts would reduce this impact to a less than significant level.

**Level of Significance Before Mitigation:** Potentially significant.

**Mitigation Measures:** Implement the following existing mitigation measure (see Section 4.2.4 for the full text of each measure):

- 2008 EIR/EIS:
  - MM 3.5-1d (Peninsular Bighorn Sheep)
- 2019 SEIS:
  - MM 3.4-6 (Mining Activity Monitoring and Reporting)
  - MM 3.4-7 (Worker Education Awareness Program)
  - MM 3.4-8 (Wildlife Impact Avoidance and Minimization Measures)

Implement new Mitigation Measure 4.2-2a, see above.

**Level of Significance After Mitigation:** Less than significant.

#### **Nesting Birds Including Burrowing Owl**

There are no listed threatened or endangered bird species with moderate or higher potential to occur on the project site and no listed birds were observed during biological surveys. However, the entire project site and surrounding area provide suitable nesting habitat for numerous resident and migratory bird species. Native birds are protected under the California Fish and Game Code and federal Migratory Bird Treaty Act.

Most adult birds would flee from equipment during initial vegetation clearing; however, eggs and nestlings would be vulnerable to project construction activities that may disrupt nesting behavior or damage nests, birds, or eggs. These potential impacts can be minimized or avoided through scheduling initial site disturbance outside the nesting season, as is required by 2019 SEIS Mitigation Measure 3.4-8.

In addition, certain bird species can become entrapped in vertical or horizontal open pipes with diameters from 1 to 10 inches. Cavity-nesting species such as Say's phoebes, owls, woodpeckers,



kestrels, and ash-throated flycatchers are particularly vulnerable. Several avoidance and minimization measures, as well as preconstruction clearance surveys and clearly delineated work areas would be required by 2019 SEIS Mitigation Measure 3.4-8.

One special-status bird species, the burrowing owl, is unlikely to flee the site during construction, due to its characteristic behavior of taking cover in burrows. Burrowing owls inhabit burrows year-round; therefore, avoidance requires pre-construction surveys and avoidance measures for occupied burrows at any time of year. Implementation of 2019 SEIS Mitigation Measure 3.4-9 would reduce impacts to burrowing owl to a level that is less than significant.

Mitigation measures identified under general wildlife impacts above, in combination with the existing measures listed below, would reduce potential impacts to nesting birds, including burrowing owl, to a less than significant level.

**Level of Significance Before Mitigation:** Potentially significant.

**Mitigation Measures:** *Implement the following existing mitigation measure (see Section 4.2.4 for the full text of each measure):*

- 2008 EIR/EIS:
  - MM 3.5-1c (*Migratory Birds*)
  - MM 3.5-1d (*Peninsular Bighorn Sheep*)
- 2019 SEIS:
  - MM 3.4-6 (*Mining Activity Monitoring and Reporting*)
  - MM 3.4-7 (*Worker Education Awareness Program*)
  - MM 3.4-8 (*Wildlife Impact Avoidance and Minimization Measures*)
  - MM 3.4-9 (*Burrowing Owl*)

*Implement new Mitigation Measure 4.2-2a, see above.*

**Level of Significance After Mitigation:** Less than significant.

### **Viking Ranch Restoration Site**

As described previously, there is moderate potential for two special-status bird species to occur on the Viking Ranch site, black-tailed gnatcatcher and loggerhead shrike. In addition, there is suitable foraging habitat present on the site for Swainson's hawk. Implementation of Mitigation Measure 4.2-2b provided below would reduce potential impacts to special-status bird species on the Viking Ranch site by limiting vegetation clearing activities to outside the nesting season (between September 1 and March 1) or requiring a preconstruction nesting bird survey and avoidance measures.

Additionally, one special-status mammal species, San Diego black-tailed jack, was also observed on the Viking Ranch site. There is a suitable habitat for this species present on the site. Implementation of Mitigation Measure 4.2-3 provided below would reduce potential impacts to

The project could have beneficial impacts for FTHL and PBS as restoration activities are anticipated to improve habitat quality and increase the likelihood of occurrence of these species on the Viking Ranch site.

**Level of Significance Before Mitigation:** Potentially significant.

**Mitigation Measures:** Implement the following newly proposed mitigation measure:

**Mitigation Measure 4.2-2b:** *Wildlife Avoidance and Minimization Measures—Viking Ranch Restoration Site)*

*To avoid impacts to common and special-status wildlife on the Viking Ranch Restoration site, the following measures shall be implemented during restoration activities:*

- The clearing of vegetation and other initial site disturbance shall occur outside of the bird nesting season. Grading shall take place between September 1 and March 1. If grading must occur during the nesting season, a qualified wildlife biologist and biological monitor shall conduct a nesting bird survey prior to clearing work. If an active nest is found it shall be protected in place with a work-free buffer with a radius determined by the biologist in consultation with the CDFW.*
- Preconstruction surveys for San Diego black-tailed jack and/or active burrows shall be conducted by a qualified biologist prior to initiating restoration activities on the site. If any individuals are observed in a burrow or shelter form, they will be allowed to leave the area on their own accord. Once the burrow is determined clear of rabbits, a qualified biologist shall collapse the burrow or shelter form.*
- Speed limits on all access roads shall not exceed 15 miles per hour.*
- Avoid or minimize night lighting by using shielded directional lighting pointed downward, thereby avoiding illumination of adjacent natural areas and the night sky.*
- The boundaries of all areas to be newly disturbed (including areas proposed for clearing and grading, access roads, staging and equipment storage areas) shall be delineated with stakes and flagging prior to disturbance. All disturbances, vehicles, and equipment shall be confined to the flagged area. The biological monitor shall be onsite to ensure that no ground disturbing activities occur outside of the flagged area during vegetation clearing, grading, or other ground disturbing activities.*
- No potential wildlife entrapments (e.g., trenches, bores) will be left uncovered overnight.*
- To avoid wildlife entrapment all pipes and other construction materials and supplies shall be covered or capped in storage areas, and at the end of each workday. No pipes or tubing of sizes or inside diameters ranging from 1 to 10 inches will be left open either temporarily or permanently.*
- To avoid wildlife attractants, all trash and food-related waste shall be placed in self-closing raven-proof containers and removed regularly from the site to prevent overflow. Workers shall not feed wildlife. Water applied to dirt roads and construction areas for dust abatement shall use the minimal amount needed to meet safety and air quality standards to prevent the formation of puddles, which could attract wildlife. Pooled rainwater shall be avoided or removed to avoid attracting wildlife.*

- *Any injured or dead wildlife encountered during site restoration or monitoring shall be reported to the project biologist, biological monitor, CDFW, or a CDFW-approved veterinary facility as soon as possible to report the observation and determine the best course of action. For special-status species, the project biologist or biological monitor shall notify the USFWS and/or CDFW as appropriate, within 24 hours of the discovery.*

**Level of Significance After Mitigation:** Less than significant.

### **Old Kane Springs Road Preservation Site**

There are no proposed physical activities on the Old Kane Springs Road Preservation Site. Thus, no impacts to wildlife are anticipated and no mitigation is required.

**Level of Significance:** No impact.

**Mitigation Measures:** None required.

### **Impact 4.2-3: The Project Could Have Substantial Adverse Effects on State or Federally Protected Wetlands**

#### **Quarry, Well No. 3 Site and Pipeline Alignment**

The 2008 EIR/EIS determined that Quarry expansion activities would impact existing streambeds which could be under the jurisdiction of CDFG through Sections 1601-3 of the California Fish and Game Code or the US Army Corps of Engineers through Section 404 of the Federal Clean Water Act. Mitigation Measure 3.4-13 was provided requiring USG to contact and consult with these agencies prior to disturbing streambeds within the Quarry expansion areas to determine jurisdiction and regulatory requirements.

The 2019 SEIS included an updated jurisdictional delineation for the project site which identified 139 acres of waters of the US within the expected disturbance area of the proposed Quarry expansion and well/pipeline development. The SEIS included mitigation to offset impacts by restoring, enhancing, and preserving aquatic resources at a property where aquatic functions are similar to the impacts functions. In response, USG proposes to mitigate impacts at a 1.92:1 mitigation-to-impact ratio, for a total of 267.3 acres of rehabilitation, enhancement, and preservation of aquatic resources. The proposed compensatory mitigation consists of the restoration and enhancement of the Viking Ranch site and the preservation of the Old Kane Springs site, as described and analyzed herein.

Implementation of this mitigation would fully mitigate the project's impacts to protected wetlands within the project site and no further mitigation is required. The potential environmental effects of implementing this mitigation are addressed throughout this SEIR.

**Level of Significance Before Mitigation:** Potentially significant.

**Mitigation Measures:** *Implement the following existing mitigation measures (see Section 4.2.4 for the full text of each measure):*

- *2008 EIR/EIS:*
  - *MM 3.5-1f (Agency Contacts for Impacts to Streambeds)*

- 2019 SEIS:
  - MM 3.4-13 (*Future Quarry Phasing Notification and Review*)

**Level of Significance After Mitigation:** Less than significant.

#### **Viking Ranch Restoration Site**

A jurisdictional wetland delineation was completed for the Viking Ranch site that identified floodplain areas, ephemeral channels, and braided channels on the site, as shown on Figure 2-4. A total of 53.12 acres of jurisdictional waters were identified on the Viking Ranch site. The project proposes to restore the natural hydrologic functioning of these wetlands as mitigation for the anticipated loss of wetlands within the Quarry expansion area and well site. Restoration would occur in accordance with the HMMP (Appendix D-4) to the satisfaction of the USFWS. The HMMP provides ecological performance standards and ongoing monitoring requirements to ensure successful restoration of the site. Therefore, the project would have a less than significant impact on the protected wetlands present on the Viking Ranch site.

**Level of Significance:** Less than significant.

**Mitigation Measures:** None required.

#### **Old Kane Springs Road Preservation Site**

There are no proposed physical activities on the Old Kane Springs Road Preservation Site. Thus, no impacts to protected wetlands are anticipated and no mitigation is required.

**Level of Significance:** No impact.

**Mitigation Measures:** None required.

#### **Impact 4.2-4: The Project Would Not Interfere Substantially with Native Wildlife Movement or Impede Nursery Site Use**

The proposed project could affect local wildlife movement patterns at the Quarry. Quarrying and construction operations would tend to dissuade most terrestrial animals from crossing the areas due to the removal of vegetation and soil that would otherwise provide food, shade, and burrowing substrate. Direct impacts, including noise, traffic, and nighttime lighting could also tend to reduce wildlife dispersal across the project site. However, the undeveloped, open space surrounding the Quarry expansion areas would continue to provide travel routes around the existing and proposed Quarry operations, and the short-term nature of pipeline construction would have only a temporary and minimal effect on local wildlife movement. Because the wildlife movement could continue around the Quarry expansion areas, and the pipeline impacts on wildlife movement would be short term, the overall effect on wildlife movement would be minimal. This effect can be further reduced by implementing the avoidance and minimization measures identified in 2019 SEIS Mitigation Measure 3.4-8.

Restoration activities at the Viking Ranch site would be temporary with minimal effect on local wildlife movement. No fencing or other barriers to movement would be erected on or around the site. Long-term the site would be preserved as open space allowing for continued use of the site by resident or migratory species.

Similarly, the proposed preservation of the Old Kane Springs Road site would ensure continued availability of the site for use by resident and migratory species.

No nursery sites were identified during biological surveys of the project site and off-site mitigation sites. As noted in Impact 4.2-3, the project site is not expected to be used for PBS lambing activity; however, 2019 SEIS Mitigation Measure 3.4-12 requires that new ground-disturbing activities (i.e., initial quarry development) and blasting may not take place during lambing season (January 1 through May 30), except with the approval of USFWS and CDFW. Furthermore, 2019 SEIS Mitigation Measure 3.4-8 requires preconstruction surveys and avoidance measures for active bird nests.

Implementation of the existing mitigation measures discussed here would reduce potential impacts to wildlife movement and nursery sites on the project site. No impacts to wildlife movement or nursery sites would occur.

**Level of Significance Before Mitigation:** Potentially significant.

**Mitigation Measures:** *Implement the following existing mitigation measures (see Section 4.2.4 for the full text of each measure):*

- 2019 SEIS:
  - MM 3.4-8 (*Wildlife Impacts Avoidance and Minimization Measures*)
  - MM 3.4-12 (*PBS Avoidance and Minimization Measures*)

**Level of Significance After Mitigation:** Less than significant

**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**

### **Quarry, Well No. 3 Site and Pipeline Alignment**

The Quarry, Well No. 3 site and pipeline alignment are located in Imperial County and are under the jurisdiction of the Imperial County Land Use Ordinance and General Plan. As demonstrated in Table 4.7-1, “Project Consistency with Local Planning Documents,” the proposed project would be consistent with the applicable policies of the Imperial County General Plan including those of the Conservation and Open Space Element. In addition, the project would be consistent with the Imperial County Zoning Ordinance and Surface Mining and Reclamation Ordinance.

The Flat-tailed Horned Lizard Rangelwide Management Strategy provides guidance for the conservation and management of sufficient habitat to maintain extant populations of flat-tailed horned lizards in five management areas – four in California and one in Arizona. The West Mesa Management Area (see Figure 1 of Appendix D-1) is located east of the project site. A segment of the Plaster City narrow gauge railroad crosses the management area; however, this segment is not within the project site. Mitigation provided in the 2008 EIR/EIS (MM 3.5-2) and in the 2019 SEIS (MM 3.4-8) would minimize potential impacts to FTHL at the well site and within the pipeline alignment. These measures require project compliance with the management strategy and provide avoidance measures during construction activities. Implementation of these measures

would reduce potential impacts to FTHL to a level that is less than significant and ensure compliance with the FTHL Rangewide Management Strategy.

The project site is not within or adjacent to any adopted or proposed habitat conservation plans or natural community conservation plans (CDFW 2019).

### **Off-Site Mitigation Sites**

The Viking Ranch and Old Kane Springs sites are located in eastern San Diego County and are subject to the San Diego County Code and General Plan. As demonstrated in Table 4.7-1, the proposed project would be consistent with the applicable policies of the San Diego County General Plan.

There are three adopted conservation plans west of the mitigation sites: (1) San Diego County Multiple Species Conservation Plan (MSCP); (2) San Diego North County MSCP; and (3) San Diego Gas and Electric Subregional NCCP/HCP. Both mitigation sites are located outside the boundaries of these conservation plans (CDFW 2019).

The proposed preservation and restoration activities at the off-site mitigation sites would not conflict with any local policies protecting biological resources.

**Level of Significance Before Mitigation:** Potentially significant.

**Mitigation Measures:** *Implement the following existing mitigation measures (see Section 4.2.4 for the full text of each measure):*

- 2008 EIR/EIS:
  - MM 3.5-2 (*Flat-tailed Horned Lizard Rangewide Management Strategy*)
- 2019 SEIS:
  - MM 3.4-8 (*Wildlife Impacts Avoidance and Minimization Measures*)

**Level of Significance After Mitigation:** Less than significant

## SECTION 4.3: CULTURAL RESOURCES

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## SECTION 4.3: CULTURAL RESOURCES

This section of the draft subsequent environmental impact report (Draft SEIR) documents potential impacts of the project on cultural resources, including archaeological and historical sites and artifacts and human remains.

The information in this section is based primarily on a cultural resources report (2018 CRR) prepared for the US Gypsum Company Expansion/Modernization Project (Pacific Legacy, Inc. 2018) (Appendix E, "Cultural Resources Report"). The 2018 CRR investigates an Area of Potential Effect (APE) that encompasses both the project site (Quarry, Well No. 3 site, pipeline alignment) and an area to the south where a waterline replacement project has been completed. The following discussion summarizes information and findings from the 2018 CRR that pertain only to the proposed project.

### **4.3.1 Environmental Setting**

This section discusses the existing cultural resources conditions within and adjacent to the project site including descriptions of previous cultural resource studies conducted within the APE and cultural resources identified within the APE.

#### **4.3.1.1 Cultural Resources Conditions at the Time of the 2008 EIR/EIS**

The 2008 EIR/EIS describes the cultural resources conditions on the project site at the time of its publication. This description was based on information provided in the *Archaeological Investigations for the U.S. Gypsum Company Quarry Expansion and Water Pipeline Replacement Project* prepared by Pacific Legacy, Inc., in 2002.

The approximately 845-acre Quarry expansion area consists of a wash located west and south of quarrying operations, but also includes areas along the western slopes of the Fish Creek Mountains.

### **Records Search**

The records search conducted as part of the 2002 CRR did not identify any previously recorded sites on or in the vicinity of the Quarry or the well site/pipeline alignment.

### **Field Investigation**

A pedestrian surface survey of the Quarry and well site/pipeline alignment was conducted in 2002 using 20 to 30 meter transects. Visibility in the area was noted as being generally good except the southern portion which consists of areas of steep terrain (e.g., 30% slope). These areas of steep terrain were not surveyed due to the nature of the terrain and the low archaeological sensitivity typically associated with such areas. The pedestrian survey noted that large portions of the area, particularly areas in the wash (west and south of quarrying operations), have been previously disturbed by natural events, such as flooding and erosion, and activities associated with previous and current quarrying activities, such as stockpiling of gypsum and overburden.

The pedestrian surface survey identified and recorded one new historic resource, designated as USG-01, which consists of the remnants of a circular stone structure, hearth, and historic trash scatter. According to

the 2008 EIR/EIS, Site USG-01 does not seem to be associated with any individuals or events important in regional or local history, does not reflect various historic mining practices, and does not seem to have the potential to yield significant historical information regarding mining in or development of the Imperial Valley. Therefore, the 2008 EIR/EIS determined that the extant remnants of site USG-01 do not meet any of the eligibility criteria for inclusion in either the National Register of Historic Places (NRHP) or the California Register of Historical Resources (CRHR). In addition, as part of the pedestrian survey, several known historic sites in the vicinity including the Quarry, the Plant, remnants of old County Road S80, and the narrow-gauge railroad were recorded as historic sites.

#### **4.3.1.2 Cultural Resources Conditions at Present**

The following discussion is based primarily on the *Cultural Resources Report for the US Gypsum Company Expansion/Modernization Project Supplemental EIS, Imperial, California* prepared by Pacific Legacy, Inc. in 2018 (2018 CRR) (see Appendix E).

The 2018 CRR investigated an Area of Potential Effect (APE) for the Quarry that included all proposed mining areas and all jurisdictional waters within the Plaster City Quarry. The APE for the proposed pipeline between the Quarry and proposed Well No. 3 was 50 feet wide on either side of the proposed pipeline alignment, and the length of the proposed line (approximately 3.45 miles).

Previously and newly recorded cultural resources within the project APE are summarized below in Table 4.3-1, “Cultural Resource Sites and Resources in Proximity to Project Site.”

#### **Records Search**

The 2002 records search was updated as part of the 2018 CRR (Appendix E). The updated records search did not identify any previous studies that encompass the Quarry other than the Class III pedestrian surface survey conducted in 2002 in support of the 2008 EIR/EIS (2018 CRR), as described above in Section 4.3.1.1.

According to the 2018 CRR, there are three previously recorded cultural resource sites in the APE for the proposed project (see Table 4.3-1). These resources include (1) the Quarry itself, which encompasses numerous isolated finds and a small u-shaped historic period stone structure with debris (Locus 1); (2) the narrow-gauge railroad (Plaster City Railroad P-13-008139); and (3) a small prehistoric scatter of “Yuman Desert Ware” potsherds (P-13-00001) that was first documented in 1950. These resources are described in greater detail below.

#### ***Plaster City Quarry***

The historic period Plaster City Quarry was originally documented in 2002 as a part of the initial Class III pedestrian inventory survey conducted by Pacific Legacy in support of the 2008 EIR/EIS. The Imperial Gypsum and Oil Corporation owned the quarry in the early 1900s and built the narrow-gauge Plaster City Railroad (P-13-008139) in 1920-1921 to facilitate removal of large quantities of gypsum from the quarry to a crusher plant near the San Diego and Arizona Eastern Railroad alignment (Tucker 1926:271). The Imperial Gypsum and Oil Corporation, however, was not very successful and sold the quarry to the Pacific Portland Cement Company in 1924. The Pacific Portland Cement Company added a plaster manufacturing plant to the ore crusher, which became Plaster City, and operated the Quarry until the mid-1940s (Tucker 1926:271, cited in Pacific Legacy 2018). In 1947, the Plaster City Quarry and the Plaster City Railroad were purchased by USG, which continues to own and operate the Quarry and its facilities. USG modernized quarry operations by adding a 900-foot belt and two kilns among other

improvements. During the 1940s-1960s, the Plaster City Plant (P-13-009303) produced plaster board, sacked lath, and plaster for agricultural purposes (URS 2010:2-32).

***Locus 1 (formerly USG-01)***

Locus 1 was first recorded in 2002 as a U-shaped, dry laid stacked stone structure with an interior hearth and a historic period debris scatter. When it was revisited in 2018, its condition was found largely unchanged as the stone structure remained standing, the fire pit was relocated, and the historic period debris noted in 2002 was present. A dirt road enters the locus from the northeast and the east end features multiple bulldozer tracks. A cluster of cans with bullet holes, likely used for target practice, also were noted. One oval-shaped tobacco tin with a hinged lid with a striker plate was observed as well as many condensed milk tins. Artifacts remain scattered about the locus with a few areas featuring more concentrated materials. The area has been somewhat impacted by aeolian erosion, which has likely buried and/or unearthed some of the historic period debris. USG personnel noted that Locus 1 had been used in the past by quarry employees as a recreational or gathering area.

***Plaster City Railroad (P-13-008139) (CA-IMP-7739H)***

P-13-008139 was originally documented in 1998 as a 4,920-foot segment of the 27-mile-long historic period Plaster City Railroad as it approaches its southern terminus at the Plaster City Plant. Also included as a part of the resource was a prehistoric site component including midden soils, hearths, fire altered rock, pottery, groundstone, flaked stone, faunal and fish bone fragments, bedrock mortars, a rock cairn, a coprolite specimen, and a few metal fragments, possibly from a flintlock or sidelock. This prehistoric component was recorded along the railroad alignment over 5 miles southeast of proposed Well No. 3 and well outside of the current Project APE. The prehistoric component was, therefore, not revisited during the 2018 investigation. In 2009, a portion of P-13-008139 near the Plaster City Plant was recorded and evaluated for listing in the NRHP and CRHR. The recorded portion of the resource was not found to be eligible for listing in the NRHP and CRHR as an individual resource and/or as a possible contributor to the larger railway alignment.

An approximate 3.45-mile segment of the narrow-gauge railroad alignment was recorded in 2018 as it extends from the Quarry towards proposed Well No. 3 within the Project APE for the pipeline alignment. The railroad alignment features rails that are 36 inches apart and are supported by wooden ties. Ten features associated with the alignment were documented in 2018, including nine maintenance offset tracks and one large culvert with horizontally aligned drainpipes. A remnant telegraph line also was documented along the railroad grade. The remaining portion of the Plaster City Railroad alignment, which was not recorded in 2018, continues generally south before terminating at the Plaster City Plant. The Plaster City Plant and Plaster City Railroad were planned and built between 1920 and 1921, though it was noted in a 2009 recording of the southern portion of the alignment that many of the tie plates and joint bars have been replaced and the rails have apparently been replaced to support heavier loads.

**Field Investigation**

The BLM requires that areas not subject to cultural resources inventory survey for over 10 years be re-examined. Thus, areas that were investigated for the project in 2002 were again inventoried in 2018. The Class III pedestrian surface survey was conducted using transects of no more than 15 meters. The survey involved both the relocation of previously recorded resources and the identification and recordation of newly identified archaeological sites and isolated finds. All identified sites and resources in the project APE are summarized in Table 4.3-1, “Cultural Resource Sites and Resources in Proximity to Project Site.”

Both previously recorded historic sites in the APE (Plaster City Quarry and Locus 1, Plaster City Railroad P-13-008139) were relocated during the 2018 pedestrian survey. The small prehistoric scatter of Yuma Desert Ware was not relocated; the area is in an active mining zone and has been completely disturbed.

Cultural resources newly identified and recorded during the survey include two prehistoric archaeological sites, 13 prehistoric isolated finds, and nine historic period isolated finds. Nineteen of these resources, including both archaeological sites and 17 isolated finds, were noted within the Quarry while three were found along the proposed pipeline alignment or the area encompassing proposed Well No. 3. Each of these resources is summarized in Table 4.3-1, and both archaeological sites are further described below.

**Table 4.3-1  
 Cultural Resource Sites and Resources in Proximity to Project Site**

Resource Designation	Site Type	Description	Author	Date	Proximate Project Component
<b>PREVIOUSLY RECORDED SITES—RELOCATED ON PROJECT SITE</b>					
P-13-008139  CA-IMP-7739H  Plaster City Railroad Project	Historic (previously multi-component)	<p>As determined by the site revisit, the previously recorded prehistoric component should be documented as a separate site and removed from this record (which has been updated to Historic only).</p> <p>That component consists of a lithic scatter, groundstone, fire-affected rock, midden, cairns, fish and mammal bone, 300+ potsherds, and a coprolite of unknown date.</p> <p>The previously recorded historic component consists of a portion of the 27-mile narrow gauge US Gypsum Rail Line (which traveled between the mine and plant), locomotives, 11 drainage culverts, a railroad bridge (1922) over Carrizo Wash, and a possible iron flintlock/sidelock. This recording effort documented a 300-foot portion of the railroad line at the north end.</p> <p>Ten features associated with the railroad line were documented (nine maintenance offset tracks; one large culvert with drain pipes aligned horizontally), and a remnant telegraph line along the grade.</p>	Shapiro, O'Neill, Cappetta	2018	Quarry; Pipeline alignment
Plaster City Quarry	Historic	<p>The resource was originally documented in 2002 (Holmes) as being a functioning quarry since 1902, modernized after purchase by US Gypsum in 1946; however, the record was never submitted to the Information Center for P# assignment.</p> <p>The quarry appears as previously described, although the active mining area may now be more extensive. A U-shaped dry-laid stacked stone structure with an interior hearth and a historic period debris scatter was documented within the quarry in 2002 and found to be unchanged in 2018. It contains hinged lid tobacco tins and many condensed milk cans. A dirt road enters the site at the northeast, and bulldozer tracks are present in addition to signs of erosion and target shooting.</p>	Shapiro, O'Neill, Sprague	2018	Quarry

Resource Designation	Site Type	Description	Author	Date	Proximate Project Component
<b>PREVIOUSLY RECORDED SITES—NOT RELOCATED ON PROJECT SITE</b>					
P-13-000001 CA-IMP-1	Prehistoric	Scatter of Yuma Desert Ware potsherds. Site was not relocated; the area is in an active mining zone and completely disturbed.	Shapiro, O'Neill, Sprague	2018	Quarry
<b>NEWLY IDENTIFIED AND RECORDED SITES</b>					
PLI-2018-1	Prehistoric	Lithic scatter of a few quartz flakes, an edge-modified flake, handstone, milling slab fragment, at least 50 ceramic sherds, two possible hearth features, and a gypsum outcrop overhang feature.	Shapiro, O'Neill, Sprague	2018	Quarry
PLI-2018-2	Prehistoric	Discrete scatter of at least 26 ceramic fragments, appearing to be from a single vessel. The site is heavily impacted from OHVs and target shooting.	Shapiro, O'Neill, Sprague	2018	Quarry
<b>NEWLY IDENTIFIED ISOLATED FINDS</b>					
PLI-2018-ISO-1	Prehistoric	Isolate assayed/shattered quartz cobble	Shapiro, O'Neill, Sprague	2018	Quarry
PLI-2018-ISO-2	Prehistoric	Isolate quartz Desert Side-notched projectile point.	Shapiro, O'Neill, Sprague	2018	Quarry
PLI-2018-ISO-5	Prehistoric	Isolate quartz shatter from an assayed cobble.	Shapiro, O'Neill, Sprague	2018	Quarry
PLI-2018-ISO-6	Prehistoric	Isolate assayed quartz cobble with shatter.	Shapiro, O'Neill, Sprague	2018	Quarry
PLI-2018-ISO-7	Prehistoric	Isolate assayed quartz cobble with shatter	Shapiro, O'Neill, Sprague	2018	Quarry
PLI-2018-ISO-8	Prehistoric	Isolate assayed quartz cobble shatter	Shapiro, O'Neill, Sprague	2018	Quarry
PLI-2018-ISO-9	Prehistoric	Isolate assayed quartz cobble shatter	Shapiro, O'Neill, Sprague	2018	Quarry
PLI-2018-ISO-10	Historic	Isolate brass cap US GLO survey marker (1921)	Shapiro, O'Neill, Sprague	2018	Quarry
PLI-2018-ISO-11	Historic	Isolate brass cap US GLO survey marker (1916) set in mound of boulders; three other large boulder mounds and two tobacco tins located nearby.	Shapiro, O'Neill, Sprague	2018	Quarry
PLI-2018-ISO-12	Prehistoric	Isolate assayed quartz cobble and shatter.	Shapiro, O'Neill, Cappetta	2018	Quarry
PLI-2018-ISO-13	Historic	Two isolate rock cairns separated by a cut, one with a brass cap US GLO survey marker (1921); the other with a tobacco tin and knife-opened sanitary can.	Shapiro, O'Neill, Cappetta	2018	Quarry
PLI-2018-ISO-14	Historic	Isolate brass cap US GLO survey marker (1921) in a rock cairn, with a Kerr Mason jar containing 1994 claim papers and two wooden lath pieces	Shapiro, O'Neill, Cappetta	2018	Quarry

Resource Designation	Site Type	Description	Author	Date	Proximate Project Component
PLI-2018-ISO-15	Historic	Isolate rock cairn with PVC pipe in the center, an "X" aerial target made from reflective cloth crossing through it, and Sir Walter Raleigh tobacco tin.	Shapiro, O'Neill, Cappetta	2018	Quarry
PLI-2018-ISO-16	Historic	Isolated historic and modern debris scatter of auto parts, melted window and bottle glass, charcoal and slag.	Shapiro, O'Neill, Cappetta	2018	Quarry
PLI-2018-ISO-17	Historic	Isolate cylindrical steep pipe water well head with welded steel cap; bullet holes present.	Shapiro, O'Neill, Cappetta	2018	Pipeline Alignment
PLI-2018-ISO-18	Prehistoric	Isolate ceramic sherd with scratch lines.	Shapiro, O'Neill, Cappetta	2018	Pipeline Alignment
PLI-2018-ISO-19	Historic	Isolate knife-opened holes-in-top can with bullet holes.	Shapiro, O'Neill, Cappetta	2018	Pipeline Alignment
PLI-2018-ISO-20	Prehistoric	Isolate of three ceramic sherds from the same vessel.	Shapiro, O'Neill, Cappetta	2018	Quarry
PLI-2018-ISO-21	Prehistoric	Isolate ceramic sherd.	Shapiro, O'Neill, Cappetta	2018	Quarry
PLI-2018-ISO-22	Prehistoric	Isolate assayed quartz cobble shatter	Shapiro, O'Neill, Cappetta	2018	Quarry

**PLI-2018-1**

PLI-2018-1 is a prehistoric site that was first encountered in 2018 at the extreme southern end of the Quarry adjacent to and upslope from a meandering draw. The site encompasses two hearth features (Features 1 and 2), a rock overhang, a ceramic scatter (Feature 3), one granitic milling slab fragment (Artifact 1), a granitic handstone (Artifact 2), an edge-modified flake (Artifact 3), and a few quartz flakes.

- Feature 1 consists of a granitic rock circle containing charcoal and lightly blackened soil that measures 2 meters north-south and 1.6 meters east-west. It has been impacted by aeolian erosion and is slightly deflated but may be at least 2 centimeters deep. It was unclear if the feature represented a prehistoric, historic period, or modern fire ring.
- Feature 2 is a rock concentration with charcoal-stained soils that also may represent a prehistoric hearth, though its age remains uncertain. It measures 1.8 meters north-south and 1.9 meters east-west. It is located within the wash to the southwest of Feature 1.
- Feature 3 is an overhang upslope from Feature 1. It is in a gypsum outcrop with a talus slope of gypsum blocks emanating from the outcrop. The overhang is deep enough to crawl into, and the floor is comprised of a light-colored gypsum soil. The overhang measures 1.25 meters high at the left side of the opening and 0.8 meters high at the right side of the opening. The overhang is 3.95 meters wide and 2.8 meters deep. Pottery sherds were found at the opening of the overhang and charcoal was scattered mostly at the edge of the overhang and downslope to Feature 1, but also to the east of the opening on the slope.

At least 50 pottery fragments were found at PLI-2018-1, most scattered downslope between Features 1 and 3. Two fragments were found in the draw on the southeast side of the site. Three fragments also were found in the southwestern portion of the site. At least two ceramic types were observed—Brownware with a light orange interior and tan exterior with these colors reversed in some instances and a reddish and tan pottery. All recorded ceramics were body sherds, many of which were curved. The tan and orange pottery were 4-5 centimeters thick and the largest fragments measured 8 by 10 centimeters. The reddish pottery was 5-6 centimeters thick and was more fragmented. Many sherds of both types displayed blackening. The granitic milling slab fragment was found on a slope near Artifact 2 and measured 29 (l) by 19 (w) by 7 (th) centimeters. The milling surface measured 13 by 13 centimeters. The granitic handstone was complete and measured 12 (l) by 9 (w) by 6 (th) centimeters. The edge modified flake was made from quartz and featured flake scars all along one margin. PLI-2018-1 crosses the Project APE for an unnamed wash or draw that witnesses seasonal rains. On-site vegetation includes creosote, ocotillo, barrel cactus and other shrubs. Gypsum outcrops are present in and around the area.

### ***PLI-2018-2***

PLI-2018-2 is a prehistoric site that was first encountered in 2018 near the southern end of the parcel that encompasses proposed Well No. 3 and a portion of the associated pipeline alignment. The site comprises a discrete pottery scatter with at least 26 sherds. Twenty sherds were recorded within a 2-meter radius in a low area of compacted sand that had been impacted by alluvial erosion. Six other ceramic sherds were found scattered to the east. Other fragments may be present and have likely been buried or displaced by alluvial action. The pottery fragments appeared to be from a single vessel. The exterior of each sherd was characterized by the same red/brown color while the interior was buff colored with gray to black temper. No rim fragments were found, and all appeared to be body sherds with slight curvature. The sherds ranged in size from 1.5-5.5 centimeters and were 0.4-0.5 centimeters in thickness. The area surrounding PLI-2018-2 has been heavily disturbed by OHV activity as well as alluvial and aeolian erosion. The area also has been used for recreational shooting, evidenced by numerous skeet fragments, ammunition cartridges and casings, and glass shards as well as other modern debris.

### **Viking Ranch Restoration Site**

A record search for potential cultural resources was conducted by Dudek archeologists for the Viking Ranch Restoration Site. No cultural resources have been recorded on the site or within a 1-mile buffer area.

### **Old Kane Springs Road Preservation Site**

The Old Kane Springs Road Preservation Site is undeveloped open space with no structures or other improvements.

## **4.3.2 Regulatory Setting**

The following sections discuss federal, State, and local regulations pertaining to biological resources that warrant consideration during the environmental review of the project.

### **4.3.2.1 Federal**

Relevant federal, state, and local programs and policies relating to cultural resources that apply to the proposed project are discussed below.

### **Section 106 of the National Historic Preservation Act of 1966**

The National Historic Preservation Act (NHPA) establishes the nation’s policy for historic preservation and sets in place a program for the preservation of historic properties by requiring Federal agencies to consider effects to significant cultural resources (i.e., historic properties) prior to undertakings. Section 106 of the NHPA states that Federal agencies with direct or indirect jurisdiction over Federally funded, assisted, or licensed undertakings must take into account the effect of the undertaking on any historic property that is included in, or eligible for inclusion in, the National Register of Historic Places (NRHP) and that the Advisory Council on Historic Preservation (ACHP) and State Historic Preservation Officer (SHPO) must be afforded an opportunity to comment on such undertakings, through a process outlined in the ACHP regulations at 36 Code of Federal Regulations (CFR) Part 800.

### **National Register of Historic Places**

The NRHP was established by the NHPA of 1966 as an authoritative guide to be used by Federal, State, and Local governments, private groups, and citizens to identify the United States’ cultural resources and to indicate what properties should be considered for protection from destruction or impairment. The NRHP recognizes properties that are significant at the national, State, and local levels. To be eligible for listing in the NRHP, a resource must be significant in American history, architecture, archaeology, engineering, or culture. Districts, sites, buildings, structures, and objects of potential significance must also possess integrity of location, design, setting, materials, workmanship, feeling, or association. A property is eligible for the NRHP if it is significant under one or more of the following criteria as defined by NRHP:

- *Criterion A:* It is associated with events that have made a significant contribution to the broad patterns of our history.
- *Criterion B:* It is associated with the lives of persons significant in our past.
- *Criterion C:* It embodies the distinctive characteristics of a type, period, or method of construction; represents the work of a master, possesses high artistic values; or represents a significant and distinguishable entity whose components may lack individual distinction.
- *Criterion D:* It has yielded, or may be likely to yield, information important in prehistory or history.

In general, a resource must be at least 50 years of age to be considered for the NRHP, unless it satisfies a standard of exceptional importance.

#### **4.3.2.2 State**

### **California Environmental Quality Act**

Pursuant to the California Environmental Quality Act (CEQA), a historical resource is a resource listed in, or eligible for listing in, the California Register of Historical Resources (CRHR) (CEQA Guidelines Section 15064.5). In addition, resources included in a local register of historic resources or identified as “significant” in a local survey conducted in accordance with State guidelines are also considered historic resources under CEQA, unless a preponderance of the facts demonstrates otherwise. According to CEQA, the fact that a resource is not listed in or determined eligible for listing in the CRHR or is not included in a local register or survey shall not preclude a Lead Agency, as defined by CEQA, from determining that the resource may be a historic resource as defined in California Public Resources Code (PRC) Section 5024.1.



CEQA applies to archaeological resources when: (1) the archaeological resource satisfies the definition of a historical resource, or (2) the archaeological resource satisfies the definition of a “unique archaeological resource.” A unique archaeological resource is an archaeological artifact, object, or site that has a high probability of meeting any of the following criteria:

1. The archaeological resource contains information needed to answer important scientific research questions and there is a demonstrable public interest in that information.
2. The archaeological resource has a special and particular quality such as being the oldest of its type or the best available example of its type.
3. The archaeological resource is directly associated with a scientifically recognized important prehistoric or historic event or person.

Finally, CEQA Guidelines Section 15064.5(e) and (f) provides measures to protect historic resources, archeological resources, and human remains (in any location other than a dedicated cemetery) from disturbance, vandalism, or inadvertent destruction.

### **California Register of Historical Resources**

Created in 1992 and implemented in 1998, the CRHR is:

“an authoritative guide in California to be used by State and local agencies, private groups, and citizens to identify the state’s historical resources and to indicate properties that are to be protected, to the extent prudent and feasible, from substantial adverse change.”

Certain properties, including those listed in or formally determined eligible for listing in the NRHP and California Historical Landmarks (CHLs) numbered 770 and higher, are automatically included in the CRHR. Other properties recognized under the California Points of Historical Interest program, identified as significant in historic resources surveys, or designated by local landmarks programs may be nominated for inclusion in the CRHR. A resource, either an individual property or a contributor to a historic district, may be listed in the CRHR if the State Historical Resources Commission determines that it meets one or more of the following criteria (modeled after NRHP criteria):

- *Criterion 1:* It is associated with events that have made a significant contribution to the broad patterns of California’s history and cultural heritage.
- *Criterion 2:* It is associated with the lives of persons important in our past.
- *Criterion 3:* It embodies the distinctive characteristics of a type, period, region, or method of construction; represents the work of an important creative individual; or possesses high artistic values.
- *Criterion 4:* It has yielded, or may be likely to yield, information important in history or prehistory.

Resources nominated to the CRHR must retain enough of their historic character or appearance to be recognizable as historic resources and to convey the reasons for their significance. It is possible that a resource whose integrity does not satisfy NRHP criteria may still be eligible for listing in the CRHR. A resource that has lost its historic character or appearance may still have sufficient integrity for the CRHR if, under Criterion 4, it maintains the potential to yield significant scientific or historical information or specific data. Resources that have achieved significance within the past 50 years also may be eligible for inclusion in the

CRHR, provided that enough time has lapsed to obtain a scholarly perspective on the events or individuals associated with the resource.

### **California Native American Graves Protection and Repatriation Act of 2001**

Codified in the California Health and Safety Code Sections 8010–8030, the California NAGPRA is consistent with the Federal NAGPRA. Intended to “provide a seamless and consistent State policy to ensure that all California Indian human remains and cultural items be treated with dignity and respect,” the California NAGPRA also encourages and provides a mechanism for the return of remains and cultural items to lineal descendants. Section 8025 established a Repatriation Oversight Commission to oversee this process. The Act also provides a process for non-Federally recognized tribes to file claims with agencies and museums for repatriation of human remains and cultural items.

### **California Public Resources Code Section 5097**

Public Resources Code (PRC) Section 5097 defines and protects Archaeological, Paleontological and Historical sites. Under PRC 5097, an archaeological site survey may be conducted to determine archaeological, paleontological, or historical features. PRC Section 5097.5 prohibits the removal, destruction, injury, or defacement of archaeological and paleontological features on any lands under the jurisdiction of state or local authorities. PRC 5097.9 states that no public agency or private party on public property shall “interfere with the free expression or exercise of Native American Religion.” The code further states that: No such agency or party [shall] cause severe or irreparable damage to any Native American sanctified cemetery, place of worship, religious or ceremonial site, or sacred shrine...except on a clear and convincing showing that the public interest and necessity so require.

### **California Health and Safety Code Section 7050.5, 7051, and 7054**

These sections collectively address the illegality of interference with human burial remains, as well as the disposition of Native American burials in archaeological sites. The law protects such remains from disturbance, vandalism, or inadvertent destruction, and establishes procedures to be implemented if Native American skeletal remains are discovered during construction of a project, including the treatment of remains prior to, during, and after evaluation, and reburial procedures.

#### **4.3.2.3 Local**

### **Imperial County General Plan**

The goals, objectives, and policies in the *Imperial County General Plan* are intended to inform decision makers, the general public, public agencies, and those doing business in the County of the County’s position on land use-related issues and to provide guidance for day-to-day decision-making. The following objectives and policies contained within the *Imperial County General Plan Conservation Element* pertain to cultural resources for the proposed project:

#### ***Conservation and Open Space Element***

**Goal 3:** Preserve the spiritual and cultural heritage of the diverse communities of Imperial County.

**Objective 3.1:** Protect and preserve sites of archaeological, ecological, historical, and scientific value, and/or cultural significance.

**Objective 3.3:** Engage all local Native American Tribes in the protection of tribal cultural resources, including prehistoric trails and burial sites.

### **Imperial County Surface Mining Ordinance**

The Imperial County Surface Mining Ordinance was enacted to ensure the continued availability of important mineral resources, while regulating surface mining operations as required by SMARA, Public Resources Code (PRC) Section 2207, and state regulations for surface mining and reclamation practice (California Code of Regulations [CCR], Title 14, Division 2, Chapter 8, Subchapter 1, Sections 3500 et seq.), to ensure prevention or mitigation of adverse effects on the environment, including damage to archaeological and historical resources.

### **San Diego County General Plan**

The goals and policies of the *San Diego County General Plan* provide direction to future growth and development in the county. The following goals and policies from the *San Diego County General Plan Conservation and Open Space Element* relate to cultural resources and apply to the proposed actions at the Viking Ranch Restoration Site and Old Kane Springs Road Preservation Site, located in unincorporated San Diego County.

#### ***Conservation and Open Space Element***

**Goal COS-7:** Protection and Preservation of Archaeological Resources. Protection and preservation of the County's important archeological resources for their cultural importance to local communities, as well as their research and educational potential.

**Policy COS-7.1:** Archaeological Protection. Preserve important archaeological resources from loss or destruction and require development to include appropriate mitigation to protect the quality and integrity of these resources.

**Policy COS-7.2:** Open Space Easements. Require development to avoid archeological resources whenever possible. If complete avoidance is not possible, require development to fully mitigate impacts to archaeological resources.

**Policy COS-7.3:** Archaeological Collections. Require the appropriate treatment and preservation of archaeological collections in a culturally appropriate manner.

**Policy COS-7.4:** Consultation with Affected Communities. Require consultation with affected communities, including local tribes to determine the appropriate treatment of cultural resources.

**Policy COS-7.5:** Treatment of Human Remains. Require human remains be treated with the utmost dignity and respect and that the disposition and handling of human remains will be done in consultation with the Most Likely Descendant (MLD) and under the requirements of Federal, State and County Regulations.

### 4.3.3 Significance Criteria and Analysis Methodology

#### 4.3.3.1 Significance Criteria

##### 2008 EIR/EIS Significance Criteria

The 2008 EIR/EIS evaluated the project's cultural resources impacts using the following significance criteria:

The project would be considered to have a significant effect on cultural resources if it would:

- Disturb cultural resources that are either listed or eligible to be listed in the NRHP; as registered or eligible to be registered as a state Historic Landmark; or included in any responsible local inventory of historical properties;
- Disturb previously unknown important archaeological or historical resources;
- Have the potential to cause physical change which would affect unique ethnic cultural values; or,
- Restrict existing religious or sacred uses within the potential impact area.

##### CEQA Appendix G Significance Criteria

Based on Appendix G of the CEQA Guidelines, the proposed project would have a significant impact to cultural resources if it would:

- a) Cause a substantial adverse change in the significance of a historical resource pursuant to § 15064.5;
- b) Cause a substantial adverse change in the significance of an archaeological resource pursuant to § 15064.5;
- c) Disturb any human remains, including those interred outside of dedicated cemeteries.

#### 4.3.3.2 Analysis Methodology

The evaluation of potential impacts to cultural resources is based on the findings of the 2018 CRR (Appendix E). Through a combination of a comprehensive records search for previously identified cultural resources and a field investigation to identify and record newly discovered resources the 2018 CRR confirmed the location of significant cultural resources within the APE for the project. Based on this information, the proposed locations of project activities were compared to determine potential impacts to resources.

### 4.3.4 Project Impacts and Mitigation Measures

#### 4.3.4.1 2008 EIR/EIS Impact Analysis

The 2008 EIR/EIS determined that impacts to known prehistoric and historic resources within the USG Expansion/Modernization Project area would be less than significant. However, it was noted that excavation in previously undisturbed areas could uncover unknown resources. The 2008 EIR/EIS includes the following mitigation measure to address potential impacts to unknown cultural resources:

***Mitigation Measure 3.8-3: If any archaeological resources are encountered during implementation of the Proposed Action, construction or any other activity that may disturb or damage such resources shall be halted, and the services of a qualified archaeologist shall be secured to assess the resources and evaluate the potential impact. Such construction or other activity may resume***

*only after the archaeological resources have been assessed and evaluated and a plan to avoid or mitigate any potential impacts to a level of insignificance has been prepared and implemented.*

#### **4.3.4.2 2019 SEIS Impact Analysis**

The 2019 SEIS further evaluated the proposed project under the National Environmental Policy Act (NEPA) and provided the following mitigation measures to address the potential for inadvertent discovery of unknown cultural resources on the project site.

**Mitigation Measure 3.6-1:** *Develop and Implement a Plan for Archaeological Monitoring, Post-Review Discovery, and Unanticipated Effects. Avoidance and protection measures for cultural resources within the Project APE will be outlined in a Construction Monitoring and Inadvertent Discovery Plan. This Plan will be prepared and approved prior to the implementation of any of the action alternatives. It will describe worker awareness training, avoidance measures, and monitoring procedures that will be implemented to protect known cultural resources from Project impacts. It will also detail the procedures that will be used to assess, manage, and mitigate potential impacts on inadvertent discoveries during Project implementation.*

**Mitigation Measure 3.6-2:** *Develop a Maintenance Notification Agreement for Future Maintenance of Pipeline Rights-of-Way. A Maintenance Notification Agreement will be outlined prior to the authorization of any pipeline right-of-way grant to ensure continued avoidance of archaeological resources during the life of the grant. This agreement will identify the schedule and data needs that will be submitted by USG to BLM when maintenance is needed on any of the pipelines authorized for this project. The BLM archaeologist will review this data to determine if and where archaeological monitors are needed during future maintenance activities.*

#### **4.3.4.3 Substantial Project Changes**

##### **Project Revisions**

The proposed Quarry expansion, and the proposed Well No. 3 and associated pipeline, are substantially in the same location and same configuration as the features that were evaluated in the 2008 EIR/EIS. Therefore, any minor revisions would not create a new or increase a significant impact related to cultural resources. However, the restoration of the Viking Ranch site and preservation of the Old Kane Springs Road site are proposed in response to mitigation required by the 2019 SEIS, and these are new actions under the proposed project.

##### **Changed Circumstances**

No changed circumstances related to the project would create a new or increased significant impact related to cultural resources.

##### **New Information**

The BLM requires that areas not subject to cultural resources inventory survey for over 10 years must be re-examined. Therefore, areas that were investigated for the USG Expansion/Modernization Project in 2002 were again inventoried in 2018. An updated Cultural Resources Report (2018 CRR) was completed as part of the 2019 SEIS. The 2018 CRR included an archival and records search and a pedestrian inventory of the USG Expansion/Modernization Project APE. As a result of the pedestrian survey, 18 cultural resources were

newly discovered including one archaeological site and 17 isolated finds within the Quarry and one prehistoric archaeological site and three isolated finds within the well site and associated pipeline alignment.

### **Significance Determination**

Based on project revisions that may create a new or increased significant impact, the County has amplified and augmented the analysis contained in the 2008 EIR/EIS. This evaluation is provided in the following impact analysis.

#### **4.3.4.4 Subsequent Environmental Analysis**

**Impact 4.3-1: The Project Could Cause a Substantial Adverse Change in the Significance of a Historical Resource Pursuant to §15064.5.**

#### **Quarry, Well No. 3, and Associated Pipeline**

Quarry operations and development of Well No. 3 and the associated pipeline would occur in substantially the same locations and in the same manner as previously described and evaluated in both the 2008 EIR/EIS and the 2019 SEIS. As these project components would remain essentially unchanged, no new or more severe impacts would occur to cultural resources under the proposed project. However, the following discussion provides an evaluation of new information regarding the presence of cultural resources in the project area that has become available with completion of the 2018 CRR.

As described in the 2018 CRR (Pacific Legacy 2018) and 2019 SEIS, there are two previously recorded historical resource sites currently present in the APE for the Quarry, Well No. 3, and associated pipeline: (1) the Quarry, which encompasses numerous isolated finds and a small u-shaped historic period stone structure with debris (Locus 1) and, (2) the Plaster City Railroad (P-13-008139). These are central components to the Quarry operation that remain in continuous operation, are properly maintained, and would not be adversely affected by project implementation. The proposed pipeline would be constructed parallel to a segment of the Plaster City Railroad but, according to the 2018 CRR, the project would avoid impacts to this historical resource site. Furthermore, the railroad is routinely subject to physical use and alteration as a result of operation, maintenance, and repair. For example, many of the tie plates and joint bars have been replaced and the rails have been replaced entirely to support heavier loads (Pacific Legacy 2018). Thus, a significant impact would occur only if the project adversely affected the historical context of the railroad as a whole, and not as a result of physical modification of one segment. As the project is not expected to affect either the railroad itself or its historical context within the project area, no impact would occur to this historical resource.

During the 2018 pedestrian survey, two prehistoric archaeological sites (PLI-2018-1 and PLI-2018-2) and 17 prehistoric and historic period isolated finds were identified and recorded within the Quarry while three isolated finds were identified and recorded within the proposed pipeline alignment or the area encompassing proposed Well No. 3. Neither of the prehistoric archaeological sites (PLI-2018-1 and PLI-2018-2) has been evaluated for listing in the NRHP. PLI-2018-1 consists of a lithic and ceramic scatter with overhang rock shelter located within jurisdictional waters in the Quarry. The 2018 CRR determined that this site is not likely to be disturbed by project activities as it lies within jurisdictional waters on the edge of Quarry boundaries and away from active mining areas. PLI-2018-2 consists of a ceramic scatter located near the site of proposed Well No. 3. The 2018 CRR determined that this site would not be affected by the project. Isolated cultural resources are not eligible for listing in the NRHP and, therefore, are not considered further in this evaluation.

Inadvertent discoveries of unknown resources and/or unanticipated damage to resources could occur during ground disturbing activities carried out as part of the proposed project. The project is subject to 2008 EIR/EIS Mitigation Measure 3.8-3 which, in the event a potential resource is encountered during construction, requires work to halt and a qualified archaeologist to assess and properly manage the find. The 2018 CRR recommends additional mitigation to more comprehensively protect discovered resources by requiring construction monitoring during all ground disturbing activities. These recommended measures were included in the 2019 SEIS as Mitigation Measures 3.6-1 and 3.6-2. Implementation of these existing mitigation measures would address the potential for inadvertent discovery of cultural resources on the project site and reduce this impact to below a level of significance.

**Level of Significance Before Mitigation:** Less than significant.

**Mitigation Measures:** *Implement the following existing mitigation measures (see Section 4.3.4 for the full text of each measure):*

- 2008 EIR/EIS:
  - Mitigation Measure 3.8-3
- 2019 SEIS:
  - Mitigation Measure 3.6-1
  - Mitigation Measure 3.6-2

**Level of Significance After Mitigation:** Less than significant.

### **Viking Ranch Restoration Site**

The cultural resources records search conducted for the Viking Ranch Restoration site failed to identify any previous cultural resource studies or recorded cultural resources on the Viking Ranch site or within a one-mile buffer area. There is, however, potential for restoration activities to disturb previously undiscovered cultural resources. Implementation of Mitigation Measures 4.3-1 below would reduce this impact to below a level of significance.

**Level of Significance Before Mitigation:** Potentially significant.

**Mitigation Measure:** *Implement the following new mitigation measure:*

**Mitigation Measure 4.3-1:** *Develop and Implement a Plan for Archaeological Monitoring, Post-Review Discovery, and Unanticipated Effects. Avoidance and protection measures for cultural resources within the Viking Ranch APE shall be outlined in a Construction Monitoring and Inadvertent Discovery Plan. This Plan will be prepared and approved prior to the implementation of any of the action alternatives. The Plan shall describe worker awareness training, avoidance measures, and monitoring procedures that will be implemented to protect known cultural resources from project impacts. It shall also detail the procedures that will be used to assess, manage, and mitigate potential impacts on inadvertent discoveries during project implementation.*

**Level of Significance After Mitigation:** Less than significant.

### Old Kane Springs Road Preservation Site

The proposed project does not include any ground disturbing activities on the Old Kane Springs Road Preservation Site and would have no potential to disturb unknown subsurface cultural resources.

**Level of Significance:** No Impact.

**Mitigation Measures:** None required.

**Impact 4.3-2: The Project Could Cause a Substantial Adverse Change in the Significance of an Archaeological Resource Pursuant to §15064.5.**

### Quarry, Well No. 3, and Associated Pipeline

According to the 2018 CRR, there is one previously recorded archaeological resource within the project APE. The Yuman Desert Ware (P-13-000001), which consisted of a potsherd scatter, could not be relocated during the 2018 pedestrian survey of the Quarry. Given the highly disturbed condition of its recorded location within an active quarry area, it is presumed that this site is no longer present in the APE. Multiple isolated finds were also identified within the project APE; however, isolated finds are not eligible for the NRHP, and these resources are not evaluated further in this SEIR.

Inadvertent discoveries of currently unknown resources and/or unanticipated damage to resources could occur during ground disturbing activities carried out as part of the proposed project. Implementation of existing Mitigation Measures 3.8-3, 3.6-1, and 3.6-2 would reduce this impact to a less than significant level by requiring worker awareness training, avoidance measures, and monitoring during earthmoving activities.

**Level of Significance Before Mitigation:** Less than significant

**Mitigation Measures:** *Implement the following existing mitigation measures (see Section 4.3.4 for the full text of each measure):*

- 2008 EIR/EIS:
  - Mitigation Measure 3.8-3
- 2019 SEIS:
  - Mitigation Measure 3.6-1
  - Mitigation Measure 3.6-2

**Level of Significance After Mitigation:** Less than significant

### Viking Ranch Restoration Site

The cultural resources records search conducted for the Viking Ranch Restoration Site failed to identify any previous cultural resource studies or recorded cultural resources on the Viking Ranch site or within a one-mile buffer area. There is potential, however, for restoration activities to disturb previously undiscovered cultural resources. Implementation of Mitigation Measure 4.3-1 would reduce this impact to below a level of significance.

**Level of Significance Before Mitigation:** Potentially significant.



**Mitigation Measure:** *Implement Mitigation Measure 4.3-1.*

**Level of Significance After Mitigation:** Less than significant.

#### **Old Kane Springs Road Preservation Site**

The proposed project does not include any ground disturbing activities on the Old Kane Springs Road Preservation Site and would have no potential to disturb unknown subsurface cultural resources at this location.

**Level of Significance:** No Impact.

**Mitigation Measure:** None required.

#### **Impact 4.3-3: The Project Could Disturb Any Human Remains, Including Those Interred Outside of Dedicated Cemeteries**

According to the cultural resources studies and records searches conducted for the project, there are no recorded cemeteries or burial sites within the project APE or on the Viking Ranch Restoration Site. However, as discussed previously, project ground-disturbing activities could disturb unknown burial sites and human remains. San Diego County General Plan Policy COS-7.5 requires that the disposition and handling of human remains be done in consultation with the Most Likely Descendent (MLD) and in accordance with federal, state and local law. Mitigation Measure 4.3-2 provides further, more detailed requirements for the handling of inadvertently discovered human remains. Implementation of Mitigation Measure 4.3-2 would reduce this impact below a level of significance.

**Level of Significance Before Mitigation:** Potentially significant

**Mitigation Measure:** *Implement the following new mitigation measure:*

**Mitigation Measure 4.3-2:** *Inadvertent Discovery of Unmarked Burials. If human remains are uncovered during project activities, the project operator shall immediately halt work within 50 feet of the find, contact the Imperial County Coroner to evaluate the remains, and follow the procedures and protocols set forth in CEQA Guidelines Section 15064.4(e)(1). If the County Coroner determines that the remains are Native American in origin, the Native American Heritage Commission (NAHC) will be notified, in accordance with Health and Safety Code Section 7050.5(c) and Public Resources Code (PRC) 5097.98 (as amended by Assembly Bill 2641). The NAHC shall designate a Most Likely Descendent (MLD) for the remains per PRC Section 5097.98, and designate a Most Likely Descendent (MLD) for the remains per PRC Section 5097.98, with the MDL regarding their recommendations for the disposition of the remains, taking into account the possibility of multiple human remains.*

**Level of Significance After Mitigation:** Less than significant.

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# SECTION 4.4: GEOLOGY, SOILS, AND PALEONTOLOGICAL RESOURCES

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## SECTION 4.4: GEOLOGY, SOILS, AND PALEONTOLOGICAL RESOURCES

This section of the subsequent environmental impact report (SEIR) describes the local and regional geologic and paleontological conditions that occur in the vicinity of the project sites. These conditions are described and evaluated to ensure that project activities would not adversely affect significant paleontological resources.

The information in this section is based primarily on the following technical study prepared to support the 2019 SEIS:

- *Paleontological Technical Study United States Gypsum Company Expansion/Modernization Project*, Paleo Solutions, Inc., May 15, 2018 (see Appendix F, "Paleontological Technical Study")

### 4.4.1 Environmental Setting

#### 4.4.1.1 Geology, Seismicity and Soils

The Quarry and site of proposed Well No. 3 and associated pipeline alignment are in western Imperial County within the Colorado Desert, which lies at relatively low elevations, in some places below sea level. This region is characterized by a series of low-lying mountains associated with the Peninsular Range, opening up to the Imperial Valley and Salton Trough to the east. The geology in the area of the Quarry consists primarily of nearly pure beds of Miocene-age gypsum. The gypsum beds are part of a conformable sequence consisting of Miocene non-marine Split Mountain Formation (also referred to as the Split Mountain Group), Fish Creek Gypsum, and Pliocene marine Imperial Formation (also referred to as the Imperial Group), which are unconformably underlain by Mesozoic intrusive igneous rocks.

There are three major fault zones in the vicinity of the Quarry and site of proposed Well No. 3 and associated pipeline: (1) the San Andreas fault zone to the northeast, which runs along the east side of the Salton Sea; (2) the San Jacinto fault zone which traverses western Imperial County through the Peninsular Ranges and into the Borrego Valley and West Mesa, and (3) the Elsinore fault zone to the southwest. The Coyote Creek fault, which runs through Ocotillo Wells and skirts the Fish Mountains east of the Quarry, is associated with the San Jacinto fault zone. The Quarry is located between the San Jacinto and Elsinore fault zones.

No significant changes in the regional or local geology of the project area have occurred since the 2008 EIR/EIS was prepared.

#### 4.4.1.2 Paleontological Resources

##### Paleontological Sensitivity Rating

Paleontological sensitivity is a qualitative assessment based on the paleontological potential of the stratigraphic units present, the local geology and geomorphology, and other factors relevant to fossil preservation and potential yield.

The BLM assigns geologic units a Potential Fossil Yield Classification (PFYC) class based on the probability and abundance of known vertebrate fossils and scientifically significant invertebrate and plant fossils. The PFYC scheme ranges from very low (PFYC 1) to very high (PFYC 5) depending on the potential fossil yield:

- *PFYC Class 1: Very Low.* Geologic units that are not likely to contain recognizable fossil remains.
  - Units that are igneous or metamorphic, excluding reworked volcanic ash units.
  - Units that are Precambrian in age or older.
- *PFYC Class 2: Low.* Sedimentary geologic units that are not likely to contain vertebrate fossil remains or scientifically significant invertebrate fossils.
  - Vertebrate or significant invertebrate or plant fossils are not present or are very rare.
  - Units that are generally younger than 10,000 years before present.
  - Recent aeolian deposits.
  - Sediments that exhibit significant physical and chemical changes.
- *PFYC Class 3: Moderate.* Fossiliferous sedimentary geologic units where fossil content varies in significance, abundance, and predictable occurrence.
  - Often marine in origin with sporadic known occurrences of vertebrate fossils.
  - Vertebrate fossils and scientifically significant invertebrate or plant fossils known to occur intermittently.
  - Predictability known to be low, but is somewhat higher for common fossils.
- *PFYC Class 4: High.* Geologic units containing a high occurrence of significant fossils. Vertebrate fossils or scientifically significant invertebrate or plant fossils are known to occur and have been documented but may vary in occurrence and predictability. Surface disturbing activities may adversely affect paleontological resources in many cases.
- *PFYC Class 5: Very High.* Highly fossiliferous geologic units that consistently and predictably produce vertebrate fossils or scientifically significant invertebrate or plant fossils, and that are at risk of human-caused adverse impacts or natural degradation.

Unknown fossil potential (PFYC U) is assigned to geologic units that do not have a clear PFYC assignment. Typically, paleontological resource compliance is required for earthwork occurring within PFYC classes 3, 4, 5, or U rock units.

### **Paleontological Sensitivity of the Project Site**

Geologic mapping indicates that the area of the Quarry, Well No. 3, and associated pipeline is underlain by Mesozoic-age or older, undivided intrusive igneous rocks (gr); Miocene-age Split Mountain Group Red Rock Formation (Tsr), and Elephant Trees Formation (Tse); Pliocene- to Miocene-age Fish Creek Gypsum (Tfc); Pliocene- to Miocene-age Imperial Group, Latrania Formation (Til), and undivided (Ti); Pleistocene- to Pliocene-age Palm Spring Group, undivided (QTp); Holocene-age Lake Cahuilla beds (Qlc); Holocene-age alluvial terrace deposits (Qt); and Holocene-age alluvium, undivided (Qa) (Paleo Solutions 2018).

According to the 2018 Paleontological Technical Study (Appendix F), the Miocene-age Split Mountain Group, Red Rock Formation (Tsr) and Elephant Trees Formation (Tse); Pliocene- to Miocene-age Imperial Group, Latrania Formation (Til) and undivided (Ti); Pleistocene- to Pliocene-age Palm Spring Group, undivided (QTp); and Holocene-age Lake Cahuilla beds (Qlc) have PFYC classes of 3, 4, and U indicating moderate to high or unknown potential to contain paleontological resources. The Fish Creek Gypsum (Tfc), alluvial terrace deposits (Qt), alluvium (undivided) (Qa), artificial fill, and previously disturbed sediments have lower PFYC classes and are unlikely to contain significant fossil vertebrate remains (Paleo Solutions 2018). Figures

4.4-1a and 4.4-1b, “Geologic Map with Paleontological Sensitivity,” show the PFYC classes within and surrounding the project site.

#### **4.4.2 Regulatory Setting**

The following sections discuss federal, state, and local regulations pertaining to geology and soils.

##### **4.4.2.1 Federal**

###### **Paleontological Resources Preservation Act**

Paleontological Resources Preservation Act (PRPA) was signed into law on March 30, 2009 (Public Law 111-11, Title VI, Subtitle D; 16 U.S.C. §§ 470aaa—470aaa11). PRPA directs the Department of Agriculture (U.S. Forest Service) and the Department of the Interior (National Park Service, BLM, Bureau of Reclamation, and Fish and Wildlife Service) to implement comprehensive paleontological resource management programs. With passage of the PRPA, Congress officially recognizes the importance of paleontological resources on federal lands by declaring that fossils from federal lands are federal property that must be preserved and protected using scientific principles and expertise. The PRPA provides: 1) uniform definitions for “paleontological resources” and “casual collecting”; 2) uniform minimum requirements for paleontological resource use permit issuance; 3) uniform criminal and civil penalties for illegal sale and transport, and theft and vandalism of fossils from federal lands; and 4) uniform requirements for curation of federal fossils in approved repositories.

##### **4.4.2.2 State**

###### **California Environmental Quality Act**

Paleontological resources are afforded protection by environmental legislation set forth under CEQA. Appendix G (part V) of the CEQA Guidelines provides guidance relative to significant impacts on paleontological resources, indicating that a project will have a significant impact on paleontological resources if it will disturb or destroy a unique paleontological resource or site or unique geologic feature.

###### **California Public Resources Code, Section 5097.5**

This law protects historic, archaeological, and paleontological resources on public lands within California and establishes criminal and civil penalties for violations. Specifically, PRC Section 5097.5 states:

“(a) No person shall knowingly and willfully excavate upon, or remove, destroy, injure or deface any historic or prehistoric ruins, burial grounds, archaeological or vertebrate paleontological site, including fossilized footprints, inscriptions made by human agency, or any other archaeological, paleontological or historical feature, situated on public lands, except with the express permission of the public agency having jurisdiction over such lands. Violation of this section is a misdemeanor. (b) As used in this section, “public lands” means lands owned by, or under the jurisdiction of, the state, or any city, county, district, authority, or public corporation, or any agency thereof.”

###### **California Penal Code, Section 622.5**

California Penal Code, Section 622.5 sets the penalties for damage, destruction, or removal of paleontological resources on private and public land.

### 4.4.2.3 Local

#### Imperial County General Plan

The goals, objectives, and policies in the *Imperial County General Plan* are intended to inform decision makers, the general public, public agencies, and those doing business in the County of the County's position on land use-related issues and to provide guidance for day-to-day decision-making. The Conservation and Open Space Element does not provide any policies or requirements for paleontological resources. However, the following policy regarding unique geologic features is provided:

#### **Conservation and Open Space Element**

**Goal 4:** The County will identify and protect geologic, soil, aggregate, and mineral resources for extraction while minimizing the effect of mining on surrounding land uses and other environmental resources.

**Objective 4.5:** Preserve significant geologic features such as rock outcroppings, the Algodones Dunes, Imperial Sand Dunes, Salton Buttes, and Shell Beds in Yuha Basin.

#### San Diego County General Plan

The goals and policies of the *San Diego County General Plan* provide direction to future growth and development in the county. The following goals and policies from the *San Diego County General Plan Conservation Element* relate to air quality and apply to proposed actions at the Viking Ranch Restoration Site and Old Kane Springs Road Preservation Site, located in unincorporated San Diego County.

#### **Conservation and Open Space Element**

**Goal COS-9:** Educational and Scientific Uses. Paleontological resources and unique geologic features conserved for educational and/or scientific purposes.

**Policy COS-9.1:** Preservation. Require the salvage and preservation of unique paleontological resources when exposed to the elements during excavation or grading activities or other development processes.

**Policy COS-9.2:** Impacts of Development. Require development to minimize impacts to unique geological features from human related destruction, damage, or loss.

### 4.4.3 Significance Thresholds and Analysis Methodology

#### 4.4.3.1 Significance Criteria

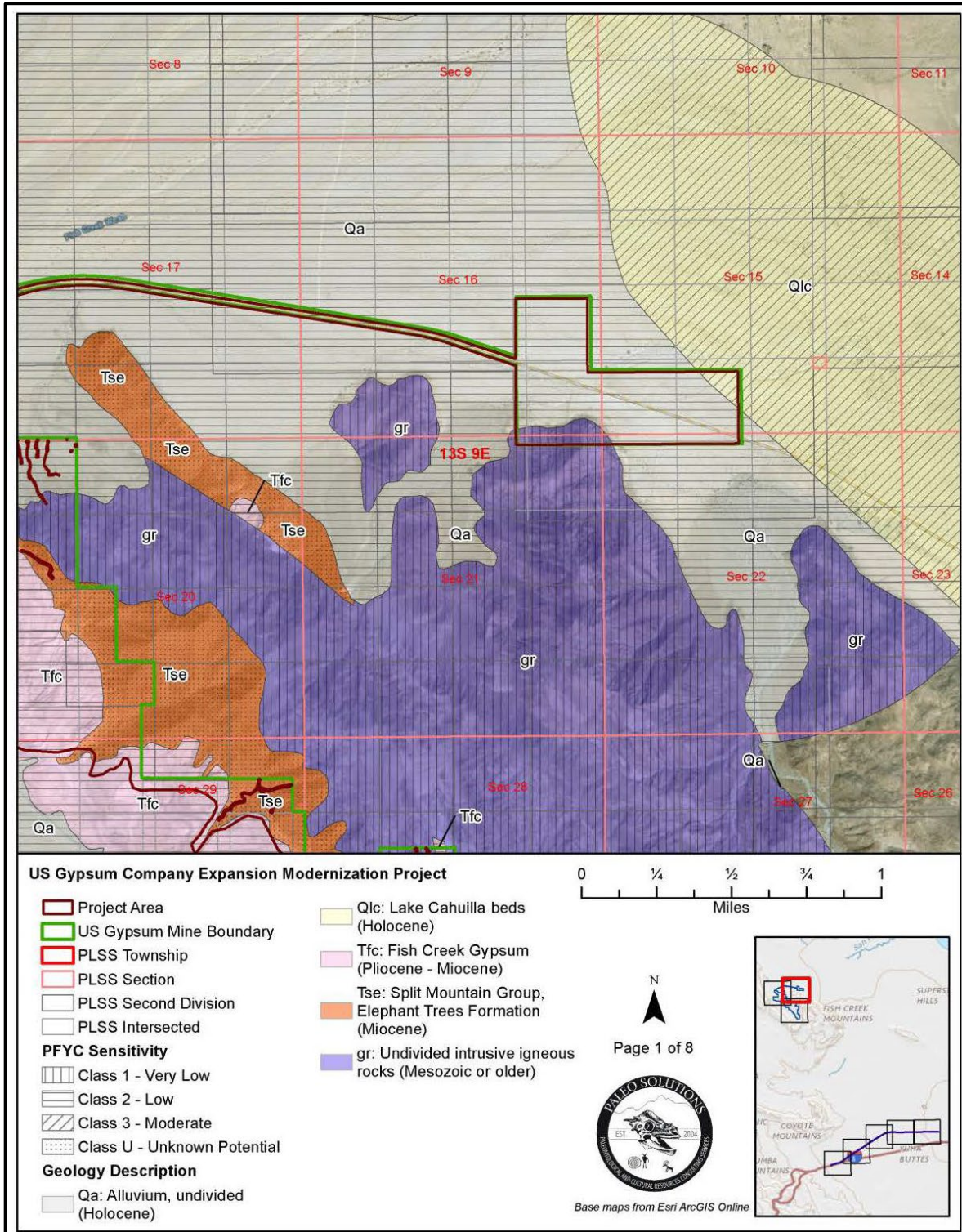
##### 2008 EIR/EIS Significance Criteria

The 2008 EIR/EIS evaluated the project's air quality impacts using the following significance criteria:

The proposed project would have a significant geologic impact if it would result in the following:

- Create a substantial geologic hazard, which could affect workers or other persons in the Project area or substantially damage structures; or
- Substantially restrict the future ability to utilize paleontological resources.



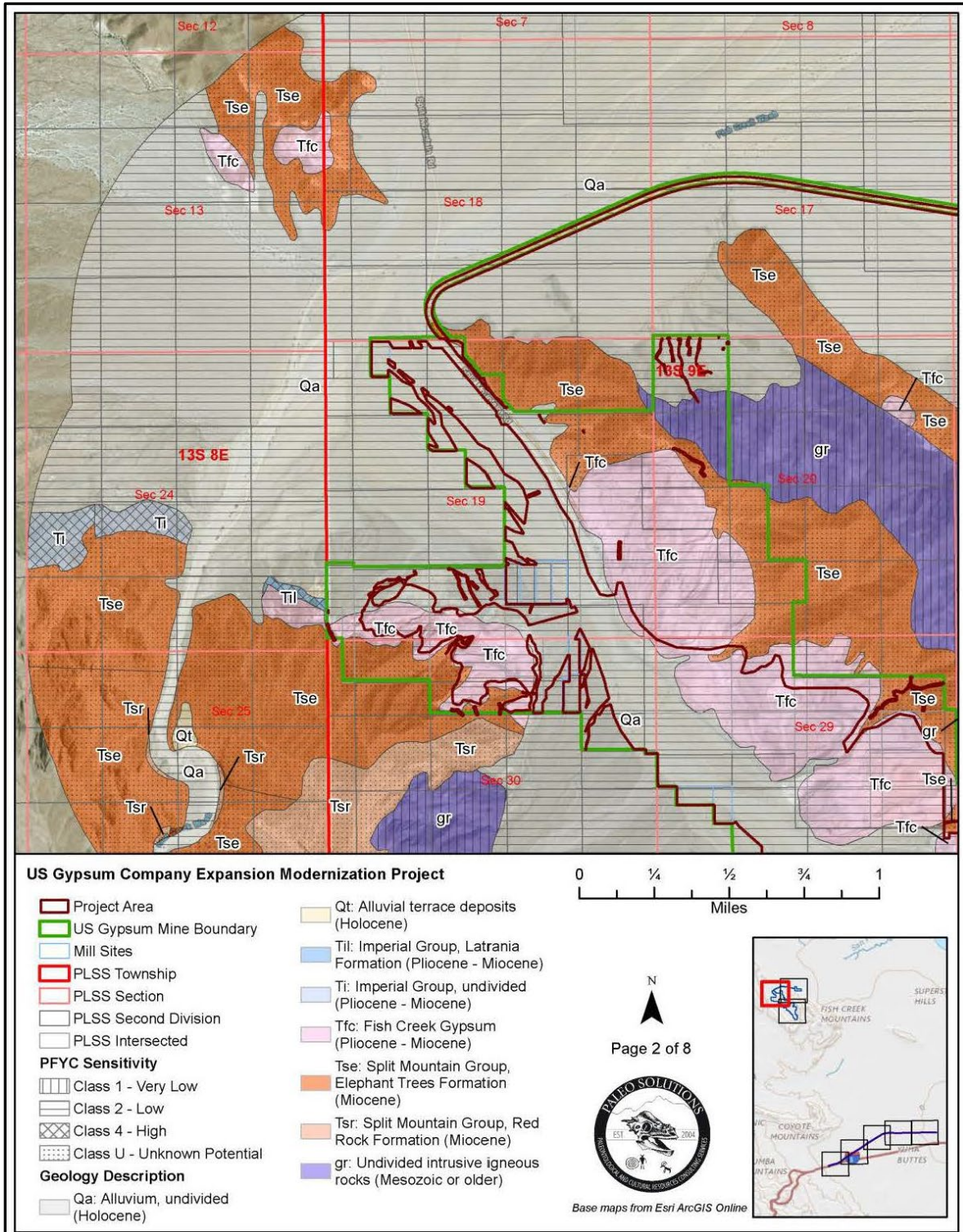


**SOURCE:** PaleoSolutions 2018; Figure A-1

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

**Figure 4.4-1a**  
**Geologic Map with Paleontological Sensitivity**

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SOURCE: PaleoSolutions 2018; Figure A-2

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

**Figure 4.4-1b**  
**Geologic Map with Paleontological Sensitivity**

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### **CEQA Appendix G Significance Criteria**

Based on Appendix G of the CEQA Guidelines, the proposed project would have a significant impact to geology and soils if it would:

- a) directly or indirectly cause potential substantial adverse effects, involving the risk of loss, injury, or death involving;
  - rupture of a known earthquake fault, as delineated on the most recent Alquist-Priolo Earthquake Fault Zone Map issued by the State Geologist for the area or based on other substantial evidence of known fault (Refer to Division of Mines and Geology Special Publication 42),
  - strong seismic ground shaking,
  - seismic-related ground failure, including liquefaction, or
  - landslides;
- b) result in substantial soil erosion or the loss of topsoil;
- c) be located on a geologic unit or soil that is unstable, or that would become unstable as a result of the project, and potentially result in on- or off-site landslide, lateral spreading, subsidence, liquefaction or collapse;
- d) be located on expansive soil, as defined in Table 18-1-B of the Uniform Building Code (1994), creating substantial direct or indirect risks to the life or property;
- e) have soils incapable of adequately supporting the use of septic tanks or alternative wastewater disposal systems where sewers are not available for the disposal of wastewater; or
- f) directly or indirectly destroy a unique paleontological resource or site or unique geological feature.

As discussed in Section 4.4.4.1, “2008 EIR/EIS Impacts Analysis,” below, under “Significance Determination,” the Initial Study (Appendix A-1) determined that the project would not result in any potentially significant impacts for checklist items a through e for both the project site and the off-site mitigation sites. Therefore, these topics are not evaluated further in this SEIR.

#### **4.4.3.2 Analysis Methodology**

The 2008 EIR/EIS concluded that Quarry expansion and development of Well No. 3 would have no potential to encounter or destroy paleontological resources. However, the proposed water pipeline alignment was not evaluated for the presence of paleontological resources at that time. A Paleontological Technical Study prepared by Paleo Solutions dated May 15, 2018, updated the previous work with current data reviews, and included more areas including the pipeline alignment. The report is included as Appendix F to this SEIR and is summarized herein.

Because the report was prepared to support the SEIS, it was prepared according to BLM standards using the BLM system for rating the potential for presence of paleontological resources. As described previously, the BLM system assigns geologic units a Potential Fossil Yield Classification (PFYC) class based on the probability and abundance of fossils ranging from very low (PFYC 1) to very high (PFYC 5). Typically, paleontological resource compliance is required for earthwork occurring within PFYC classes 3, 4, 5, or U rock units. The BLM identified that portions of the project area are underlain by geologic formations assigned to a class of PFYC 3, 4, and U.

#### 4.4.4 Project Impacts and Mitigation Measures

##### 4.4.4.1 2008 EIR/EIS Impact Analysis

The 2008 EIR/EIS concluded that the expanded Quarry would not be subject to substantial risk of deep-seated landslides, rockfalls, or surficial instability based on the characteristics of the gypsum deposit, which is nearly pure, with no weak clay or silt intercalations observed in natural or mined exposures. However, the 2008 EIR/EIS did indicate that reclaimed slopes could be subject to significant slope instability due to the proximity of the Coyote Creek branch of the San Jacinto fault and the relatively long period of exposure expected for reclaimed quarry slopes. To ensure long-term slope stability within the Quarry, the following mitigation measures were included:

**Mitigation Measure 3.2-1a:** *Reclaimed cut slopes in the alluvial materials (map units Qya and Qoa) should be constructed no steeper than 1.75H:1V up to a maximum height of 100 feet.*

**Mitigation Measure 3.2-1b:** *Reclaimed cut slopes in the gypsum (map unit Tfc) should be no steeper than 1H:1V up to a maximum height of approximately 225 feet.*

**Mitigation Measure 3.2-1c:** *Any large, unstable, rounded boulders on reclaimed slopes steeper than approximately 2H:1V should be removed or stabilized prior to the end of reclamation.*

The 2008 EIR/IES did not identify any potentially significant geologic, soil, or seismic impacts that would result from development of proposed Well No. 3 and associated pipeline.

The 2008 EIR/EIS also determined that impacts to paleontological resources from the USG Expansion/Modernization Project would be less than significant and no mitigation was required. This determination was supported by the fact that the formations with higher likelihood of the presence of fossils are located below the formation that is being mined at the Quarry. Thus, proposed activities would not extend into fossil-bearing formations.

##### 4.4.4.2 2019 SEIS Impact Analysis

The 2019 SEIS further evaluated the proposed project under the National Environmental Policy Act (NEPA) based on an updated paleontological technical study and provided the following additional mitigation measure to address potential impacts to paleontological resources at the site of proposed Well No. 3 and along the associated pipeline alignment.

**Mitigation Measure 3.2-3:** *Once the pipeline alignment is located and staked, a pre-construction pedestrian field survey is recommended in order to locate any surficial fossil localities and verify the geologic units underlying the area associated with the Proposed Action. For any areas where potential resources cannot be avoided by the pipeline construction, a Paleontological Resources Monitoring and Mitigation Plan (PRMMP) should be prepared and implemented by a BLM-permitted paleontologist and approved by the BLM and Imperial County.*

#### **4.4.4.3 Substantial Project Changes**

##### **Project Revisions**

The proposed Quarry expansion, and the proposed Well No. 3 and associated pipeline, are substantially in the same location and same configuration as the features that were evaluated in the 2008 EIR/EIS. Therefore, any minor revisions would not create a new or increase a significant impact related to geology, soils, or paleontological resources. However, the restoration of the Viking Ranch site and preservation of the Old Kane Springs Road site are proposed in response to mitigation required by the 2019 SEIS, and these are new actions under the proposed project.

##### **Changed Circumstances**

The primary change in circumstance related to geology, soils, and paleontological resources was that the Paleontological Resources Preservation Act (PRPA) was signed into law on March 30, 2009 (Public Law 111-11, Title VI, Subtitle D; 16 U.S.C. §§ 470aaa—470aaa11). The PRPA provides: 1) uniform definitions for “paleontological resources” and “casual collecting”; 2) uniform minimum requirements for paleontological resource use permit issuance; 3) uniform criminal and civil penalties for illegal sale and transport, and theft and vandalism of fossils from federal lands; and 4) uniform requirements for curation of federal fossils in approved repositories.

##### **New Information**

There is no new information related to the potential for unstable geologic or soils conditions to occur at the Quarry. The Quarry is inspected and monitored annually in accordance with Imperial County and Division of Mine Reclamation requirements. Slopes are evaluated for gross and surficial stability under both static and seismic conditions. In addition to conducting quantitative analyses, the slopes are visually evaluated by a qualified geologist for erosion, over-excavation, and signs of adverse geologic conditions. The annual inspection reports were reviewed as part of the 2019 SEIS. No change in conditions that could alter the findings of the 2008 EIR/EIS were noted.

As described previously, a Paleontological Technical Study (Appendix F) was completed as part of the 2019 SEIS (Paleo Solutions, Inc. 2018) which identifies geologic formations underlying the Quarry, well site, and associated pipeline alignment which have high potential for containing paleontological resources. Based on the results of the Paleontological Technical Study, the 2019 SEIS recommended implementation of Mitigation Measure 3.2-3 to address potential impacts to paleontological resources at Well No. 3 and the associated pipeline alignment.

##### **Significance Determination**

The Initial Study prepared for the project (Appendix A-1) determined that with respect to the Quarry expansion and development of Well No. 3 and associated pipeline, each of the geology, soils, and seismic impacts (checklist questions [a] through [e]) would be below the applicable significance thresholds and that no additional analysis of this portion of the proposed project is required. This was based on the finding that the proposed project would not result in a new significant geology or soils impact or a substantial increase in the severity of a previously identified significant impact caused by substantial changes proposed in the project, substantial changes with respect to project circumstances, or new information of substantial importance that was not known and could not have been known with the exercise of reasonable diligence at the time the 2008 EIR/EIS was adopted.

As preservation of the Old Kane Springs Road site and restoration of the Viking Ranch site are newly proposed actions, the Initial Study (Appendix A-1) provided further evaluation of the potential geologic, seismic, and soils impacts (checklist questions [a] through [e]) at these sites and determined each to be below the applicable significance threshold. This was based on the fact that no ground disturbing activities are proposed at the Old Kane Springs Road site and proposed activities at the Viking Ranch site would be limited to grading, would be subject to existing regulations ensuring worker safety and minimizing soil erosion, and would not expose anyone to geologic or seismic hazards as no development is proposed. These issues are not evaluated further in this SEIR.

Regarding paleontological resources (checklist question [f]), new information available in the 2019 SEIS indicates the potential for paleontological resources to be encountered at the Well No. 3 site and along the associated pipeline alignment. In addition, potential disturbance of paleontological resources at the Viking Ranch site has not previously been evaluated. No ground disturbing activities are proposed at the Old Kane Springs Road Preservation Site and there would be no potential to destroy paleontological resources or unique geologic features at that site.

Based on project revisions, changed circumstances, and new information that may create a new or increased significant impact, the County has amplified and augmented the analysis contained in the 2008 EIR/EIS pertaining to paleontological resources. This evaluation is provided in the following impact analysis.

#### **4.4.4.4 Subsequent Environmental Analysis**

##### **Impact 4.4-1: Directly or Indirectly Destroy a Unique Paleontological Resource or Site or Unique Geological Feature**

According to the 2008 EIR/EIS, the geologic units at the Quarry are not expected to contain significant paleontological resources due to their nature and origin. Paleontological surveys were recommended in the areas of the proposed Well No. 3 and associated pipeline alignment, but these surveys were not performed prior to certification of the 2008 EIR/EIS.

The Paleontological Technical Study (Paleo Solutions 2018; Appendix F) prepared for the 2019 SEIS determined that the Quarry, well site, and proposed pipeline alignment are mostly underlain by geologic units with very low or low paleontological potential (PFYC classes 1 and 2). Areas of high paleontological potential (PFYC classes 3 and 4) lie within a mile of the west and southwest portions of the Quarry boundary. However, project ground disturbing activities at the Quarry operation would only be associated with the mining of gypsum and would not extend into the boulder conglomeration formation. Therefore, the proposed project would not be expected to affect any significant paleontological resources within the Quarry.

One segment of the proposed pipeline alignment intersects with mapped higher-potential deposits. Excavations, grading, and other earthmoving activities can result in significant adverse effects to paleontological resources in geologic units determined to have a moderate to high potential for fossil yield. Consistent with the recommendations of the 2018 technical study, Mitigation Measure 4.4-1 would minimize this potential impact by requiring completion of pre-construction paleontological surveys, by requiring preparation of a plan for monitoring and worker training, and in the event of a discovery, for the implementation of recovery, analysis, curation, and notification protocols.



The Viking Ranch Restoration Site has not been evaluated for paleontological resources sensitivity. The site has been subject to extensive ground disturbance through its use as an orchard resulting in a low potential for presence of significant undiscovered paleontological resources. Regardless, implementation of Mitigation Measure 4.4-1 requiring a pre-construction paleontological survey and resource management plan would reduce this potential impact to a less than significant level.

No ground disturbing activities are proposed at the Old Kane Springs Road Preservation Site and there would be no potential to destroy paleontological resources at that site.

**Level of Significance Before Mitigation:** Potentially significant.

**Mitigation Measures:** *Implement the following newly proposed mitigation measure:*

**Mitigation Measure 4.4-1:** *Pre-construction pedestrian field surveys shall be conducted throughout the proposed areas of disturbance for the Well No. 3 site, the final pipeline alignment, and the Viking Ranch site to locate any surficial fossil localities and verify the underlying geologic units. For any areas where potential resources cannot be avoided by proposed construction activities, a Paleontological Resources Monitoring and Mitigation Plan (PRMMP) shall be prepared and implemented by a BLM-permitted paleontologist and approved by the BLM and Imperial County.*

**Level of Significance After Mitigation:** Less than significant.

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# SECTION 4.5: GREENHOUSE GAS EMISSIONS

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## SECTION 4.5: GREENHOUSE GAS EMISSIONS

This section of the subsequent environmental impact report (SEIR) documents potential impacts associated with greenhouse gas (GHG) emissions and plans for reducing GHG emissions that would occur as a result of the project.

The information in this section is based primarily on the *Air Quality Modeling Analysis US Gypsum Company—Southwest Plant* (Trinity Consultants 1999) (see Appendix C-1, “Air Quality Modeling Analysis”), the analysis provided in the 2019 SEIS, and other publicly available sources related to air quality.

### 4.5.1 Environmental Setting

This section discusses GHGs and climate change issues to provide a context for the analysis of project impacts associated with GHG emissions. It also provides a discussion of the actions and phenomena that contribute to climate change and puts into context global, national, and state emissions of GHGs. The term “climate change” is often used interchangeably with the term “global warming;” however, “climate change” is the preferred term because it helps convey that there are other changes in addition to rising temperatures (NAS 2005).

#### 4.5.1.1 Climate Change Background

##### The Greenhouse Effect and Greenhouse Gases

GHGs trap heat in the atmosphere. Principal GHGs include carbon dioxide (CO<sub>2</sub>), methane (CH<sub>4</sub>), nitrous oxide (N<sub>2</sub>O), O<sub>3</sub>, and water vapor (H<sub>2</sub>O). Some GHGs, such as CO<sub>2</sub>, CH<sub>4</sub>, and N<sub>2</sub>O, occur naturally and are emitted into the atmosphere through natural processes and human activities. Of these gases, CO<sub>2</sub> and CH<sub>4</sub> are emitted in the greatest quantities from human activities. Man-made GHGs, which have a much greater heat-absorption potential than CO<sub>2</sub>, include fluorinated gases, such as hydrofluorocarbons (HFCs), perfluorocarbons (PFCs), sulfur hexafluoride (SF<sub>6</sub>), and nitrogen trifluoride (NF<sub>3</sub>), are associated with certain industrial products and processes. The major GHGs emitted by human activities remain in the atmosphere for periods ranging from decades to centuries; therefore, it is expected that atmospheric concentrations of GHGs will continue to rise over the next few decades (EPA 2020d).

Human activity has been increasing the concentration of GHGs in the atmosphere (mostly carbon dioxide from combustion of coal, oil, and gas, and a few other trace gases). Human activities are estimated to have caused approximately 1.0°C of global warming above pre-industrial levels, with a likely range of 0.8°C to 1.2°C. Global warming is likely to reach 1.5°C between 2030 and 2052 if it continues to increase at the current rate.

A warming trend from anthropogenic emissions, or human activity, from the pre-industrial period to the present is predicted to persist for centuries to millennia and continue to cause further long-term changes in the climate system, such as sea level rise, with associated impacts. Climate models project robust differences in regional climate characteristics between present-day and global warming of 1.5°C, and between 1.5°C and 2°C. These differences include increases in mean temperature in most land and ocean regions, hot extremes in most inhabited regions, heavy precipitation in several regions, and the probability of drought and precipitation deficits in some regions (IPCC 2018).

The effect each GHG has on climate change is measured as a combination of the volume or mass of its emissions, plus the potential of a gas or aerosol to trap heat in the atmosphere, known as its global warming potential (GWP), and is expressed as a function of how much warming would be caused by the same mass of CO<sub>2</sub>. Thus, GHG emissions are typically measured in terms of pounds or tons of “carbon dioxide equivalent” (CO<sub>2</sub>e).

**Contributions to Greenhouse Gas Emissions**

***Global***

Anthropogenic GHG emissions worldwide in 2010 totaled approximately 44,542 million metric tons of carbon dioxide equivalent (MMT<sub>CO<sub>2</sub>e</sub>) (CAIT 2014). The carbon dioxide equivalent for a gas is derived by multiplying the tons of the gas by the associated GWP, such that MMT<sub>CO<sub>2</sub>e</sub> = (million) metric tons of a GHG) x (GWP of the GHG). For example, the GWP for methane is 21. This means that emissions of 1 million metric tons of methane are equivalent to emissions of 21 million metric tons of CO<sub>2</sub>. Six countries—China, the U.S., the Russian Federation, India, Japan, and Brazil—and the European Community accounted for approximately 66 percent of the total global emissions, approximately 28,943 MMT<sub>CO<sub>2</sub>e</sub> (CAIT 2014). Anthropogenic GHG emissions worldwide in 2011 totaled approximately 43,816 MMT<sub>CO<sub>2</sub>e</sub>.

***United States***

In 2012, the United States produced 6,676 million metric tons (MMT) of CO<sub>2</sub> (EPA 2020b). The primary GHG emitted by human activities in the United States was CO<sub>2</sub>, representing approximately 81 percent of total GHG emissions. The largest source of CO<sub>2</sub>, and of overall GHG emissions, was fossil-fuel combustion, which accounted for approximately 93 percent of the CO<sub>2</sub> emissions. Since 1990, gross U.S. greenhouse gas emissions have increased by 3.7 percent. From year to year, emissions can rise and fall due to changes in the economy, the price of fuel, and other factors. In 2018, U.S. greenhouse gas emissions increased compared to 2017 levels. The increase in CO<sub>2</sub> emissions from fossil fuel combustion was a result of multiple factors, including increased energy use due to greater heating and cooling needs due to a colder winter and hotter summer in 2018 compared to 2017 (EPA 2020d).

***State of California***

According to the 2019 GHG inventory data compiled by California Air Resources Board (CARB) for the California Greenhouse Gas Inventory for 2000—2017, California emitted 424 MMT<sub>CO<sub>2</sub>e</sub> of GHGs, including emission resulting from out-of-state electrical generation (CARB 2019). The primary contributors to GHG emissions in California are transportation, industry, electric power production from both in-state and out-of-state sources, agriculture, and other sources, which include commercial and residential activities. These primary contributors to California’s GHG emissions and their relative contributions in 2017 are presented in Table 4.5-1, “GHG Sources in California.”

**Table 4.5-1  
 GHG Sources in California**

Source	Percent of Total <sup>1</sup>
Agriculture	7.6%
Commercial Uses	3.6%
Electricity Generation	14.7% <sup>2</sup>
Industrial Uses	21.1%
Recycling and Waste	2.1%

Source	Percent of Total <sup>1</sup>
Residential Uses	6.1%
Transportation	40.1%
High GWP Substances	4.7%
<b>Total<sup>3</sup></b>	<b>100%</b>

Source: CARB 2019

**Notes:**

1. Percentage of total has been rounded.
2. Includes emissions associated with imported electricity, which account for 44.07 MMT CO<sub>2</sub>e annually.
3. Totals may not sum due to rounding.

### Potential Effects of Human Activity on Climate Change

Globally, climate change has the potential to impact numerous environmental resources though uncertain impacts related to future air temperatures and precipitation patterns. Scientific modeling predicts that continued emissions of GHGs at or above current rates would induce more extreme climate changes during the 21<sup>st</sup> century than were observed during the 20<sup>th</sup> century. Estimated global warming from human activity is currently increasing at 0.2°C (likely between 0.1°C and 0.3°C) per decade due to past and ongoing emissions (IPCC 2018).

The 2014 *Safeguarding California: Reducing Climate Risk* report prepared by the California Natural Resources Agency (CNRA) identified anticipated impacts to California due to climate change through extensive modeling efforts. The Intergovernmental Panel on Climate Change’s Working Group II Report, *Climate Change 2007: Impacts, Adaptation and Vulnerability*, also describes anticipated impacts on a global scale. Collectively, the two reports indicate general climate changes in California may include the following events:

- Increasing evaporation;
- Rearrangement of ecosystems as species and ecosystems shift northward and to higher elevations;
- Increased frequency, duration, and intensity of conditions conducive to air pollution formation (particularly ozone);
- Reduced precipitation, changes to precipitation and runoff patterns, reduced snowfall (precipitation occurring as rain instead of snow), earlier snowmelt, decreased snowpack, and increased agricultural demand for water;
- Increased experiences of heat waves;
- Increased growing season and increased growth rates of weeds, insect pests and pathogens;
- Inundation by sea level rise, and exacerbated shoreline erosion; and
- Increased incidents and severity of wildfire events and expansion of the range and increased frequency of pest outbreaks (CNRA 2014 and IPCC 2007).

The changes described above are based on the results of several models prepared under different climatic scenarios; therefore, discrepancies may occur between projections and interpretations.

#### 4.5.2 Regulatory Setting

Climate change has recently become widely recognized as a threat to the global climate, economy, and population. As a result, the climate change regulatory setting—at the federal, state and local level—is

complex and evolving. This section identifies key legislation, executive orders, and seminal court cases related to climate change that are germane to the project's GHG emissions.

#### **4.5.2.1 Federal**

In 2002, President George W. Bush set a national policy goal of reducing the GHG emission intensity (tons of GHG emissions per million dollars of gross domestic product) of the U.S. economy by 18% by 2012. The goal did not establish any binding reduction mandates. Rather, the United States Environmental Protection Agency (EPA) began to administer a variety of voluntary programs and partnerships with GHG emitters in which the EPA partners with industries that produce and utilize synthetic gases to reduce emissions of particularly potent GHGs.

The Bush Administration's approach to addressing climate change was challenged in *Massachusetts et al. v. Environmental Protection Agency*, 549 U.S. 497 (2007). In this decision, the U.S. Supreme Court held that the EPA was authorized by the Clean Air Act to regulate CO<sub>2</sub> emissions from new motor vehicles. The Court did not mandate that the EPA enact regulations to reduce GHG emissions but found that the only instances in which the EPA could avoid taking action were if it found that GHGs do not contribute to climate change or if it offered a "reasonable explanation" for not determining that GHGs contribute to climate change.

On December 7, 2009, the EPA issued an endangerment finding under the Clean Air Act, concluding that GHGs threaten the public health and welfare of current and future generations and that motor vehicles contribute to greenhouse gas pollution. These findings provide the basis for adopting new national regulations to mandate GHG emission reductions under the federal Clean Air Act.

The following four sections summarize EPA's recent regulatory activities with respect to various types of GHG sources.

#### **Stationary Sources**

##### ***Mandatory Greenhouse Gas Reporting Rule***

Congress passed the Consolidated Appropriations Act of 2008 (HR 2764) in December 2007, which includes provisions requiring the establishment of mandatory GHG reporting requirements. On September 22, 2009, EPA issued a final rule to require reporting of GHG emissions from all sectors of the United States economy. Fossil fuel and industrial GHG suppliers, motor vehicle and engine manufacturers, and facilities that emit 25,000 metric tons or more of CO<sub>2e</sub> per year are required to report GHG emissions data to EPA annually. The first annual reports for the largest emitting facilities, covering calendar year 2010, were submitted to EPA in 2011. This program covers approximately 85 percent of the nation's GHG emissions and applies to roughly 10,000 facilities. USEPA's reporting system provides a better understanding of GHG sources and will guide development of the best possible policies and programs to reduce emissions. The data also allows the reporters to track their own emissions, compare them to similar facilities, and aid in identifying cost-effective methods to reduce emissions in the future.

##### ***Prevention of Significant Deterioration and Title V Greenhouse Gas Tailoring Rule***

The Clean Air Act established the Prevention of Significant Deterioration (PSD) and Title V programs, which apply to stationary sources that emit certain levels of regulated air pollutants (generally those pollutants for which USEPA has established ambient air quality standards and their precursors or has established emission standards). The PSD applicability thresholds are up to 250 tons per year (tpy) of an attainment pollutant, while the Title V applicability thresholds are up to 100 tpy of a regulated air



pollutant. On June 3, 2010, EPA published a final rule that tailors the applicability criteria that determine whether stationary sources and modification projects become subject to permitting requirements for GHG emissions under the PSD and Title V programs of the Clean Air Act (tailoring rule). Under the tailoring rule, only the largest sources of GHGs (i.e., those responsible for 70 percent of the GHG pollution from stationary sources) would be subject to these GHG permitting requirements.

In 2014, the U.S. Supreme Court issued its decision in *Utility Air Regulatory Group v. EPA* (No. 12-1146), finding that the U.S. EPA may not treat GHGs as an air pollutant for purposes of determining whether a source is a major source required to obtain a permit pursuant to the “Clean Air Act’s Prevention of Significant Deterioration” or “Title V” operating permit programs. The Court also held that PSD permits that are otherwise required (based on emissions of other pollutants) may continue to require limitations on GHG emissions based on the application of Best Available Control Technology (BACT). The U.S. EPA’s Greenhouse Gas Reporting Program requires facilities that emit 25,000 MTCO<sub>2e</sub> or more of GHG to report their GHG emissions to the U.S. EPA to inform future policy decisionmakers (EPA 2020f).

## Mobile Sources

### ***EPA and NHTSA Joint Rulemaking for Vehicle Standards***

In response to the Massachusetts v. EPA U.S. Supreme Court ruling discussed above, the Bush Administration issued an Executive Order on May 14, 2007, directing the EPA, the Department of Transportation (DOT), and the Department of Energy (DOE) to establish regulations that reduce GHG emissions from motor vehicles, non-road vehicles, and non-road engines by 2008. On December 19, 2007, the Energy Independence and Security Act of 2007 (EISA) was signed into law. EISA reinforces the energy reduction goals for federal agencies put forth in Executive Order 13423, as well as introduces more aggressive requirements. The three key provisions enacted are the Corporate Average Fuel Economy Standards, the Renewable Fuel Standard (RFS), and the appliance/lighting efficiency standards. The law includes an increased Corporate Average Fuel Economy (CAFE) standard of 35 miles per gallon for the combined fleet of cars and light trucks by model year 2020. EPA (2020e). On March 31, 2020, the National Highway and Traffic Safety Administration (NHTSA) and EPA finalized CAFE and carbon dioxide emissions standards for model years 2021-2026 (NHSTA 2020).

On June 30, 2009, the EPA granted a waiver for California for its greenhouse gas emission standards for motor vehicles. In August 2016, the USEPA and the NHTSA adopted Phase 2 of the Heavy-Duty Vehicle National Program. Phase 2 aims to set performance-based standards that would be met through wider deployment of existing and advanced technologies. For diesel engines, the proposed standards began for model year 2018 engines and phased in through 2027. Phase 2 is expected to reduce GHG emissions by an additional 10 percent.

However, EPA withdrew the waiver on September 19, 2019, and announced “The Safer Affordable Fuel-Efficient (SAFE) Vehicles Rule Part One: One National Program.” NHTSA also proposed regulatory text implementing its statutory authority to set nationally applicable fuel economy standards that made explicit that California’s programs would also be preempted under NHTSA’s authorities. The SAFE Vehicles Rule sets fuel economy and carbon dioxide standards that increase 1.5% in stringency each year from model years 2021 through 2026. These standards apply to both passenger cars and light trucks (NHSTA 2020). However, California and twenty-three other states and the Cities of Los Angeles and New York have challenged the legality of the SAFE program in federal court.

### **Additional GHG Rules and Policies**

In addition to the rules and regulations developed with respect to stationary and mobile sources, discussed above, other federal developments have aimed to reduce GHGs from other sources, including land use activities.

#### ***Energy Independence and Security Act***

On December 19, 2007, President Bush signed the Energy Independence and Security Act of 2007 (EISA). Among other key measures, the Act would do the following, which would aid in the reduction of national GHG emissions:

1. Increase the supply of alternative fuel sources by setting a mandatory RFS requiring fuel producers to use at least 36 billion gallons of biofuel in 2022.
2. Set a target of 35 miles per gallon for the combined fleet of cars and light trucks by Model Year 2020; directs National Highway Traffic Safety Administration to establish a fuel economy program for medium- and heavy-duty trucks and create a separate fuel economy standard for work trucks.
3. Prescribe or revise standards affecting regional efficiency for heating and cooling products, procedures for new or amended standards, energy conservation, energy efficiency labeling for consumer electronic products, residential boiler efficiency, electric motor efficiency, and home appliances.

Additional provisions of the EISA address energy savings in government and public institutions, promoting research for alternative energy, additional research in carbon capture, international energy programs, and the creation of “green jobs.”

#### ***Partnership for Sustainable Communities***

On June 16, 2009, the DOT, US Department of Housing and Urban Development, and USEPA announced the creation of the Partnership for Sustainable Communities (Partnership). The Partnership was formed to help improve access to affordable housing and transportation choices, and to lower transportation costs while protecting the environment. In order to achieve these goals, the Partnership agencies have and will continue to incorporate the following six livability principles into federal funding programs, policies and legislative proposals:

- Provide more transportation choices.
- Promote equitable, affordable housing.
- Enhance economic competitiveness.
- Support existing communities.
- Coordinate and leverage federal policies and investment.
- Value communities and neighborhoods.

Since 2009, the Partnership awarded more than \$4 billion in grants to support livability investments, provided recommendations for the sustainable siting of federal facilities, and participated in various forums to encourage sustainable housing and transportation strategies. Going forward, the Partnership plans to continue to work with existing grantees to encourage economic growth and implementation of livability principles and leverage off of these efforts to provide additional communities with lessons

learned from these experiences, as well as improving the federal government's ability to provide additional communities with more streamlined access to Partnership programs (EPA 2014).

### ***CEQ NEPA Guidelines on GHGs***

On June 26, 2019, the Council on Environmental Quality (CEQ) published draft guidance on how National Environmental Policy Act (NEPA) analysis and documentation should address greenhouse gas (GHG) emissions and climate change. It recommends agencies attempt to quantify a proposed action's projected direct and reasonably foreseeable indirect GHG emissions when the amount of those emissions is substantial enough to warrant quantification, and when it is practicable to quantify them using available data and GHG quantification tools. When an agency determines that the tools, methods, or data inputs necessary to quantify a proposed action's GHG emissions are not reasonably available, or it otherwise would not be practicable, the agency should include a qualitative analysis and explain its basis for determining that quantification is not warranted.

The draft guidance provides reporting tools and instructions on how to assess the effects of climate change. The draft guidance does not apply to land and resource management actions, nor does it propose to regulate greenhouse gases. The CEQ extended the comment period on the draft guidance, which was scheduled to close on July 26, 2019, for 31 days until August 26, 2019. Although CEQ has not yet issued final guidance, various NEPA documents are beginning to incorporate the approach recommended in the draft guidance (CEQ 2019).

#### **4.5.2.2 State**

California has adopted various administrative initiatives and enacted legislation relating to climate change, much of which sets aggressive goals for GHG emissions reductions within the state. However, none of this legislation provides definitive direction regarding the treatment of climate change in environmental review documents prepared under CEQA. In particular, the amendments to the CEQA Guidelines do not require or suggest specific methodologies for performing an assessment or thresholds of significance, and do not specify greenhouse gas reduction mitigation measures. Instead, the CEQA amendments continue to rely on lead agencies to choose methodologies and make significant determinations based on substantial evidence, as discussed in further detail below. Consequently, no State agency has promulgated binding regulations for analyzing GHG emissions, determining their significance, or mitigating any significant effects in CEQA documents.

The discussion below provides a brief overview of CARB and Office of Planning and Research (OPR) documents and of the primary legislation that relates to climate change that may affect the emissions associated with the proposed project. It begins with an overview of the primary regulatory acts that have driven GHG regulation in California, which underlie many of the GHG rules and regulations that have been developed.

#### **Executive Order S-3-05 (Statewide GHG Targets)**

California Executive Order S-03-05 (June 1, 2005) mandates a reduction of GHG emissions to 2000 levels by 2010, to 1990 levels by 2020, and to 80% below 1990 levels by 2050. Although the 2020 target is the core of AB 32, and has effectively been incorporated into AB 32, the 2050 target remains the goal of the Executive Order only.

**Assembly Bill 32 and Senate Bill 32 (Statewide GHG Reductions)**

The California Global Warming Solutions Act of 2006, Assembly Bill (AB) 32, was signed into law in September 2006 after considerable study and expert testimony before the Legislature. The law instructs CARB to develop and enforce regulations for the reporting and verifying of statewide GHG emissions. The Act directed CARB to set a GHG emission limit of approximately 28.5% below “business-as-usual” predictions of year 2020 GHG emissions, based on 1990 levels, to be achieved by December 31, 2020. The bill set a timeline for adopting a scoping plan for achieving GHG reductions in a technologically and economically feasible manner and required CARB to adopt rules and regulations in an open public process to achieve the maximum technologically feasible and cost-effective GHG reductions. SB 32 and Executive Order B-30-15 requires the state to reduce emissions by 40 percent below 1990 levels by 2030.

On December 11, 2008, CARB adopted the initial Scoping Plan to achieve the goals of AB 32. The Scoping Plan established an overall framework for the measures that would be adopted to reduce California’s GHG emissions. CARB determined that achieving the 1990 emission level would require a reduction of GHG emissions of approximately 29% below what would otherwise occur in 2020 in the absence of new laws and regulations (referred to as “business as usual”). The 2008 Scoping Plan evaluated opportunities for sector-specific reductions, integrated all CARB and Climate Action Team early actions and additional GHG reduction measures by both entities, identified additional measures to be pursued as regulations, and outlined the role of a cap-and-trade program. In a report prepared on September 23, 2010, CARB indicated 40 percent of the reduction measures identified in the Scoping Plan had been secured. Although the cap-and-trade program began on January 1, 2012 (after CARB completed a series of activities dealing with the registration process, compliance cycle, and tracking system), covered entities did not have an emissions obligation until 2013.

In July 2011, CARB revised its “business as usual” GHG emission estimate for 2020, in order to account for the recent economic downturn in its emission projections. The estimate presented in the scoping plan (596 million metric tons CO<sub>2</sub>e) was based on pre-recession, 2007 data from the Integrated Energy Policy Report. CARB also updated the projected “business as usual” 2020 GHG emissions to 545 million metric tonnes CO<sub>2</sub>e at this time. The Scoping Plan was reapproved in August 2011 with the program’s environmental documentation.

On February 10, 2014, CARB released the public draft of the “First Update to the Scoping Plan.” “The First Update” built upon the 2008 Scoping Plan with new strategies and recommendations and identified opportunities to leverage existing and new funds to further drive GHG emission reductions through strategic planning and targeted low carbon investments. “The First Update” defined CARB’s climate change priorities over the next five years and set the groundwork to reach post-2020 goals set forth in Executive Orders S-3-05 and B-16-12. It also highlighted California’s progress toward meeting the 2020 GHG emission reduction goals defined in the 2008 Scoping Plan. “The First Update” evaluated how to align the State’s long-term GHG reduction strategies with other State policy priorities for water, waste, natural resources, clean energy, transportation, and land use. “The First Update” to the Scoping Plan was approved by the Board on May 22, 2014 (CARB 2020).

The second update to the scoping plan, the *2017 Climate Change Scoping Plan* update (CARB 2017), was adopted by CARB in December 2017. The primary objective for the *2017 Climate Change Scoping Plan* is to identify the measures required to achieve the mid-term GHG reduction target for 2030 (i.e., reduce emissions by 40 percent below 1990 levels by 2030) established under Executive Order B-30-15 and SB 32. The 2017 Climate Change Scoping Plan identifies an increased need for coordination among State, Regional, and local

governments to realize the potential for GHG emissions reductions that can be gained from local land use decisions. It notes that emissions reductions targets set by more than one hundred local jurisdictions in the State could result in emissions reductions of up to 45 MMTCO<sub>2</sub>e and 83 MMTCO<sub>2</sub>e by 2020 and 2050, respectively. To achieve these goals, the 2017 Scoping Plan Update includes a recommended plan-level efficiency threshold of six metric tons or less per capita by 2030 and no more than two metric tons by 2050. The major elements of the 2017 Climate Change Scoping Plan framework include:

- Implementing and/or increasing the standards of the Mobile Source Strategy, which include increasing zero emission vehicle (ZEV) buses and trucks;
- Low Carbon Fuel Standard (LCFS), with an increased stringency (18 percent by 2030);
- Implementation of SB 350, which expands the Renewable Portfolio Standard (RPS) to 50 percent and doubles energy efficiency savings by 2030;
- California Sustainable Freight Action Plan, which improves freight system efficiency, utilizes near-zero emissions technology, and deployment of ZEV trucks;
- Implementing the proposed Short-Lived Climate Pollutant Strategy, which focuses on reducing CH<sub>4</sub> (methane) and hydrocarbon emissions by 40 percent and anthropogenic black carbon emissions by 50 percent by year 2030;
- Continued implementation of SB 375;
- Post-2020 Cap-and-Trade Program that includes declining caps;
- 20 percent reduction in GHG emissions from refineries by 2030; and
- Development of a Natural and Working Lands Action Plan to secure California's land base as a net carbon sink (CARB 2017).

### **Energy Conservation Standards**

The Energy Efficiency Standards for Residential and Nonresidential Buildings (Title 24, of the California Code of Regulations [CCR], known as "Title 24") were established in 1978 in response to a legislative mandate to reduce California's energy consumption. Since that time, Title 24 has undergone several revisions. Although not originally intended to reduce GHG emissions, increased energy efficiency, and reduced consumption of electricity, natural gas, and other fuels would result in fewer GHG emissions from residential and nonresidential buildings subject to the standard. The standards are updated periodically to allow for the consideration and inclusion of new energy efficiency technologies and methods.

On July 17, 2008, the California Building Standards Commission adopted the nation's first green building standards, referred to as "CALGreen." The California Green Building Standards Code (Title 24, proposed Part 11) was adopted as part of the California Building Standards Code (24 CCR). Part 11 which adopts certain mandatory standards for residential and nonresidential development and imposes a number of requirements on California buildings, including those with respect to planning and design for sustainable site development, energy efficiency (in excess of the California Energy Code requirements), water conservation, material conservation, and indoor environmental quality. The California Green Building Standards Code also contains a variety of voluntary measures, which local governments can choose to require, and which would enable buildings to qualify for special recognition. In part, the purpose of the California Green Building Code is to reduce greenhouse gas emissions from buildings.

CALGreen contains both mandatory and voluntary measures. For non-residential land uses there are 39 mandatory measures including, but not limited to exterior light pollution reduction, wastewater reduction by 20 percent, and commissioning (i.e., bringing into operation and ensuring quality) of projects over 10,000 square feet. Two tiers of voluntary measures apply to non-residential land uses, for a total of 36 additional elective measures.

California’s Building Energy Efficiency Standards are updated on an approximately three-year cycle. The 2019 standards, which were adopted May 9, 2018, and went into effect on January 1, 2020, improve upon existing standards, focusing on three key areas: proposing new requirements for installation of solar photovoltaics for newly constructed low-rise residential buildings; updating current ventilation and Indoor Air Quality (IAQ) requirements; and extending Title 24 Part 6 to apply to healthcare facilities. The 2019 standards also propose several smaller improvements in energy efficiency, such as lighting controls and improvements for water heating systems.

**Mobile Sources**

***Senate Bill 375 (Sustainable Communities and Climate Protection Act)***

In January 2009, California SB 375, known as the Sustainable Communities and Climate Protection Act, went into effect. SB 375 provides for a new planning process to coordinate land use planning, regional transportation plans, and funding priorities in order to help California meet the GHG reduction goals established in AB 32. SB 375 includes provisions for streamlined CEQA review for some infill projects such as transit-oriented development. SB 375 also requires Metropolitan Planning Organizations (MPOs) relevant to the project area (including the Association of Bay Area Governments [ABAG]) to incorporate a “sustainable communities strategy” (SCS) in their regional transportation plans (RTPs) that will achieve GHG emission reduction targets set by CARB. The applicable SCS for the project area is called Plan Bay Area 2040 (see Section 4.5.2.4, “Local”).

The SCS is a growth strategy in combination with transportation policies that will show how the MPO will meet its GHG reduction target. If the SCS cannot meet the reduction goal, an Alternative Planning Strategy may be adopted that meets the goal through alternative development, infrastructure, and transportation measures or policies.

In August 2010, CARB released the proposed GHG reduction targets for the MPOs to be adopted in September 2010. The proposed reduction targets for the Bay Area region were seven percent by the year 2020 and 15 percent by the year 2035. On February 15, 2011, CARB’s Executive Officer approved the final targets. CARB filed a Notice of Decision two days later on February 17, 2011.

SB 375 also required CARB to appoint a Regional Targets Advisory Committee (RTAC) by January 31, 2009, to recommend factors for CARB to consider and methodologies for it to use in setting GHG emission reduction targets for each region. The RTAC must include representation from the League of California Cities, the California State Association of Counties,

MPOs, developers, planning organizations, and other stakeholders. In January 2009, CARB appointed 21 members to the RTAC, from a variety of constituencies. On September 29, 2009, the RTAC released its recommendations to CARB, representing a key step in the establishment of regional targets for inclusion in sustainable community strategies. The RTAC recommendations focus largely on the manner

in which CARB staff should interact with various stakeholders during the target-setting process, and how staff should use empirical studies and modeling in establishing regional GHG targets.

### ***Senate Bill 743***

Traditionally, transportation impacts have been evaluated pursuant to CEQA by examining whether the project is likely to cause automobile delay at intersections and congestion on nearby individual highway segments, and whether this delay will exceed a certain amount (this is known as Level of Service or LOS analysis). SB 743, which was signed into law in 2013, initiated an update to the CEQA Guidelines to change how lead agencies evaluate transportation impacts, with the goal of better measuring the actual transportation-related environmental impacts, including greenhouse gas emissions, of any given project.

According to the Legislature: "New methodologies under the California Environmental Quality Act [were] needed for evaluating transportation impacts that are better able to promote the state's goals of reducing greenhouse gas emissions and traffic-related air pollution, promoting the development of a multimodal transportation system, and providing clean, efficient access to destinations."

Starting on July 1, 2020, agencies analyzing the transportation impacts of new projects must look at a metric known as vehicle miles traveled (VMT) instead of LOS. VMT measures how much actual auto travel (additional miles driven) a proposed project would create on California roads. If the project adds excessive car travel onto roads, the project may cause a significant transportation impact.

Agencies have used VMT as a concept and metric for some time. Prior to SB 743, VMT was already being used in CEQA to study other potential impacts such as greenhouse gas, air quality, and energy impacts.

### ***Assembly Bill 1493 (Mobile Source Reductions)***

AB 1493 required CARB to adopt regulations by January 1, 2005, to reduce GHG emissions from noncommercial passenger vehicles and light-duty trucks of model year 2009 and after. The bill required the California Climate Action Registry (CCAR) to develop and adopt protocols for the reporting and certification of GHG emissions reductions from mobile sources for use by CARB in granting emission reduction credits. The bill authorized CARB to grant emission reduction credits for reductions of GHG emissions prior to the date of the enforcement of regulations, using model year 2000 as the baseline for reduction.

In 2004, CARB applied to the EPA for a waiver under the Federal Clean Air Act to authorize implementation of these regulations. The waiver request was formally denied by the EPA in December 2007. In January 2008, the State Attorney General filed a lawsuit against the EPA challenging the denial of California's request for a waiver to regulate and limit GHG emissions from these vehicles. In January 2009, President Barack Obama issued a directive to the EPA to reconsider California's request for a waiver, which the EPA granted on June 30, 2009, as discussed further below. As part of this waiver, the EPA specified that CARB may not hold a manufacturer liable or responsible for any noncompliance caused by emission debits generated by the manufacturer for the 2009 model year. The waiver was later withdrawn on September 19, 2019, under the "SAFE Vehicles Rule Part One: One National Program," discussed above. As noted above, the withdrawal of the waiver and implementation of SAFE are currently undergoing suit by California and several other states and cities.

**Low Carbon Fuel Standard (LCFS)**

Executive Order S-01-07 (January 18, 2007) requires a 10% or greater reduction (from current transportation fuels) in the average fuel carbon intensity for CARB-regulated transportation fuels in California. CARB identifies the Low Carbon Fuel Standard as a Discrete Early Action item under AB 32, and the final resolution (09 31) was issued on April 23, 2009. CARB is currently in the process of updating its Carbon Intensity Lookup Tables to add new pathways to calculate emissions from fuel sources.

**CEQA Guidelines****Senate Bill 97 (CEQA Guidelines)**

SB 97 required OPR to prepare amended CEQA Guidelines for submission to the CNRA regarding GHG analysis and feasible mitigation of the effects of GHG emissions as required by CEQA. The CNRA was required to certify and adopt these revisions to the State CEQA Guidelines by January 1, 2010. These amendments became effective as of March 18, 2010. The adoption of SB 97 and subsequent CEQA amendments are widely recognized as confirmation that lead agencies are required to include an analysis of climate change impacts in CEQA documents.

**CEQA Amendments**

Pursuant to SB 97, OPR developed proposed amendments to the CEQA Guidelines (CEQA Amendments) for the feasible mitigation of GHG emissions and their effects, which it first submitted to the Secretary of the CNRA on April 13, 2009. After a public review and comment period, on December 30, 2009, the CNRA adopted the CEQA Amendments, which became effective on March 18, 2010.

The CEQA Amendments for Greenhouse Gas Emissions state in Section 15064.4(a) that lead agencies should “make a good faith effort, to the extent possible on scientific and factual data, to describe, calculate or estimate” GHG emissions. The CEQA Amendments note that an agency may identify emissions by either selecting a “model or methodology” to quantify the emissions or by relying on “qualitative analysis or other performance-based standards.” Section 15064.4(b) provides that the lead agency should consider the following when assessing the significance of impacts from GHG emissions on the environment:

- The extent a project may increase or reduce GHG emissions as compared to the environmental setting.
- Whether the project emissions exceed a threshold of significance that the lead agency determines applies to the project.
- The extent to which the project complies with regulations or requirements adopted to implement a statewide, regional, or local plan for the reduction or mitigation of GHG emissions.

In addition, Section 15064.7(c) of the CEQA Amendments specifies that “[w]hen adopting thresholds of significance, a lead agency may consider thresholds of significance previously adopted or recommended by other public agencies, or recommended by experts, provided the decision of the lead agency to adopt such thresholds is supported by substantial evidence.” Similarly, the revision to CEQA Appendix G, “Environmental Checklist Form,” which is often used as a basis for lead agencies’ selection of significance thresholds, does not prescribe specific thresholds. Rather, Appendix G asks whether the project would conflict with a plan, policy or regulation adopted to reduce GHG emissions; or generate GHG emissions that would significantly affect the environment, indicating that the determination of what is a significant effect on the environment should be left to the lead agency.



Accordingly, the CEQA Amendments do not prescribe specific methodologies for performing an assessment, do not establish specific thresholds of significance, and do not mandate specific mitigation measures. Rather, the CEQA Amendments emphasize the lead agency's discretion to determine the appropriate methodologies and thresholds of significance consistent with the manner in which other impact areas are handled in CEQA.

The CEQA Amendments indicate that lead agencies should consider all feasible means, supported by substantial evidence and subject to monitoring and reporting, of mitigating the significant effects of GHG emissions. As pertinent to the project, these potential mitigation measures, set forth in Section 15126.4(c), may include (1) measures in an existing plan or mitigation program for the reduction of GHG emissions that are required as part of the lead agency's decision; (2) reductions in GHG emissions resulting from a project through implementation of project design features; (3) off-site measures, including offsets, to mitigate a project's emissions; and (4) carbon sequestration measures.

Among other things, the CNRA noted in its Public Notice for these changes that impacts of GHG emissions should focus on the cumulative impact on climate change. The Public Notice states:

While the Proposed Amendments do not foreclose the possibility that a single project may result in greenhouse gas emissions with a direct impact on the environment, the evidence before [CNRA] indicates that in most cases, the impact will be cumulative. Therefore, the Proposed Amendments emphasize that the analysis of greenhouse gas emissions should center on whether a project's incremental contribution of greenhouse gas emissions is cumulatively considerable.

Thus, the CEQA Amendments continue to make clear that the significance of greenhouse gas emissions is most appropriately considered on a cumulative level.

### **Other State GHG Activities**

#### ***Executive Order S-13-08***

On November 14, 2008, Governor Schwarzenegger issued Executive Order S-13-08 instructing California agencies to assess and prepare for the impacts of rising sea level associated with climate change. Rising sea levels could have devastating effects on California's infrastructure, such as threatening the state's water supply, highways, and airports. Pursuant to S-13-08, by June 30, 2009, the CNRA must have assessed California's vulnerability to climate change impacts and outlined solutions to climate change problems. The CNRA released the 2009 Climate Adaptation Strategy on August 3, 2009. The report summarizes the latest science on how climate change could impact the state and provides recommendations on how to manage against those threats in seven sector areas. The report is to be reviewed every two years.

Executive Order S-13-08 also required the CNRA to request that the National Academy of Sciences (NAS) convene an independent panel to complete the first California Sea Level Rise Assessment Report by December 1, 2010. In October 2010, the Sea-Level Rise Task Force of the Coastal and Ocean Working Group of the California Action Team released the State of California Sea-Level Rise Interim Guidance Document. The final report from the National Academy of Sciences, *Sea-Level Rise for the Coasts of California, Oregon, and Washington*, was released in June 2012. The final report was updated in 2013, and again in 2017 in response to Governor Brown's Executive Order B-30-15, establishing a California greenhouse gas reduction target of 40 percent below 1990 levels by 2030. The current 2017

version of the report is published under the name *Rising Seas in California: An Update on Sea-Level Rise Science*. The updated guidance incorporates new information presented in the NAS Report to reflect recent advances in ice loss science and projections of sea-level rise.

### **Renewable Power Requirements**

A major component of California's Renewable Energy Program is the Renewable Portfolio Standard (RPS) established under SBs 1078 (Sher), 107 (Simitian), and 2X (Simitian). Under the RPS, certain retail sellers of electricity are required to increase the amount of renewable energy each year by at least one percent until they reach twenty percent by December 31, 2010, with a final goal of 33 percent by 2020. Renewable sources of electricity include wind, small hydropower, solar, geothermal, biomass, and biogas. The increase in renewable sources for electricity production will decrease indirect GHG emissions from the project because electricity production from renewable sources is generally considered "carbon neutral." For the purposes of this analysis, it is assumed that the production of electricity from these renewable sources does not produce any net emissions of CO<sub>2</sub>.

### **Vehicle Emissions Standards/Improved Fuel Economy**

AB 1493 (Pavley) and the Low Carbon Fuel Standard (LCFS) is a clean-car standard that reduces GHG emissions from new passenger vehicles (light duty auto–medium duty vehicle [LDAMDV]) from 2009 through 2016 and is anticipated to reduce GHG emissions from passenger vehicles by 30% in 2016. The LCFS requires a reduction of 2.5% in the carbon intensity of California's transportation fuels by 2015 and a reduction of at least 10% by 2020.

For on-road vehicle CO<sub>2</sub> emissions, California Emissions Estimator Model (CalEEMod) applies AB 1493 and LCFS reductions to the appropriate vehicle classes for scenario years 2011 and after, based on CARB's EMFAC model and associated post processors.

## **4.5.2.3 Regional**

### **Southern California Association of Governments**

The Southern California Association of Governments (SCAG) is the regional planning agency for Imperial, Los Angeles, Orange, Riverside, San Bernadino, and Ventura counties, and serves as a forum for regional issues relating to transportation, the economy, community development, and the environment. SCAG serves as the federally designated metropolitan planning organization (MPO) for the Southern California region and is the largest MPO in the U.S. SCAG prepared the 2020 Regional Transportation Plan/Sustainable Communities Strategy (2020 RTP/SCS), which includes policies, strategies, and projects for advancing the region's mobility, economy, and sustainability through 2040. The RTP serves as a long-range transportation plan that is developed and updated by SCAG every four years, providing a vision for the development of transportation facilities throughout the region based on growth forecasts and economic trends over a 20-year period. The SCS expands upon transportation strategies in the RTP to analyze growth patterns.

and establish future land use strategies that aid the region in meeting its GHG reduction targets. The SCS does not mandate future land use policies for local jurisdictions, but rather provides a foundation of regional policy upon which local governments can build. On September 3, 2020, SCAG's Regional Council unanimously voted to approve and fully adopt Connect SoCal (2020–2045 Regional Transportation Plan/Sustainable Communities Strategy), and the addendum to the Connect SoCal Program Environmental Impact Report. Connect SoCal is a long-range visioning plan that builds upon and expands land use and transportation strategies established over several planning cycles to increase mobility options and achieve a

more sustainable growth pattern. It charts a path toward a more mobile, sustainable and prosperous region by making connections between transportation networks, between planning strategies and between the people whose collaboration can improve the quality of life for Southern Californians. Connect SoCal outlines more than \$638 billion in transportation system investments through 2045. It was prepared through a collaborative, continuous, and comprehensive process with input from local governments, county transportation commissions, tribal governments, non-profit organizations, businesses and local stakeholders within the counties of Imperial, Los Angeles, Orange, Riverside, San Bernardino and Ventura.

#### **4.5.2.4 Local**

##### **Imperial County**

###### ***Imperial County Regional Climate Action Plan***

The Imperial County Regional Climate Action Plan identifies GHG reduction strategies and measures that would be implemented on a regional level as well as jurisdiction-specific measures that are intended to reduce local GHG emissions in unincorporated Imperial County as well as each of the incorporated cities within the County.

###### ***Imperial County Air Pollution Control District***

The Imperial County Air Pollution Control District (ICAPCD) is the regulatory agency responsible for air quality in the Imperial Valley region. ICAPCD regulates emission sources and ensures regional compliance with State and federal regulations. ICAPCD develops rules and regulations, establishes permitting requirements for stationary sources, inspects emission sources, and enforces such measures through educational programs or fines, when necessary. ICAPCD is directly responsible for reducing emissions from stationary, mobile, and indirect sources. The ICAPCD has not established formal quantitative or qualitative GHG emissions thresholds through a public rulemaking process. However, the ICAPCD has adopted the federal Prevention of Significant Deterioration (PSD) and Title V GHG air permitting requirements by reference for stationary sources in Regulation IX in Rules 900 and 903, which are described below.

###### **ICAPCD Rule 900**

ICAPCD Rule 900 provides procedures for issuing permits to operate for industrial projects that are subject to Title V of the federal Clean Air Act Amendments of 1990 (Major Sources) of emissions, which is defined as a source that exceeds 100 tons per year of any regulated pollutant, including GHG emissions.

###### **ICAPCD Rule 903**

ICAPCD Rule 903 applies to any stationary source that would have the potential to emit hazardous air pollutants (HAPs). Rule 903 provides a de minimis emissions level of 20,000 tons of CO<sub>2e</sub> per year, where if a stationary source produces less emissions than the de minimis emissions levels, the source is exempt from the Rule 903 recordkeeping and reporting requirements.

###### ***Imperial County Regional Active Transportation Plan***

The Imperial County Regional Active Transportation Plan incorporates existing plans and studies, including the Imperial County Safe Routes to School Regional Master Plan and Imperial County Bicycle Master Plan, into a comprehensive regional active transportation plan. The Active Transportation Plan includes six goals aimed at improving active transportation (i.e., walking and bicycling) improvements throughout the unincorporated County (Imperial County 2018). These goals are: (1) Improved Access,

(2) Network Connectivity, (3) Safety, (4) Increase Active Transportation Travel Within Each Community, (5) Health, and (6) Equity.

### ***Imperial County General Plan***

The goals, objectives, and policies in the *Imperial County General Plan* are intended to inform decision makers, the general public, public agencies, and those doing business in the County of the County's position on land use-related issues and to provide guidance for day-to-day decision-making. The following objectives and policies contained within the *Imperial County General Plan Conservation Element* pertain to air quality and the proposed project:

#### **Conservation and Open Space Element**

**Goal 7:** The County shall actively seek to improve the quality of air in the region.

**Objective 7.1:** Ensure that all projects and facilities comply with current Federal, state, and local requirements for attainment of air quality objectives.

**Objective 7.2:** Develop management strategies to mitigate fugitive dust. Cooperate with all Federal, State and local agencies in the effort to attain air quality objectives.

**Objective 7.4:** Enforce and monitor environmental mitigation measures relating to air quality.

### **San Diego County**

#### ***San Diego County Climate Action Plan***

On September 30, 2020, the County of San Diego Board of Supervisors voted to set aside its approval of the County's 2018 Climate Action Plan (2018 CAP) and related actions because the Final SEIR (2018 CAP SEIR) was found to be out of compliance with CEQA. In response to this Board action, staff are currently preparing a CAP Update to revise the 2018 CAP and correct the items identified by the court within the Final 2018 CAP SEIR that were not compliant.

The overall objective of the CAP Update is to reduce GHG emissions generated from activities within the unincorporated county and GHG emissions generated by County facilities and operational activities throughout the county, including facilities and operations located within incorporated cities, to meet or exceed GHG reduction goals under State laws.

The CAP Update may consider strategies and reduction measures, and supporting efforts organized under the same five categories as the 2018 CAP:

- Built Environment & Transportation
- Energy
- Solid Waste
- Water and Waste Water
- Agriculture and Conservation

Pending adoption of a new CAP, the County will continue to implement the 26 GHG reduction measures and sustainability initiatives/programs identified in the 2018 CAP to reduce GHG emissions as part of its ongoing commitment to the environment and to meet the State's 2030 reduction target.

### ***San Diego County General Plan***

The goals and policies of the *San Diego County General Plan* provide direction to future growth and development in the county. The following goals and policies from the *San Diego County General Plan Conservation Element* relate to air quality and apply to proposed actions at the Viking Ranch Restoration Site and Old Kane Springs Road Preservation Site, located in unincorporated San Diego County.

#### **Conservation and Open Space Element**

**Goal COS-14:** Sustainable Land Development. Land use development techniques and patterns that reduce emissions of criteria pollutants and GHGs through minimized transportation and energy demands, while protecting public health and contributing to a more sustainable environment.

**Policy COS-14.8:** Minimize Air Pollution. Minimize land use conflicts that expose people to significant amounts of air pollutants.

**Policy COS-14.9:** Significant Producers of Air Pollutants. Require projects that generate potentially significant levels of air pollutants and/or GHGs such as quarries, landfill operations, or large land development projects to incorporate renewable energy, and the best available control technologies and practices into the project design.

**Policy COS-14.10:** Low-Emission Construction Vehicles and Equipment. Require County contractors and encourage other developers to use low-emission construction vehicles and equipment to improve air quality and reduce GHG emissions.

**Policy COS-14.11:** Native Vegetation. Require development to minimize the vegetation management of native vegetation while ensuring sufficient clearing is provided for fire control.

**Goal COS-15:** Sustainable Architecture and Buildings. Building design and construction techniques that reduce emissions of criteria pollutants and GHGs, while protecting public health and contributing to a more sustainable environment.

**Policy COS-15.6:** Design and Construction Methods. Require development design and construction methods to minimize impacts to air quality.

### ***San Diego County Air Pollution Control District***

The San Diego County APCD (SDAPCD) is responsible for regulating stationary sources of air emissions in the San Diego Air Basin (SDAB). The SDAPCD Rules and Regulations establish emission limitations and control requirements for stationary sources, based on their source type and magnitude. The SDAPCD and the San Diego Association of Governments are responsible for developing and implementing the clean air plan for attainment and maintenance of the ambient air quality standards in the SDAB. The San Diego County RAQS was initially adopted in 1991 and is periodically updated to reflect updated information on air quality, emission trends, and new feasible control measures. The most recent update was adopted in March 2023 (SDAPCD 2023).

The RAQS includes all feasible control measures that can be implemented for the reduction of O<sub>3</sub> precursor emissions. To be consistent with the RAQS, a project must conform to emission growth factors outlined in the plan. Control measures for stationary sources proposed in the RAQS and adopted by the SDAPCD are incorporated into the SDAPCD Rules and Regulations. SDAPCD has also developed the air basin's input to the SIP. The SIP includes the SDAPCD's plans and control measures for attaining the O<sub>3</sub> NAAQS. The SIP is also updated on a triennial basis. SDAPCD developed its 2020 Eight-Hour Ozone Attainment Plan for San Diego County, which provides plans for attaining and maintaining the 8-hour NAAQS for O<sub>3</sub> (San Diego County APCD 2020). A Redesignation Request and Maintenance Plan for the 1997 National Ozone Standard was adopted by the SDAPCD in 2012 but has not yet been approved by the USEPA (SDAPCD 2012). The SDAB is designated attainment or unclassified for the remaining criteria air pollutants.

### 4.5.3 Analysis Methodology and Significance Criteria

The following sections discuss the methods for evaluating project emissions of greenhouse gases.

#### 4.5.3.1 Significance Criteria

##### CEQA Guidelines Appendix G

Appendix G of the CEQA Guidelines identifies the following impact issues in Greenhouse Gas Emissions tables of the Appendix G Environmental Checklist, asking whether the project would:

- a) Generate greenhouse gas emissions, either directly or indirectly, that may have a significant impact on the environment?
- b) Conflict with any applicable plan, policy or regulation of an agency adopted for the purpose of reducing the emissions of greenhouse gases?

##### Imperial County GHG Thresholds of Significance

ICAPCD does not have established quantitative or qualitative GHG emissions thresholds through a public rulemaking process. However, the ICAPCD has adopted the federal Prevention of Significant Deterioration (PSD) and Title V GHG air permitting requirements by reference for stationary sources in Regulation IX in Rules 900 and 903, as described in Section 4.5.2.4, above. Rule 903 provides a de minimis emissions level of 20,000 tons of CO<sub>2e</sub> per year for stationary sources. In the absence of a formally adopted emissions threshold for land development projects, this de minimis emissions level is used as a provisional threshold for projects in Imperial County.

##### San Diego County GHG Thresholds of Significance

In response to AB 32, the California Air Pollution Control Officers Association (CAPCOA) white paper titled "CEQA & Climate Change: Evaluating and Addressing Greenhouse Gas Emissions from Projects Subject to the California Environmental Quality Act," provides a current methodology used for jurisdictions across the state to identify a screening level for GHG emissions (CAPCOA 2008). The CAPCOA guidance states that projects should be screened to determine if their associated GHG emissions exceed 900 MT CO<sub>2e</sub>.

Because the County has not developed its own numeric GHG significance threshold, it utilizes the interim screening threshold of 900 MT CO<sub>2e</sub> per year in accordance with the CAPCOA white paper. The screening level does not indicate impact significance; rather, it is intended to be used to screen out smaller projects that

do not generate substantial amounts of GHG emissions and allows regulatory and discretionary actions to focus on the more significant sources of GHG emissions. If a project exceeds this threshold, a climate change analysis would need to be completed to analyze any potential project specific impacts. The CAPCOA white paper suggests that projects that emit less than 900 MT CO<sub>2</sub>e per year would not likely be considered cumulatively considerable and would not interfere with the ability of the state to achieve its GHG reduction targets.

#### **4.5.3.2 Methodology**

##### **Quarry, Well No. 3, and Associated Pipeline**

The GHG emissions analysis for the Quarry expansion project is based on a comparison of the emissions estimated in the 2008 EIR/EIS and those estimated in the 2019 SEIS. Construction and operation emissions were assessed in accordance with EPA and ICAPCD air quality regulations using CARB's Off-Road Emissions Model, CARB Off-Road Diesel Tier Emission Factors, and Off-Road and On-Road Mobile Source Emissions' Factors (EMFAC per SCAQMD website).

##### **Viking Ranch Restoration Site**

The GHG emissions related to restoration of the Viking Ranch site were calculated using the CalEEMod Version 2022.1.1.4 using the project details, including construction equipment, provided in Chapter 2, "Project Description." The CalEEMod printouts for the Viking Ranch site are provided as Appendix C-3, "Estimated Air Quality Emissions—Viking Ranch."

##### **Old Kane Springs Road Preservation Site**

GHG emissions were not calculated for the Old Kane Springs Road Preservation Site as no construction activities will be carried out and operational emissions would be limited to occasional maintenance activities and would be negligible.

#### **4.5.4 Project Impacts and Mitigation Measures**

##### **4.5.4.1 2008 EIR/EIS Impact Analysis**

The 2006 Draft EIR/EIS did not evaluate Greenhouse Gas (GHG) Emissions because this was not yet identified as a topic that requires evaluation in Appendix G, Environmental Checklist Form, of the CEQA Guidelines. However, the 2008 Final EIR/EIS provided an analysis of GHG emissions in response to public comments on the 2006 Draft EIR/EIS. The 2008 Final EIR/EIS notes that USG has taken specific actions to track, report and certify GHG emissions. In November 2006, USG voluntarily joined the California Climate Action Registry (CCAR), a group of distinguished public and private sector organizations taking demonstrated leadership on climate change. USG was the first building materials manufacturer to participate in this program. As a member, USG has worked with the CCAR to develop an annual GHG emission tracking, reporting and certification protocol, that USG is applying to all of its facilities, including the Project. In particular, USG is certifying its GHG emissions data for the facility with the CCAR.

The Plant and Quarry, as well as associated activities, have used a variety of fuels over time for mobile sources, powering the Plant and for Quarry operations. Under the CCAR emission reporting regime, direct emissions of GHG are generated at the USG Expansion/Modernization Project from sources that are owned or controlled by USG, and include stationary combustion (e.g., plant burner and emergency generators) and mobile combustion sources (e.g., company owned off-road equipment and vehicles). Additionally, the USG

Expansion/Modernization Project accounts for indirect GHG emissions, which are generated by sources owned or controlled by other entities. These indirect sources are primarily from fossil fuel combustion at third party power plants. GHG emissions are typically measured in terms of pounds or tons of “carbon dioxide equivalent” (CO<sub>2</sub>e). The following estimates of GHG emissions were provided:

Maximum *direct* GHG emissions CO<sub>2</sub>e associated with the USG Expansion/Modernization Project in comparison with the baseline year of 1998 are as follows: During the 1998 baseline, the facility generated approximately 72,200 tons of CO<sub>2</sub>e per year. The proposed action will result in about 110,000 tons of CO<sub>2</sub>e per year, which represents an increase of approximately 37,800 tons of CO<sub>2</sub>e per year, from business as usual.

Maximum *indirect* GHG emissions CO<sub>2</sub>e associated with the USG Expansion/Modernization Project from the baseline year of 1998 are as follows: During the 1998 baseline, the facility generated approximately 14,000 tons of CO<sub>2</sub>e per year. The Proposed action will generate approximately 23,700 tons of CO<sub>2</sub>e per year, which represents an increase of approximately 9,700 tons of CO<sub>2</sub>e per year, from business as usual.

The 2008 Final EIR/EIS notes that while USG Expansion/Modernization Project may emit up to a maximum of approximately 47,500 tons of additional (above baseline) CO<sub>2</sub>e emissions per year (assuming business as usual) from both direct and indirect sources, the USEPA estimates 2005 national CO<sub>2</sub>e emissions of 7,260.4 teragrams (i.e., million metric tons). Thus, the project’s CO<sub>2</sub>e emission increases represent less than 0.0000654 percent of the national CO<sub>2</sub>e loading, and an even smaller percentage of the worldwide CO<sub>2</sub>e loading. Consequently, the 2008 Final EIR/EIS concludes that it is not anticipated that the individual effect of the project’s GHG emissions on the environment will be significant.

With regard to the USG Expansion/Modernization Project’s cumulative contribution to GHG emissions, the 2008 Final EIR/EIS acknowledges that the project may emit up to a maximum approximately 47,500 tons additional CO<sub>2</sub>e emission per year above baseline for both direct and indirect sources, but states that this increase could be below reasonably anticipated thresholds of significance (though none existed at the time of the 2008 EIR/EIS), even when considered cumulatively. Further, since the demand for wallboard remains strong, it is stated that no project alternative would lead to more wallboard production outside of California, perhaps in other states or countries with little or no emission controls when compared to California’s requirements. Since California is globally acknowledged as having among the most stringent energy efficiency and emission control requirements, wallboard production outside California would generate more GHG emissions. Additionally, transportation of the products into California (whether by truck, rail, or ship) would produce even more GHG emissions from the burning of fuel associated with product transportation. On this point, USG has determined that “transportation of gypsum board accounts for over 10 percent of the embodied energy,” associated with the product. Thus, the no project alternative would have greater environmental impacts than the emissions from the project.

Despite the limited potential impacts due to increased GHG emissions identified in the 2008 Final EIR/EIS, the following mitigation measure was identified to substantially lessen the potential for the project to result in cumulative impacts on climate change:

***Mitigation Measure 1:*** USG has already acquired approximately \$1.6 million in emission credits for the Project to meet applicable air quality standards. Similarly, to the extent necessary, USG will



*acquire recognized carbon credits to offset the project's increased GHG emissions.*

The air quality section of the 2008 EIR/EIS also provided the following mitigation measures to limit exhaust emissions from mobile equipment at the Quarry. These measures would also reduce emission of GHGs during project implementation:

**Mitigation Measure 3.6-1a:** *USG shall ensure all equipment is maintained and tuned according to manufacturer's specifications.*

**Mitigation Measure 3.6-1b:** *USG shall schedule production activities to minimize daily equipment operations and idling trucks.*

**Mitigation Measure 3.6-1c:** *USG shall comply with all existing and future California Air Resources Board (CARB) and ICAPCD regulations related to diesel-fueled trucks and equipment, which may include: (1) meeting more stringent engine emission standards; (2) retrofitting existing engines with particulate traps; (3) use of low or ultra-low sulfur diesel fuel; and (4) use of alternative fuels or equipment.*

#### **4.5.4.2 2019 SEIS Impact Analysis**

In accordance with the Council on Environmental Quality's (CEQ) NEPA-implementing regulations in place at the time of its preparation, the 2019 SEIS did not evaluate greenhouse gas emissions or climate change and no additional mitigation measures were provided.

#### **4.5.4.3 Substantial Project Changes**

##### **Project Revisions**

The proposed Quarry expansion, and the proposed Well No. 3 and associated pipeline, are substantially in the same location and same configuration as the features that were evaluated in the 2008 EIR/EIS. Therefore, any minor revisions would not create a new or increase a significant impact related to GHG emissions. However, the restoration of the Viking Ranch site and preservation of the Old Kane Springs Road site are proposed in response to mitigation required by the 2019 SEIS, and these are new actions under the proposed project.

##### **Changed Circumstances**

GHG emissions must now be discussed under current CEQA Guidelines. With regard to ICAPCD requirements, in 2011, ICAPCD amended Rule 903 to add GHGs to the list of regulated pollutants. Rule 903 applies to any stationary source that would have the potential to emit air contaminants equal to or in excess of the threshold for a major source of regulated air pollutants. As part of the revised rule, stationary sources that exceed the de minimis emissions level of 20,000 tons of CO<sub>2</sub>e per year in a 12-month period would need to meet recordkeeping and reporting requirements.

##### **New Information**

No new information of substantial importance is available that was not known and could not have been known with the exercise of reasonable diligence at the time the 2008 EIR/EIS was adopted. Furthermore, the effect of GHG emissions is not new information under CEQA Guidelines Section 15162(a)(3) that was not known

and could not have been known during the prior environmental evaluations (see e.g., *Citizens for Responsible Equitable Environmental Development v. City of San Diego*, 196 Cal.App.4th 515, 524 (2011)).

**4.5.4.4 Subsequent Environmental Analysis**

**Impact 4.5-1: Greenhouse Gas Emissions Generated by Project Activities Could Have a Significant Impact on Global Climate Change**

**Quarry, Well No. 3, and Associated Pipeline**

ICAPCD does not have established quantitative or qualitative GHG emissions thresholds through a public rulemaking process. However, the ICAPCD has adopted the federal Prevention of Significant Deterioration (PSD) and Title V GHG air permitting requirements by reference for stationary sources in Regulation IX in Rules 900 and 903, as described in Section 4.5.2.4, above. Rule 903 provides a de minimis emissions level of 20,000 tons of CO<sub>2e</sub> per year for stationary sources. In the absence of a formally adopted emissions thresholds for land development projects, this de minimis emissions level is used as a provisional threshold for projects in Imperial County.

Quarry operations and construction of proposed Well No. 3 and the associated pipeline would result in the emission of GHGs associated primarily with heavy equipment operation. The 2019 SEIS included updated emissions estimates for the proposed project, including Quarry operations and construction of Well No. 3 and the associated pipeline. These emissions estimates are summarized in Table 4.5-2, “Proposed Project Estimated GHG Emissions,” and are provided in detail in Appendix C-2, “SEIS Air Emissions Estimates.” As shown, Quarry operations and pipeline construction emissions would not exceed ICAPCD’s de minimis threshold for GHG emissions.

**Table 4.5-2  
Proposed Project Estimated GHG Emissions**

<b>Emissions Source</b>	<b>Total Annual CO<sub>2e</sub> Emissions (MTCO<sub>2e</sub>)<sup>1</sup></b>
Quarry Operations (Mobile Equipment)	8,312.5
Pipeline Construction (Mobile Equipment)	127.2
Total Annual CO <sub>2e</sub> Emissions	8,439.7
ICAPCD Threshold	20,000
Exceed Threshold?	No

Source: BLM 2019 (Appendix N)

Notes:

1. Metric tons of CO<sub>2</sub> equivalent

It should be noted that pipeline construction emissions would be temporary with construction activities limited to one year, after which time total project GHG emissions would be reduced. Project emissions are further reduced through implementation of 2008 EIR/EIS Mitigation Measure 1 which requires USG to acquire recognized carbon credits to offset the project’s increased GHG emissions. For these reasons, the project would not significantly contribute to global climate change and this impact would be less than significant.

**Level of Significance Before Mitigation:** Less than significant.

**Mitigation Measures:** *Implement the following existing mitigation measures (see Section 4.5.4 for the full text of each measure):*

- *2008 EIR/EIS:*
  - *Mitigation Measure 3.6-1a*
  - *Mitigation Measure 3.6-1b*
  - *Mitigation Measure 3.6-1c*
  - *Mitigation Measure 1*

**Level of Significance After Mitigation:** Less than significant.

### **Viking Ranch Restoration Site**

Because San Diego County has not developed its own numeric GHG significance threshold, it utilizes an interim screening threshold of 900 MT CO<sub>2</sub>e per year based on the CAPCOA white paper (see Section 4.5.4.2, above).

The proposed restoration of the Viking Ranch site would result in temporary GHG emissions associated primarily with construction equipment operation. Emissions were estimated using the CalEEMod Version 2022.1.1.4 (see Appendix C-3) at an annual maximum of 880 MT CO<sub>2</sub>e. Thus, the estimated annual project emissions would not exceed SDAPCD's screening thresholds of 900 MT CO<sub>2</sub>e. This indicates that restoration of the Viking Ranch site would not generate a substantial amount of GHG emissions, and this impact would be less than significant.

**Level of Significance:** Less than significant.

**Mitigation Measures:** None required.

### **Old Kane Springs Road Preservation Site**

No construction or development is proposed on the Old Kane Springs site. Operational GHG emissions, associated with occasional maintenance vehicle trips, would be negligible and are not evaluated further here.

**Level of Significance:** Less than significant.

**Mitigation Measures:** None required.

## **Impact 4.5-2: Consistency with Applicable GHG Plans, Policies, or Regulations**

### **Quarry, Well No. 3, and Associated Pipeline**

As demonstrated in this section, the proposed project would not exceed Imperial County's established significance threshold for GHG emissions. Implementation of mitigation measures from the 2006 Draft EIR/EIS (Mitigation Measures 3.6-1a through 3.6-1c) and 2008 Final EIR/EIS (Mitigation Measure 1) would further reduce or offset project GHG emissions. As demonstrated in Section 4.1, "Air Quality," the project would be consistent with the applicable air quality plans as well as the Imperial County General Plan and would not exceed development or population growth projections for the region. Thus, the project would be consistent with applicable GHG plans, policies, and regulations.

**Level of Significance:** Less than significant.

**Mitigation Measures:** None required.

#### **Offsite Mitigation Sites**

San Diego County does not currently have an adopted climate action plan. However, GHG emissions at the offsite mitigation sites would be limited to temporary construction emissions at the Viking Ranch site. As demonstrated in this section, these construction emissions would not exceed the applicable San Diego County significance threshold. Upon completion of restoration activities, operational emissions at both the Viking Ranch and Old Kane Springs sites would be limited to occasional maintenance truck trips and would be negligible. The project would not result in any development, population growth, or a significant increase in vehicle miles traveled. Thus, the project would be consistent with applicable GHG plans, polices, and regulations.

**Level of Significance:** Less than significant.

**Mitigation Measures:** None required.

# SECTION 4.6: HYDROLOGY AND WATER QUALITY

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## SECTION 4.6: HYDROLOGY AND WATER QUALITY

This section of this subsequent environmental impact report (SEIR) addresses potential impacts of the project on hydrology and water quality, describes the environmental and regulatory setting, and discusses mitigation measures to reduce impacts where applicable. Issues addressed include impacts on surface and ground water quality, surface water drainage patterns, and groundwater supply.

The information in this section is based on the following hydrology studies which were previously prepared to support the 2008 EIR/EIS and 2019 SEIS, as well as the habitat mitigation and monitoring plan (HMMP) prepared for the offsite mitigation sites:

- *Jurisdictional Delineation for United State Gypsum Company Plaster City Expansion/Modernization Project* (Hernandez Environmental Services [HES] 2016) (Appendix D-2, “2016 Jurisdictional Delineation”)
- *Hydrologic and Water Quality Study for the U.S. Gypsum Company Supplemental Environmental Impact Study* (Dudek 2018) (Appendix G-1, “2018 Water Quality Study”)
- *Update on Groundwater Conditions Memorandum* (Todd Groundwater 2018) (Appendix G-2, “2018 Groundwater Conditions Memorandum”)

### **4.6.1 Environmental Setting**

#### **4.6.1.1 Regional Setting**

The Colorado Desert has a typical arid desert climate with low rainfall and extreme temperature ranges. Average annual rainfall in El Centro is approximately three inches. At the Anza Borrego State Park headquarters, located in a canyon along the east side of the Peninsular Range, rainfall can average as high as six to seven inches per year. Most of the rain falls in December through March but August and September can experience severe thunderstorms associated with monsoon conditions bringing moisture from the Gulf of California. During these episodes, it is not uncommon for thunderstorms to drop several inches of rain in just a few hours, causing severe flash flooding, washing out roads, scouring washes and uprooting vegetation (HES 2016).

#### **4.6.1.2 Hydrology and Water Quality Conditions at the Time of the 2008 EIR/EIS**

The hydrology and water quality setting for the project site as provided in the 2008 EIR/EIS is summarized in the following paragraphs.

The project site is located within the Ocotillo Valley Groundwater Basin which is located to the west of the southwestern corner of the Salton Sea. This area is also commonly referred to as the Borrego Valley. It is bounded on the southwest by the Vallecito and Fish Creek Mountains, on the west by the Peninsular Ranges, on the north by the Borrego badlands, and on the east by the Salton Sea.

According to the 2008 EIR/EIS, the primary drainage in the Ocotillo Valley is San Felipe Creek. San Felipe Creek extends from the Peninsular Ranges to the Salton Sea. In the area of proposed Well No. 3, the primary surface drainage is the Fish Creek Wash. San Felipe Creek and Fish Creek Wash only flow seasonally, when runoff occurs from the upper reaches of their respective watersheds. In an area approximately 10 miles

northeast of the proposed well site, groundwater discharges from two springs near the confluence of San Felipe Creek and Fish Creek Wash. Prior to 1984, flow from these springs only occurred intermittently. Since 1984, however, flow from these two springs has occurred year-round.

Groundwater is reported to occur in two aquifers. The shallow aquifer is present at depths above approximately 100 feet below ground surface (bgs) in the center of the basin and contains water with TDS levels report in the range of 8,000 ppm. The elevated TDS levels are most likely due to leaching of the saline evaporite deposits in the surficial sediments. An aquitard that may be 100 to 200 feet thick separates the shallow aquifer from the lower aquifer. The lower aquifer extends to at least 650 feet bgs at some locations and contains water with TDS levels reported in the range of 1,400 ppm. Groundwater from the lower aquifer is used for agricultural purposes. According to DWR (Bulletin 118-75), the Ocotillo Valley Groundwater Basin covers an area of about 410 square miles, with a storage capacity of 5,800,000-acre feet and a usable groundwater capacity of 1,900,000 AF.

Groundwater is reported to be discharging to the Salton Sea at rates of 2,200 acre-feet/year to 4,500 acre-feet/year. The rate of outflow from the Ocotillo Valley Groundwater Basin is greater than the rate of inflow, as evidenced by declining water levels in the lower aquifer. Water levels are decreasing at the rate of three feet per year. Approximately one-third to one-half of this decline is due to agricultural pumping and the balance is due to natural outflow. The naturally-occurring groundwater deficit is most likely due to long-term climatic changes and/or drainage of the lower aquifer due to the lowering of the hydrologic base level caused by the disappearance of ancient Lake Cahuilla.

Water quality data and the timing of the change in flow from intermittent to year-round indicate that the discharges at San Felipe Creek Spring and Fish Creek Spring are due to increased rates of irrigation to the west. Excess irrigation water percolates to the shallow aquifer and raises the water table. The elevated water table intersects the surface at the location of the springs. From 1983 through 1996, irrigation rates have ranged from approximately 9,250-acre feet/year to over 12,000-acre feet/year, based on reported groundwater production.

Stream gauge data along San Felipe Creek show that, beginning in 1984, the base flow averaged several cubic feet per second (cfs). Seasonal peak flow generally occurs in late summer or early fall and may reach 50 cfs. If it is assumed that the base flow averages two cfs, then the minimum annual discharge of San Felipe Creek Spring is approximately 1,500-acre feet/year. The actual discharge is likely to be appreciably greater due to seasonal peak flows (Imperial County 2008).

#### **4.6.1.3 Hydrology and Water Quality Conditions at Present**

##### **Quarry, Well No. 3, and Associated Pipeline**

The following discussion is based primarily on the 2018 Water Quality Study prepared by Dudek (Appendix G-1) and the 2018 Groundwater Conditions Memorandum prepared by Todd Groundwater (Appendix G-2).

##### **Surface Water**

The project site falls within a 6,734-acre drainage area (Quarry watershed) in the greater Ocotillo Lower Felipe hydrologic area (HA) located within the Anza-Borrego hydrologic unit (HU) in the Colorado River Basin (Calwater 2.2.1, 2004, cited in Dudek 2018). All existing and proposed components of the project comprise approximately 1,100 acres.



Figure 4.6-1, “Hydrologic Setting,” shows the location of the proposed project with reference to the Ocotillo Lower Felipe HA. The 1,100-acre-project site represents approximately 0.34 percent of the 322,686-acre Ocotillo Lower Felipe hydrologic area.

The region is characterized by low average annual rainfall (~4.5 inches), high rates of evapotranspiration, and steep rocky terrain sloping to lower-gradient alluvial filled basins. The hydrology of the region is dominated by the brief but high intensity rainfall events that typically occur during the bi-modal winter or summer rainy seasons. The majority of these rainfall events do not produce runoff, but those with sufficient rainfall intensity can, and often result in channel forming flash floods with high scouring energy and sediment loads. Within the steeper slopes of the Quarry watershed, concentrated runoff is collected within single well-defined channels, many of which are deeply incised. Upon reaching the alluvial basin of the Quarry watershed, coarse sediment loads are deposited with loss of streamflow energy, sometimes clogging channels and directing flow into prior channels (relic channels) or creating new channels. This dynamic has led to the development of a system of braided channels within the alluvial basin of the Quarry watershed, most effectively described as a series of compound channels, where a single dominate low-flow channel meanders through a network of relic channels and terraces, often susceptible to channel relocation during moderate to high discharge events (ACOE 2008, cited in Dudek 2018).

Surface flow generated from the Quarry watershed joins Fish Creek Wash just upstream where Split Mountain Road crosses Fish Creek Wash, at the apex of the Fish Creek Alluvial Fan. Similar to when the flows in the steeper Quarry watershed terrain reach the alluvial valley, surface flows that reach the Fish Creek Alluvial Fan apex lose energy and drop heavier sediment loads, often redirecting flows and forming numerous channels across the valley floor. As a typical alluvial fan, flow can be distributed across multiple channels during a single flow event (ACOE 2008, cited in Dudek 2018). Surface flows are typically lost to shallow infiltration in the soils adjacent to the active channels (and along floodplains) which are then lost to the high evaporative demands of the region. A smaller percentage of the discharge is lost to infiltration through the channel (transmission), which ultimately becomes groundwater recharge. Groundwater recharge is typically highest near the fan apex (Houston 2002, cited in Dudek 2018), where the coarser material is deposited. If surface flows are sufficient enough to overcome the losses within the alluvial fan (infiltration, soil tension, evaporation and evapotranspiration), they ultimately coalesce approximately 11 miles downstream near the confluence with San Felipe Creek.

San Felipe Creek resembles a more defined single-thread channel (ACOE 2008, cited in Dudek 2018) which drains to the Salton Sea approximately 20 miles east of the confluence with Fish Creek Wash. Fish Creek Wash is an ephemeral drainage downstream from the Project, while San Felipe Creek gains intermittent surface flows approximately 11 miles downstream (northeast) from the Quarry. The perennial surface water in this section of the creek is fed by groundwater discharge, not from the infrequent flows generated in Fish Creek. San Felipe Creek is natural habitat for the endemic *Cyprinodon macularius* (desert pupfish) (Black 1980, cited in Dudek 2018).

### **Existing Floodplain**

Federal Emergency Management Agency (FEMA) Flood Insurance Rate Maps (FIRMs) identify flood zones and areas that are susceptible to 100-year and 500-year floods. Flood Zone A designates special flood hazard areas subject to inundation by the 1% (100-year) annual chance flood but for which no base flood elevations have been determined. The drainage located in the valley of the proposed project is located within a FEMA flood zone as depicted in Figure 4.6-2, “Existing Floodplain.” Portions of the

existing and proposed gypsum mining operations fall within the 100-year flood zone (FEMA 1984, cited in Dudek 2018).

### **Groundwater**

A groundwater basin is defined by the California Department of Water Resources (DWR) as a hydrogeologic unit containing one large aquifer, or a series of stacked aquifers, with definitive lateral and horizontal boundaries (2003). California's Imperial Valley, and the area bordering the Salton Sea, are characterized by one large aquifer composed of numerous smaller interconnected groundwater basins and subbasins. The proposed project is located within the approximately 153,978-acre Borrego Valley Groundwater Basin (7-24), and specifically within the 90,086-acre Ocotillo Wells Sub-Basin (7-24.02), as defined by the California Department of Water Resources (DWR) Bulletin 118.

Two groundwater wells with depth to water information were identified near the project site. Well (12S08E22E001S) located approximately 7 miles north-northwest of the project site, provides groundwater depth data for the past 66 years. Current (2016) groundwater levels at this well indicate that the depth to groundwater is greater than 110 feet. Well 12S9E23D001S, located about 7.5 northeast of the project site, shows groundwater depths greater than 150 feet from 1980 to 2014.

### **Water Quality**

303(d) Listed Water Bodies Fish Creek Wash and San Felipe Creek are not listed on California's Clean Water Act Section 303(d) list of Impaired Waters for any constituents. San Felipe Creek was evaluated for Selenium impairment, but the previous conclusion was reversed after analysis of three fish tissue samples taken from the creek determined that none exceeded the Office of Environmental Health Hazard Assessment (OEHHA) Fish Contaminant Goal.

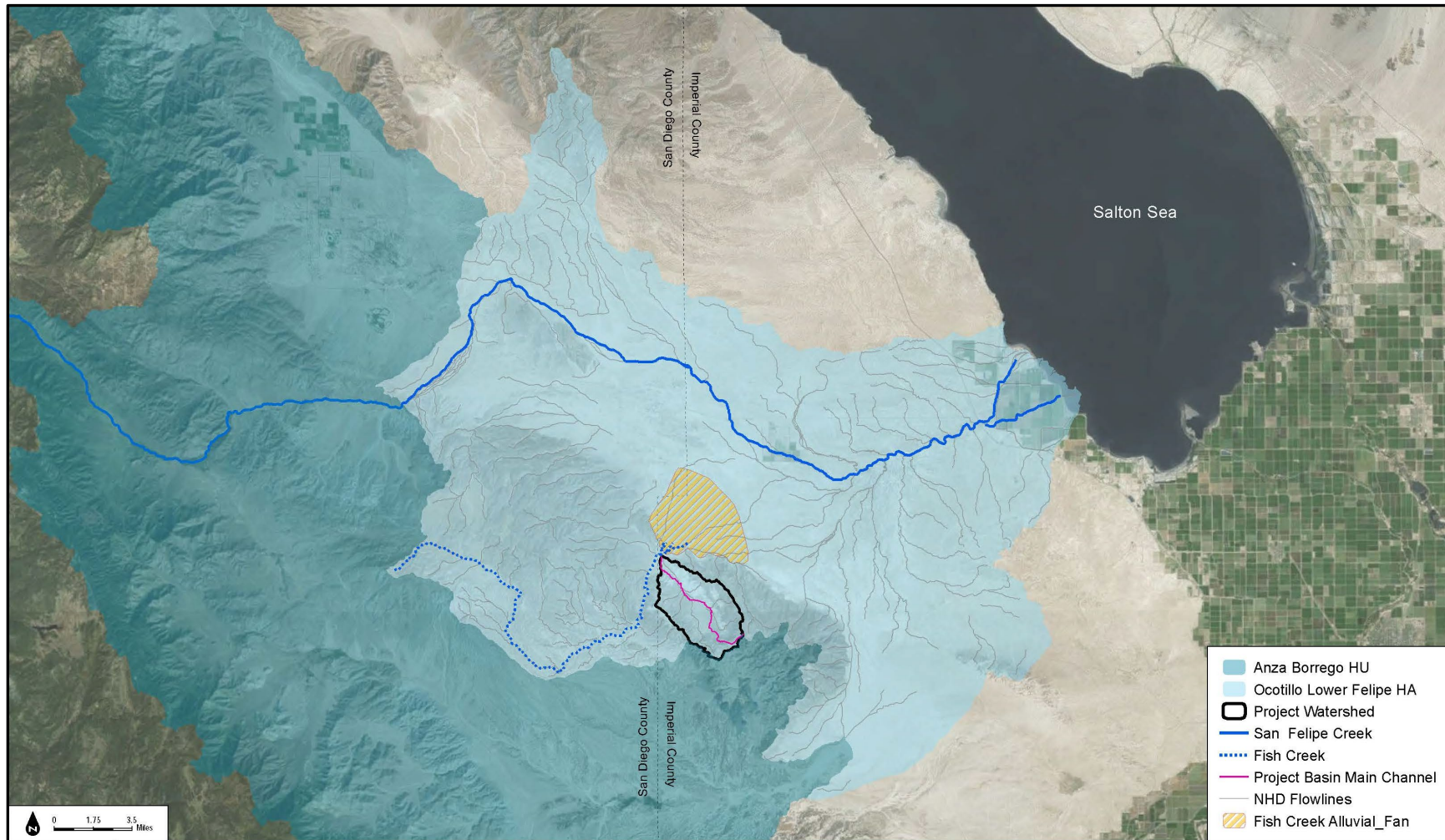
The Salton Sea is 303d listed for a number of contaminants that include arsenic, low dissolved oxygen (DO), nutrients, salinity, and toxicity. The Imperial Valley Drains are listed for sedimentation/siltation and selenium, in addition to a number of pesticides and herbicides. The 303d list indicates that selenium originates from the upper Colorado River basin, which does not include the San Felipe Creek drainage.

A Total Maximum Daily Load (TMDL) has been established for sedimentation/siltation in the Imperial Valley Drains, which reduced the current load of 11,000 tons per year of sediment to 4,600 tons per year. Sediment loads from Fish Creek Wash and San Felipe Creek do not reach the Imperial Valley Drains as San Felipe Creek discharges directly into the Salton Sea.

Groundwater quality for well 12S9E23D001S is generally characterized as sodium chlorite sulfate water. Total dissolved solids (TDS) concentrations range between 1,650 and 1,740 milligrams per liter (mg/L) (Dudek 2018).

### **Viking Ranch Restoration Site**

The following discussion is based entirely on the HMMP prepared for the Viking Ranch site by Dudek (2021; Appendix D-4). A site reconnaissance of the Viking Ranch site was conducted on June 1, 2018, by Hugh McManus of Dudek. The site reconnaissance consisted of walking the site and viewing adjacent properties from the site. Photographs of the Viking Ranch site are included in Appendix C of Appendix D-4.

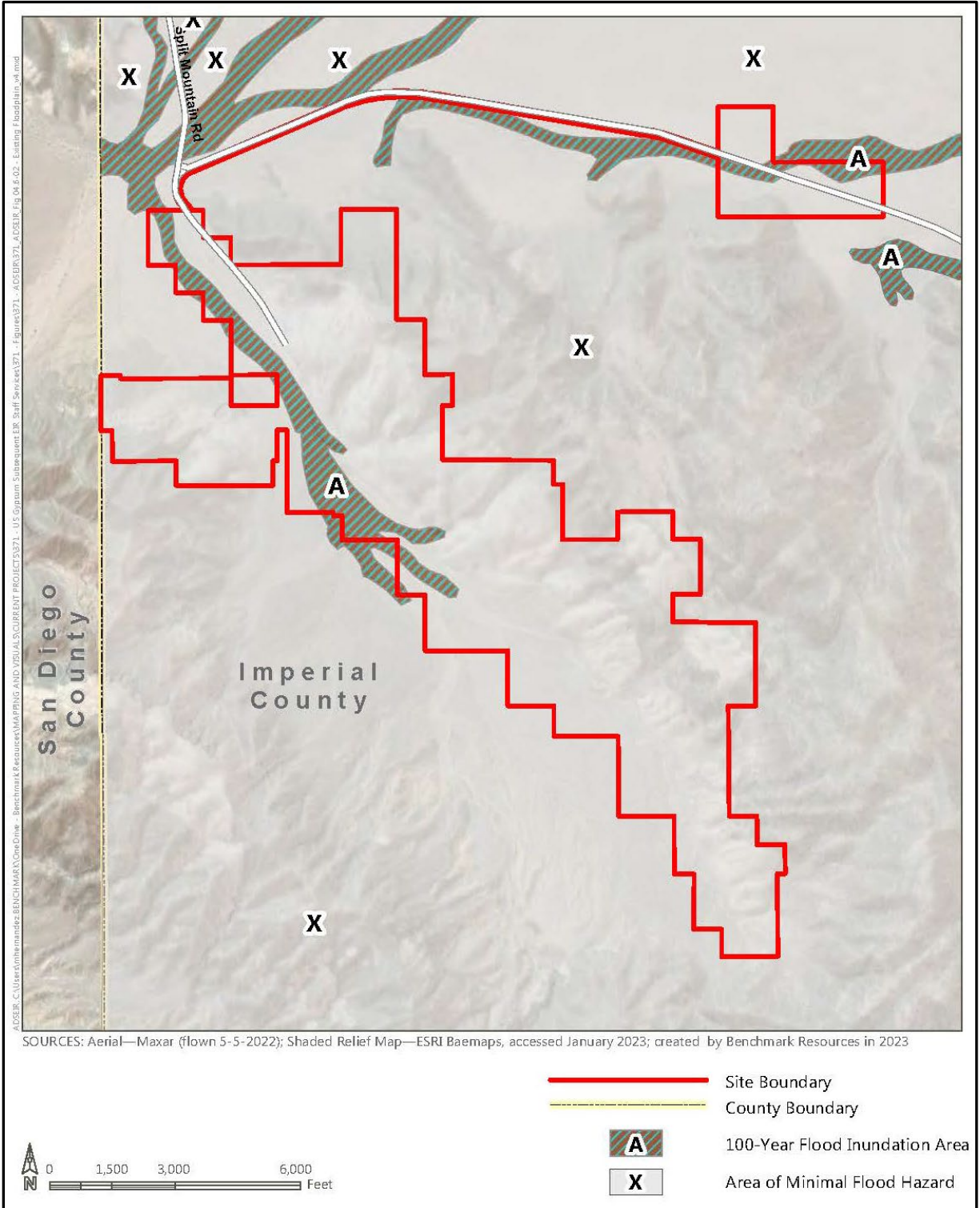


SOURCE: DUDEK 2018; Figure 2-1

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**Figure 4.6-1**  
**Hydrologic Setting**

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

Figure 4.6-2  
 Existing Floodplain

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### ***Surface Water***

According to Dudek, Coyote Creek splits just northwest of the Viking Ranch site and bisects both the southwestern and northeastern corners of the site. Berms, located along the entire north side of the site, appear to divert flood water from the north to the east and off the site. Surface water appeared to have flowed over areas of the site. Various water-cut channels and mud cracks were observed, likely due to runoff of water from high rainfall events (Dudek 2021).

Surface water was observed by Dudek staff flowing along the southern boundary of the site from the west to the east. The source of the surface water was not observed due to dense vegetation but was likely irrigation water from the adjacent property to the south. Surface water was flowing at roughly 0.25 cubic feet per second (cfs) and sustained flow for over 50 feet prior to infiltrating into the underlying sediments. Plant health and type near the surface water flow indicated that surface water regularly flows in that area. Surface water was not observed flowing off of the site (Dudek 2021).

According to Dudek, no unnatural pits, ponds, or lagoons were observed on site. Ponding of stormwater likely occurs in various low points on the site as observed by the presence of mud cracks. Incised channels, likely associated with Coyote Creek flooding, were observed throughout the site (Dudek 2021).

Traces of Coyote Creek currently bisect the property and, based on observations during the site reconnaissance performed by Dudek (2021), surface water occasionally flows southeast across the site during high rainfall events. According to Dudek (2021), historical aerial imagery and topographic maps show that Coyote Creek meandered across the site creating braided channels through the unconfined basin area. Coyote Creek is within the Borrego Springs Sub-basin 18100203, which lies within the same sub-basin as the proposed Quarry expansion. The area receives water from direct precipitation that flows from Coyote Creek, the surrounding Coyote and Indianhead mountains and which provides runoff to the surrounding watershed, and potentially from irrigation runoff from adjacent farmlands.

Agricultural land modifications were constructed that diverted hydrology of Coyote Creek around the agricultural field. These topographic modifications included excavation of ditches and construction of berms to protect the orchard from flooding. Based on a review of historical aerial imagery, the majority of water was diverted around the north end of the Viking Ranch site (Dudek 2021).

### ***Floodplain***

The floodplain on the Viking Ranch site is shown on Figure 2-4, “Old Kane Springs Road Preservation Site.” As a result of its former use as an orchard, the Viking Ranch site is hydrologically disconnected from the Coyote Creek floodplain. The flow characteristics of the site have been substantially altered from natural conditions and windrows of coarse organic materials (from ground up orchard trees) and onsite topographic modifications impede water flows (Dudek 2021).

### ***Groundwater***

Based on sources searched by Environmental Data Resources (EDR), five water wells were mapped within 1 mile of the site. Water wells are located to the south of the site. The most recent water level measurement for the nearest well was recorded in 2008 and is approximately 336.34 feet below ground surface (bgs) (USGS 2018, cited in Dudek 2021). During the site reconnaissance, one additional water well was observed near the southwest corner of the site. The most recent water level measurements from the on-site well was recorded in 2008 and measured 340.10 feet bgs. The highest groundwater

level measurement from the on-site well was recorded in 1998 and measured 250 feet bgs (USGS 2018, cited in Dudek 2021).

### **Old Kane Springs Preservation Site**

According to Dudek (2021), historical aerial imagery and topographic maps show that the Old Kane Springs site receives water from direct precipitation that flows from the Vallecito Mountains into an unnamed stream that flows down to the valley floor. The stream meanders across the site creating braided channels through the unconfined basin area. The Old Kane Springs site is within the Borrego Springs Sub-basin (18100203), which lies within the same sub-basin as the Quarry expansion area.

According to Dudek (2021), USFWS NWI mapping shows riverine features on the site continue off site to the east and flow through the alluvial fan until it widens and becomes undefined near Split Mountain Road, approximately four miles east of the site. At this point, the features are no longer mapped. Hydrologic connectivity to downstream washes or known creeks and rivers is unclear, but it is likely that sheet flows or groundwater from these features that cross the site eventually drain into San Felipe Creek and later the Salton Sea, east of the site.

## **4.6.2 Regulatory Setting**

### **4.6.2.1 Federal**

#### **Federal Water Pollution Control Act (33 USC 1251 et seq.)**

The Federal Water Pollution Control Act, commonly known as the Clean Water Act (CWA), established the basic structure for regulating discharges of pollutants into the waters of the United States. This gave U.S. Environmental Protection Agency (EPA) the authority to implement pollution control programs such as setting water quality standards and criteria for contaminants in surface waters. The CWA does not deal directly with groundwater or with water quantity issues. Section 208 requires the use of best management practices (BMPs) to control releases of pollutants in stormwater at construction sites. Section 303(d) requires the states identify waters for which effluent limits are not stringent enough to implement the applicable water quality standards, and to prepare plans for improving the quality of these water bodies. Section 401 requires the federal government to obtain certification from the state that a project is consistent with state water quality standards. Section 402(p)(3)(B)(iii) authorizes the National Pollutant Discharge Elimination System (NPDES) permit program to control water pollution by regulating point sources that discharge pollutants into waters of the United States. Point sources are discrete conveyances such as pipes or human-made ditches. Section 404 authorizes the U.S. Army Corps of Engineers to regulate projects that will discharge dredge or fill materials into waters of the United States.

Construction projects and many industrial facilities must obtain NPDES permits to control the release of industrial chemicals in stormwater runoff. Stormwater discharges are generated by runoff from land and impervious areas such as paved streets, parking lots, and building rooftops during rainfall events that often contain pollutants in quantities that could adversely affect water quality. The primary method to control stormwater discharges is through the use of BMPs.

Anti-degradation Standards of the CWA dictate that once the existing uses of a water body have been established—by evaluating the water's quality relative to uses already attained—a State/Tribe must maintain the level of water quality that has been identified as being necessary to support those existing uses. The "use" of a water body is the most fundamental articulation of its role in the aquatic and human environments.



The "designated" uses of a water body are an expression of goals for the water, such as supporting aquatic life and human activities, including recreation and use as a public water supply. That is, these uses may not currently be attained for the water body. The general parameters of a State or Tribe's antidegradation program must address the following three categories:

- *Tier 1*: Protection of water quality for existing uses by maintaining the water quality necessary to support those uses. Tier 1 is applicable to all surface waters;
- *Tier 2*: Protection of high-quality waters, or water bodies where existing water quality conditions are better than necessary to protect CWA 101(a) designated uses. High quality waters must be addressed by the State or Tribe's antidegradation program because of the importance of such waters as a resource with economic, public health, and ecological value; and
- *Tier 3*: Outstanding National Resource Waters (ONRWs), or waters that have unique characteristics to be preserved (e.g., waters of exceptional recreational, environmental, or ecological significance). While States/Tribes are required to have provisions in their antidegradation policy that address ONRWs, it is left to the State/Tribe's discretion to identify waters as ONRWs.

At a minimum, States/Tribes must apply their antidegradation program to activities that are regulated under State, Tribal, or federal law, including:

- Any activity that requires a permit or water quality certification.
- Any activity subject to State/Tribal non-point source control requirements or regulations.
- Any activity that is otherwise subject to State/Tribal regulations specifying that water quality standards are applicable (EPA 2020).

#### **4.6.2.2 State and Regional**

##### **Porter-Cologne Water Quality Control Act**

The Porter-Cologne Water Quality Control Act (Division 7 of the California Water Code) [Section 13000 et seq.] was enacted to establish a regulatory program to protect water quality and beneficial uses of all waters of the State of California. It created the State Water Resources Control Board (SWRCB) and nine regional water quality control boards (RWQCBs) to plan, implement, manage, and enforce water quality protection and management. The RWQCBs are empowered by the Porter-Cologne Water Quality Control Act to require compliance with State and local water quality standards. The project site is located within the Colorado River Basin and is regulated by the Colorado River Basin RWQCB.

##### **State Water Resources Control Board**

The SWRCB administers regulations governed by the U.S. Environmental Protection Agency (USEPA) requiring the permitting of stormwater-generated pollution under the National Pollutant Discharge Elimination System (NPDES). In turn, SWRCB's jurisdiction is administered through nine regional water quality control boards.

##### **Statewide Construction General Permit**

Dischargers whose projects disturb one or more acres of soil, or less than one acre but are part of a larger common plan of development that in total disturbs one or more acres, are required to obtain coverage under SWRCB Order 2012-0006-DWQ (amending Order 2009-0009-DWQ as amended by 2010-0014-DWQ), the General Permit for Storm Water Discharges Associated with Construction

and Land Disturbance Activities (Construction General Permit). Construction activity subject to this permit also includes linear underground/overhead projects, such as the proposed pipeline, disturbing at least one acre. Construction and demolition activities subject to this permit include clearing, grading, grubbing, and excavation, or any other activity that results in a land disturbance equal to or greater than 1.0 acre.

Linear Utility Project (LUP) construction includes those activities necessary for installation of underground and overhead linear facilities (e.g., conduits; substructures; pipelines; towers and poles; cables and wires; connectors; switching, regulating, and transforming equipment; and associated ancillary facilities). As Order 2003-0007-DWQ previously regulated LUP construction activities, these projects are now regulated by Attachment A of Order 2012-0006-DWQ.

Permit applicants are required to submit a Notice of Intent (NOI) to the SWRCB and to prepare a Storm Water Pollution Prevention Plan (SWPPP). The SWPPP identifies best management practices (BMPs) that must be implemented to reduce construction effects on receiving water quality based on potential pollutants. The BMPs identified are directed at implementing sediment- and erosion-control measures and other measures to control potential chemical contaminants. The SWPPP also includes descriptions of the BMPs to reduce pollutants in stormwater discharges after all construction phases are completed at the site (postconstruction BMPs).

The Construction General Permit requires a risk-level assessment for construction sites, an active stormwater effluent monitoring and reporting program, rain event action plans, and numeric effluent limitations and numeric action levels for pH and turbidity.

#### **Statewide Industrial General Permit**

The SWRCB issued Water Quality Order 97-03-DWQ, NPDES General Permit No. CAS000001 WDRs for discharges of stormwater associated with industrial activities. This General Permit is intended to cover all new or existing stormwater discharges and authorized nonstormwater discharges from facilities required by federal regulations to obtain a permit, including those designated by the RWQCBs, facilities whose operators seek coverage under this General Permit, and facilities required by future USEPA stormwater regulations. Attachment 1 of the permit describes the types of facilities that are covered, summarized as follows:

- facilities that are subject to stormwater effluent limitations guidelines, new source performance standards, or toxic pollutant effluent standards (40 C.F.R. Subchapter N)
- manufacturing facilities,
- mining/oil and gas facilities,
- hazardous waste treatment, storage, or disposal facilities,
- landfills, land application sites, and open dumps that receive industrial waste,
- recycling facilities such as metal scrap yards, battery reclaimers, salvage yards, and automobile yards,
- steam electric-generating facilities,
- transportation facilities that conduct any type of vehicle maintenance such as fueling, cleaning, repairing, etc.,

- sewage treatment plants, and
- certain facilities (often referred to as “light industry”) where industrial materials, equipment, or activities are exposed to stormwater.

Requirements of this permit include effluent limitations, receiving water limitations, SWPPP preparation, and stormwater monitoring programs. Facility operators must control pollutant discharges using the best available technology economically achievable and best conventional pollutant control technology. Discharges from facilities must not cause or contribute to a violation of an applicable water quality standard.

### ***Colorado River Basin Regional Water Quality Control Board***

As described previously, the project site and off-site mitigation sites are located within the Colorado River Basin and are under the jurisdiction of the Colorado River Basin Regional Water Quality Control Board.

### **Water Quality Control Plan for the Colorado River Basin**

The Colorado River Basin RWQCB implements the Water Quality Control Plan for the Colorado River Basin (Basin Plan), which designates beneficial uses, establishes water quality objectives, and contains implementation programs and policies to achieve those objectives for all waters addressed through the plan (California Water Code Sections 13240-13247). The Basin Plan provides quantitative and narrative criteria for a range of water quality constituents applicable to certain receiving water bodies and groundwater basins within the Colorado River Basin. Specific criteria are provided for the larger, designated water bodies within the region, as well as general criteria or guidelines for surface waters and groundwaters. In general, the narrative criteria require that degradation of water quality does not occur due to increases in pollutant loads that will adversely affect the designated beneficial uses of a water body. Surface waters within the Ocotillo Lower Felipe Hydrologic Area (722.20) and groundwaters within the Anza-Borrego Hydrologic Unit (722.00) have been assigned multiple beneficial uses including wildlife habitat, freshwater habitat, recreation, agricultural supply, and groundwater recharge.

### **Senate Bill 610—Water Supply Assessment**

Water Code Sections 10910 through 10915 were amended by Senate Bill 610 (SB 610) in 2002. SB 610 requires that under specific circumstances, as detailed below, an assessment of available water supplies must be conducted. The purpose of the assessment is to determine if available water supplies are sufficient to serve the demand generated by the project, as well as the reasonably foreseeable demand in the region over the next 20 years under average normal year, single dry year, and multiple dry year conditions. Water Code Section 10910 was further amended by SB 1262 on September 24, 2016, to require a Water Supply Assessment to include additional information regarding the groundwater basin designation and adjacent water systems.

### **California Surface Mining and Reclamation Act**

The Surface Mining and Reclamation Act of 1975 (SMARA) (Public Resources Code [PRC], Sections 2710–2796) and its implementing regulations (California Code of Regulations [CCR], Title 14, §3500 et seq.) provide a comprehensive surface mining and reclamation policy with the regulation of surface mining operations to assure that adverse environmental impacts are minimized, and mined lands are reclaimed to a usable condition. SMARA also encourages the production, conservation, and protection of the state’s mineral

resources. PRC Section 2207 provides annual reporting requirements for all mines in the state, under which the State Mining and Geology Board is also granted authority and obligations.

SMARA CCR Section 3706 applies to the discussion of the project's potential for hydrology and water quality impacts:

- a) Surface mining and reclamation activities shall be conducted to protect on-site and downstream beneficial uses of water in accordance with the Porter-Cologne Water Quality Control Act, Water Code Section 13000, et seq., and the Federal Clean Water Act, 33 U.S.C. Section 1251, et seq.
- b) The quality of water, recharge potential, and storage capacity of ground water aquifers which are the source of water for domestic, agricultural, or other uses dependent on the water, shall not be diminished, except as allowed in the approved reclamation plan.
- c) Erosion and sedimentation shall be controlled during all phases of construction, operation, reclamation, and closure of a surface mining operation to minimize siltation of lakes and watercourses, as required by the Regional Water Quality Control Board or the State Water Resources Control Board.
- d) Surface runoff and drainage from surface mining activities shall be controlled by berms, silt fences, sediment ponds, revegetation, hay bales, or other erosion control measures, to ensure that surrounding land and water resources are protected from erosion, gulying, sedimentation and contamination. Erosion control methods shall be designed to handle runoff from not less than the 20 year/1-hour intensity storm event.
- e) Where natural drainages are covered, restricted, rerouted, or otherwise impacted by surface mining activities, mitigating alternatives shall be proposed and specifically approved in the reclamation plan to assure that runoff shall not cause increased erosion or sedimentation.
- f) When stream diversions are required, they shall be constructed in accordance with: (1) the stream and lake alteration agreement between the operator and the Department of Fish and Game; and (2) the requirements of the Federal Clean Water Act, Sections 301 (33 U.S.C. 1311) and Section 404 (33 U.S.C. 1344) and/or Section 10 of the Rivers and Harbors Act of 1899 (33 U.S.C. 403).
- g) When no longer needed to achieve the purpose for which they were authorized, all temporary stream channel diversions shall be removed, and the affected land reclaimed.

### **Sustainable Groundwater Management Act**

On September 16, 2014, Governor Edmund G. Brown Jr. Signed a three-bill package known as the Sustainable Groundwater Management Act (SGMA). The legislation allows local agencies to customize groundwater sustainability plans to their regional economic and environmental needs. The three bills that make up SGMA are AB 1739, SB 1319, and SB 1668. The SGMA provides for sustainable management of groundwater basins; enhances local management of groundwater consistent with rights to use or store groundwater; establishes minimum standards for effective; continuous management of groundwater; provides local groundwater agencies with the authority; technical and financial assistance needed to maintain groundwater supplies; avoids or minimizes impacts for land subsidence; improves data collection and understanding of groundwater resources and management; increases groundwater storage and removes impediments to recharge; and empowers local agencies to manage groundwater basins, while minimizing State intervention. The SGMA allows agencies, a combination of local agencies, or counties to establish a Groundwater Sustainability Agency (GSA), who is responsible for developing and implementing a

groundwater sustainability plan (GSP). Imperial County serves as the GSA for all fifteen groundwater basins and subbasins within the County.

#### **4.6.2.3 Local**

##### **Imperial County General Plan**

The goals, objectives, and policies in the *Imperial County General Plan* are intended to inform decision makers, the general public, public agencies, and those doing business in the County of the County's position on land use-related issues and to provide guidance for day-to-day decision-making. The following objectives and policies contained within the *Imperial County General Plan* pertain to hydrologic resources and the proposed project:

##### **Water Element**

##### **Goal 4:**

Protection of Water Resources from Hazardous Materials. The County will adopt and implement ordinances, policies, and guidelines that assure the safety of County ground and surface waters from toxic or hazardous materials and wastes.

##### *Programs:*

- The County of Imperial shall make every reasonable effort to limit or preclude the contamination or degradation of all groundwater and surface water resources in the County.
- All development proposals brought before the County of Imperial shall be reviewed for potential adverse effects on water quality and quantity, and shall be required to implement appropriate mitigation measures for any significant impacts.

##### **Seismic/Public Safety Element and Multi-Jurisdictional Hazard Mitigation Plan**

##### **Goal 1:**

Land Use Planning and Public Safety. Include public health and safety considerations in land use planning.

##### **Objective 1.2:**

Regulate development within flood-way areas in accordance with Federal Emergency Management Agency (FEMA).

##### **Goal 2:**

Emergency Preparedness. Minimize potential hazards to public health, safety, and welfare and prevent the loss of life and damage to health and property resulting from both natural and human-related phenomena.

##### **Objective 2.3:**

Identify potential risk and damage due to inundation from dam failure and/or water releases.

##### *Flood Hazards Programs:*

1. Provide technical and policy information regarding flood hazards to developers, interested parties, and the general public.
2. Regulate and restrict development near major water courses and floodplains through application of appropriate land use measures.
3. Both the ground floor elevation of any building for human occupancy

and the driving surface, if designated evacuation routes within the 100-year floodplain, shall be constructed above the projected profile of a 100-year flood event. 4. Require all new development for human occupancy within the 100-year floodplain to be adequately flood-proofed. 5. Establish technical design criteria which minimizes or mitigates impacts associated with crossing of floodplains by development. Unless such engineering alternatives are implemented, development in floodplains is to be restricted or prohibited.

### ***Imperial County Multi-Jurisdictional Hazard Mitigation Plan***

Completed in January 2021, the Imperial County Multi-Jurisdictional Hazard Mitigation Plan (MHMP) identifies and rates local hazards and provides goals, objectives, and action plans to mitigate these hazards. The participating jurisdictions are Imperial County; the cities of Brawley, Calexico, Calipatria, El Centro, Holtville, Imperial, and Westmorland; Imperial Irrigation District; and the Imperial County Office of Education. Hazards identified in the MHMP include flooding and dam failure as well as earthquakes, extreme weather, wildfire, hazardous materials, biological threats, volcanoes, and terrorism.

### **County of Imperial Flood Management Plan**

The County of Imperial Department of Public Works (DPW) and the engineering departments of the incorporated areas are responsible for designing, constructing, and maintaining flood control facilities in their respective jurisdictions. These responsibilities include evaluation of proposed construction projects with regard to their potential to increase flood hazard. The County of Imperial Office of Emergency Services (OES) developed the Flood Management Plan (FMP) (County 2007) to identify known flood problems, reduce flooding and flood hazards, and protect the beneficial functions of floodplains. The County of Imperial recognizes that flood management is a comprehensive process that requires constant planning and implementation of flood protection and mitigation measures, strict land use regulations and enforcement, and community-wide awareness and vigilance. Included in this FMP are the County of Imperial and cities of Brawley, Calexico, Calipatria, El Centro, Holtville, Imperial, and Westmorland, with participation and input from the Imperial Irrigation District, Imperial County School District, and the Salton Community Services District.

### **San Diego County General Plan**

The goals and policies of the *San Diego County General Plan* provide direction to future growth and development in the county. The following goals and policies from the *San Diego County General Plan Conservation Element* relate to hydrology and water quality and apply to proposed actions at the Viking Ranch Restoration Site and Old Kane Springs Road Preservation Site, located in unincorporated San Diego County.

#### ***Conservation and Open Space Element***

**Goal COS-4.5:** Water Management. A balanced and regionally integrated water management approach to achieve the long-term viability of the County's water quality and supply.

**Policy COS-4.1:** Water Conservation. Require development to reduce the waste of potable water through use of efficient technologies and conservation efforts that minimize the County's dependence on imported water and conserve groundwater resources.

- Policy COS-4.2:** Drought-Efficient Landscaping. Require efficient irrigation systems and in new development encourage the use of native plant species and non-invasive drought tolerant/low water use plants in landscaping.
- Policy COS-4.3:** Stormwater Filtration. Maximize stormwater filtration and/or infiltration in areas that are not subject to high groundwater by maximizing the natural drainage patterns and the retention of natural vegetation and other pervious surfaces. This policy shall not apply in areas with high groundwater, where raising the water table could cause septic system failures, moisture damage to building slabs, and/or other problems.
- Policy COS-4.4:** Groundwater Contamination. Require land uses with a high potential to contaminate groundwater to take appropriate measures to protect water supply sources.
- Policy COS-4.5:** Recycled Water. Promote the use of recycled water and gray water systems where feasible.
- Goal COS-5:** Protection and Maintenance of Water Resources. Protection and maintenance of local reservoirs, watersheds, aquifer-recharge areas, and natural drainage systems to maintain high-quality water resources.
- Policy COS-5.1:** Impact to Floodways and Floodplains. Restrict development in floodways and floodplains in accordance with policies in the Flood Hazards section of the Safety Element. Development in floodways and floodplains has the potential to alter natural hydrologic flow and cause soil erosion and increased stormwater runoff—including loss of wetland and health issues related to surface and groundwater contamination.
- Policy COS-5.2:** Impervious Surfaces. Require development to minimize the use of directly connected impervious surfaces and to retain stormwater run-off caused from the development footprint at or near the site of generation.
- Policy COS-5.3:** Downslope Protection. Require development to be appropriately sited and to incorporate measures to retain natural flow regimes, thereby protecting downslope areas from erosion, capturing runoff to adequately allow for filtration and/or infiltration, and protecting downstream biological resources.
- Policy COS-5.4:** Invasive Species. Encourage the removal of invasive species to restore natural drainage systems, habitats, and natural hydrologic regimes of watercourses.
- Policy COS-5.5:** Impacts of Development to Water Quality. Require development projects to avoid impacts to the water quality in local reservoirs, groundwater resources, and recharge areas, watersheds, and other local water sources.

### 4.6.3 Significance Criteria and Analysis Methodology

#### 4.6.3.1 Significance Criteria

##### 2008 EIR/EIS Significance Criteria

The 2008 EIR/EIS evaluated the project's hydrology and water quality impacts using the following significance criteria:

The significance criteria for this analysis were developed from Appendix G of the CEQA Guidelines. The proposed project would have a significant impact on hydrology and water quality if it would:

- Violate any water quality standards or waste discharge requirements;
- Deplete groundwater supplies such that there would be a net deficit in aquifer volume or a lowering of the local groundwater table (e.g., the production rate of pre-existing nearby wells would drop to a level which would not support existing land uses or planned uses for which a permit has been granted); or
- Otherwise substantially degrade water quality.

##### CEQA Appendix G Thresholds of Significance

Based on Appendix G of the CEQA Guidelines, the proposed project would have a significant impact to hydrology and water quality if it would:

- a) violate any water quality standards or waste discharge requirements or otherwise substantially degrade surface or groundwater water quality;
- b) substantially decrease groundwater supplies or interfere substantially with groundwater recharge such that the project may impede sustainable groundwater management of the basin;
- c) substantially alter the existing drainage pattern of the site or area, including through the alteration of the course of a stream or river or through the addition of impervious surfaces, in a manner which would:
  - result in substantial erosion or siltation on- or off-site,
  - substantially increase the rate or amount of surface runoff in a manner which would result in flooding on- or offsite,
  - create or contribute runoff water which would exceed the capacity of existing or planned stormwater drainage systems or provide substantial additional sources of polluted runoff, or
  - impede or redirect flood flows;
- d) in flood hazard, tsunami, or seiche zones, risk release of pollutants due to project inundation; or
- e) conflict with or obstruct implementation of a water quality control plan or sustainable groundwater management plan.

#### 4.6.3.2 Analysis Methodology

Evaluation of the hydrology and water quality impacts in this section is based primarily on the Hydrologic and Water Quality Study prepared by Dudek (2018). This study serves as an update to the 2004 Hydrology Study and Drainage Analysis prepared by Joseph Bonadiman & Associates in support of the 2008 EIR/EIS. The Bonadiman hydrology study included a rainfall/runoff analysis comparing existing with proposed conditions



for the drainage area west of the proposed berm and provided a conclusion that natural flows could be conveyed safely around the berm within a graded channel with a bottom width of 50 feet and a berm height of 5 feet (assuming 2 feet of freeboard). Mitigation Measure 3.3-7, as provided in the 2008 EIR/EIS, consists of this berm and the accompanying conveyance channel, and is required to convey flows around the project site.

While the Bonadiman Hydrology Study incorporated the 50-foot-wide channel to convey flows around the project site, this analysis was conducted following the latest grading plans which do not include the conveyance channel. In addition, the 40-acre Georgia Pacific parcel was not included in the Bonadiman hydrology study (as this parcel was included later). For these reasons, the updated 2018 Hydrologic Study and updated 2016 Jurisdictional Delineation were prepared.

The 2018 Hydrologic Study (Dudek 2018) provides a detailed hydrologic analysis of the Quarry watershed for both the existing and proposed conditions as well as a hydraulic analysis to assist with determining the proposed impacts to the mapped U.S. ACOE jurisdictional area (HES 2016). The hydraulic analysis was specifically designed to identify potential impacts related to the proposed berm intended to divert runoff from entering the extraction sites, and included scour and sediment deposition analyses. Analyses were conducted using a spectrum of storm events relevant to jurisdictional delineation in the arid southwest (2-year, 5-year, 10-year), as well as storm events relevant to design assessment (25-year and 100-year). All existing and proposed components of the project within the Quarry watershed, including the 40-acre George Pacific property, were included in this analysis. Detailed methodologies for the hydrologic and hydraulic analyses are provided in Appendix G-1.

Evaluation of groundwater levels and quality with project implementation were based on the *Update on Groundwater Conditions* memorandum prepared by Todd Groundwater in 2018 (Appendix G-2). Groundwater conditions were assessed with respect to thresholds for short-term water level changes, long-term water level changes, and groundwater quality. The memorandum focuses on recent changes in groundwater conditions that may have contributed to the sudden onset of adverse flow conditions in San Felipe Creek and the San Sebastian Marsh, which is critical habitat for desert pupfish. Current groundwater monitoring of Coyote Wells Valley Basin and changes in groundwater conditions in recent years were examined.

#### **4.6.4 Project Impacts and Mitigation Measures**

##### **4.6.4.1 2008 EIR/EIS Impact Analysis**

Under the 2008 EIR/EIS, impacts to hydrology and water quality were determined to be less than significant with mitigation or less than significant.

#### **Impacts to Surface Water**

Based on hydrology reports completed for the USG Expansion/Modernization Project (Joseph E. Bonadiman & Associates 2004), the 2008 EIR/EIS found that the expansion of the Quarry would generally not produce a significant reduction of runoff of tributaries to Fish Creek because 1) the Quarry expansion is adjacent to a mountain range that provides the smallest contribution of rainfall in the entire drainage area due to topographic and geologic conditions; and 2) rainfall east of the Quarry or within the Quarry will percolate into the ground, recharging the water table. It was concluded that the proposed Quarry expansion will have no effect on the natural groundwater process, and groundwater would continue to transigrate towards Fish

Creek along the standard pattern. However, the main drainage patterns from the western mountain range of the drainage area produces the largest flow rate tributary to Fish Creek, potentially causing a disruption of periodic flows at the Quarry site. Consequently, the 2008 EIR/EIS includes the following mitigation measure to address the disruption in flow:

**Mitigation Measure 3.3-7:** *An earthen berm will be constructed along the west side of the Quarry in order to preserve the natural drainage pathway. The berm would work as a natural earth channel, to preserve existing flow characteristics in the drainage area and protect the Quarry from flood waters by diverting water away from the Quarry and towards the Fish Creek Wash. This channel requires a minimum 50-foot bottom width for the floodway and 2:1 channel side slopes. The graded channel only requires an earthen berm of approximately 5 feet high, assuming 2 feet of freeboard. The berm would be 5 feet high by 20 feet wide, and would provide an adequate solution to contain and divert run-off.*

### Impacts to Groundwater

The 2008 EIR/EIS indicates that the existing and proposed Quarry water wells are located within the Borrego Valley Groundwater Basin (7-24). The Borrego Valley Groundwater Basin is distinctly different from the Coyote Wells Valley Groundwater Basin (7-29) in which the USG production wells for the Plant are located. The Borrego Valley Groundwater Basin consists of sedimentary deposits derived from the surrounding mountain ranges. Groundwater is reported to occur in two aquifers. The shallow aquifer is present at depths above approximately 100 feet below ground surface (bgs) in the center of the basin with total dissolved solids levels reported in the range of 8,000 parts per million (ppm). An aquitard that may be 100 to 200 feet thick separates the shallow aquifer from the lower aquifer. The lower aquifer extends to at least 650 feet bgs at some locations with TDS levels reported in the range of 1,400 ppm. The primary drainage in the Ocotillo Valley is San Felipe Creek. San Felipe Creek extends from the Peninsular Ranges to the Salton Sea. In the area of proposed Quarry Well No. 3, the primary surface drainage is the Fish Creek Wash. San Felipe Creek and Fish Creek Wash only flow seasonally, when runoff occurs from the upper reaches of their respective watersheds. The 2008 EIR/EIS determined that the increase in pumping at the Quarry that would result from development and operation of Well No. 3 would not result in the substantial depletion of the Borrego Valley Groundwater Basin. This is because the proposed increase in pumping would be minimal relative to the existing use of groundwater for agriculture and relative to the natural rate of discharge from the basin. The proposed project would increase groundwater pumping in the Borrego Valley Groundwater Basin from the current permit limit of approximately 7.8 AF/yr to approximately 26 AF/yr. In contrast, the natural discharge from the Borrego Valley Groundwater Basin is 2,200 AF/yr to 4,500 AF/yr and the agricultural pumping ranges from 9,250 AF/yr to over 12,000 AF/yr. Therefore, the potential of the proposed project to have a perceptible effect on the existing water levels or rate of decline of the basin was found to be less than significant. Additionally, water quality data from the USG test hole also demonstrates that the new well would tap groundwater that is part of the lower aquifer. Discharge at San Felipe Creek Spring and Fish Creek Spring is from the shallow aquifer. Therefore, the potential of the proposed project to affect the flow of the springs was found to be less than significant. The 2008 EIR/EIS determined that the potential of pumping at Well No. 3 to degrade water quality by causing the vertical migration of saline water from the shallow aquifer to the deeper aquifer would be less than significant. This is because the USG test hole drilling results indicate that the shallow aquifer is not present in the area of the proposed Well No. 3.

#### **4.6.4.2 2019 SEIS Impact Analysis**

The 2019 SEIS further evaluated the proposed project under the National Environmental Policy Act (NEPA) based on the new information provided in the updated technical studies prepared for the project. The 2019 SEIS determined that project impacts related to the redirection of flood flows and water quality would be less than significant and no new mitigation was provided.

#### **4.6.4.3 Substantial Project Changes**

##### **Project Revisions**

The proposed Quarry expansion, and the proposed Well No. 3 and associated pipeline, are substantially in the same location and same configuration as the features that were evaluated in the 2008 EIR/EIS. Therefore, any minor revisions would not create a new or worsen an existing significant impact related to hydrology and water quality. However, the restoration of the Viking Ranch site and preservation of the Old Kane Springs Road site are proposed in response to mitigation required by the 2019 SEIS, and these are new actions under the proposed project.

##### **Changed Circumstances**

The Borrego Valley Groundwater Basin (7-24) was modified in 2016 by the California Department of Water Resources (DWR). The basin was divided into two subbasins: Borrego Valley—Borrego Springs (7-24.01) and Borrego Valley—Ocotillo Wells (7-24.02) (DWR 2021a). The proposed Quarry Well No. 3 is located in the Ocotillo Wells subbasin.

On September 16, 2014, Governor Jerry Brown signed into law a three-bill legislative package—Assembly Bill 1739 (Dickinson), SB 1168 (Pavley), and SB 1319 (Pavley)—collectively known as the Sustainable Groundwater Management Act (SGMA), which requires governments and water agencies of high- and medium-priority basins to halt overdraft and bring groundwater basins into balanced levels of pumping and recharge. Under SGMA, these basins should reach sustainability within 20 years of implementing their sustainability plans. Through SGMA, DWR provides ongoing support to local agencies through guidance, financial assistance, and technical assistance. SGMA empowers local agencies to form Groundwater Sustainability Agencies (GSAs) to manage basins sustainably and requires the preparation of groundwater sustainability plans (GSPs) for crucial (i.e., medium to high priority) groundwater basins in California. Low- and very low-priority basins may adopt these plans, but are not required to, and neither are adjudicated basins. The project site is located within the Ocotillo Wells subbasin of the Borrego Valley Groundwater Basin, which has been designated a very low priority basin (DWR 2021b). In September 2015, the Imperial County Board of Supervisors provided notice to DWR that Imperial County had resolved to assume the role of GSA for all groundwater basins underlying the County. In its resolution to become a GSA (Imperial County Board of Supervisors Resolution No. 2015-122), the County expressed its commitment to sustainable groundwater use and cited its jurisdiction over groundwater basins county-wide. The County also cited its long experience and background in groundwater management and monitoring, including the County Groundwater Management Ordinance. As described under Section 2.2, “Project Background,” of Chapter 2, “Project Description,” the Settlement Agreement replaced Mitigation Measures 3.3-1 and 3.3-2 adopted in the 2008 EIR/EIS with new mitigation measures (Mitigation Measures 3.3-1-A through 3.3-1-G). The measures are intended to ensure that project impacts on individual groundwater wells within the Coyote Wells Groundwater Basin are less than significant. The Quarry is not located within the Coyote Wells Groundwater Basin. Therefore, the Settlement Agreement mitigation measures are not applicable to this analysis.

## New Information

A Jurisdictional Delineation (Hernandez Environmental Services 2016), Hydrologic and Water Quality Study (Hydrology Study) (Dudek 2018), and Update on Groundwater Conditions Memorandum (Todd Groundwater 2018) were completed as part of the 2019 SEIS.

The Jurisdictional Delineation identified a total 325.79 acres of unnamed streambeds within Quarry area and found that the expansion of quarrying activities would result in impacts to approximately 134.08 acres of CDFW, USACE, and RWQCB jurisdictional drainages. The Jurisdictional Delineation noted that Well No. 3 and the water supply pipeline would result in filling of all ephemeral streambeds and washes within the waterline/powerline area, and that these activities would result in impacts to 0.21 acres of CDFW, USACE, and RWQCB jurisdictional drainages. No wetland habitat was identified to occur at the Quarry, Well No. 3, or pipeline alignment. Little to no vegetation was observed to occur within any of the drainages evaluated. The Jurisdictional Delineation recommended avoidance and minimization measures to address potential impacts to wildlife, vegetation, and habitat that could occur during the disturbance of drainages during project construction.

The Hydrology Study evaluated the existing and proposed hydrology and water quality conditions for the Quarry watershed. The study focused on changes in hydrology due to mine expansion activities under the USG Expansion/Modernization Project. Based on the results of the study, it was recommended that the berm required by Mitigation Measure 3.3-7 of the 2008 EIR/EIS be armored along the westerly bank with rock riprap to decrease the likelihood and severity of erosion damage to the berm. The Hydrology Study did not evaluate the impacts of the development of the proposed Well No. 3 and associated pipeline, but noted that the 2008 EIR/EIS covered the potential impacts of these project components in detail, and further noted that the installation of the proposed water supply line to the Quarry would result in temporary construction related impacts to a number of ephemeral drainages, but these impacts would be less than significant as the anticipated impacts would not permanently modify the existing drainages.

The Update on Groundwater Conditions Memorandum (Todd 2018) was developed to assess groundwater conditions in the Coyote Wells Valley, Borrego Valley-Borrego Springs, Borrego Valley-Ocotillo Wells, and Ocotillo-Clark Valley groundwater basins, and to identify whether changes in the groundwater conditions of these basins may have contributed to the sudden onset of adverse flow conditions in San Felipe Creek and the San Sebastian Marsh, which is critical habitat for desert pupfish. With regard to the Borrego Valley-Ocotillo Wells subbasin, which the existing Quarry Well No. 2 and proposed Well No. 3 are located, the study notes that information on pumping in Ocotillo Wells is minimal, but the subbasin likely has very limited pumping. DWR estimated pumping of 256 AFY as part of its 2018 SGMA Basin Prioritization Process and Results (DWR 2021b). The study concludes that it is unlikely that the San Sebastian Marsh groundwater depletion is affected by current pumping at Well No. 2 because of the relatively large distance of more than seven miles from the San Sebastian Marsh; because both Well No. 2 pumps from the deeper aquifer; and because the San Sebastian Marsh is located within the Ocotillo-Clark Valley groundwater basin, and the shared boundary between the Ocotillo Wells subbasin and Ocotillo-Clark Valley groundwater basin is the trace of the Coyote Creek Fault and Superstition fault, which are regarded as barriers to groundwater flow. Based on the distance from the marsh, relatively low rate of pumping, and the presence of intervening faults and aquitards, the study concluded that pumping at Quarry Well No. 2 is unlikely to have caused changes in San Felipe Creek and the San Sebastian Marsh. The study also notes that other pumping in the basin is ongoing and minor, and that any changes in the basin since 2008 do not change the findings in the 2008 EIR/EIS.

Based on the results of the Jurisdictional Delineation, the 2019 SEIS recommended new mitigation that requires the restoration and preservation of offsite properties with similar hydrologic functions as the Quarry drainages to off-set the impacts to jurisdictional drainages within the Quarry.

### **Significance Determination**

Based on project revisions, changed circumstances, and new information that may create a new or increased significant impact, the County has amplified and augmented the analysis contained in the 2008 EIR/EIS. This evaluation is provided in the following impact analysis.

#### **4.6.4.4 Subsequent Environmental Analysis**

##### **Impact 4.6-1: The Project Could Violate Water Quality Standards or Waste Discharge Requirements or Otherwise Substantially Degrade Surface or Ground Water Quality**

#### **Quarry, Well No. 3, and Associated Pipeline**

Quarry operations and development of Well No. 3 and the associated pipeline would occur in substantially the same locations and in the same manner as previously described and evaluated in both the 2008 EIR/EIS and the 2019 SEIS. As these project components would remain essentially unchanged, no new or more severe water quality impacts would be expected to occur under the proposed project. However, since publication of the 2008 EIR/EIS, an updated Hydrologic and Water Quality Study (Dudek 2018; Appendix G-1) was prepared for the project which provides new information relevant to this analysis. Following is a summary of the findings of the updated 2018 Hydrology Study on water quality.

The proposed project's potentially adverse effects to downstream water quality are considered less than significant due to the following:

- Most, if not all, water would be retained within the proposed excavation pits. As a result, the total volume of water discharged from the Quarry watershed would be reduced.
- The proposed project is not anticipated to adversely impact the water quality in the Salton or Imperial Valley Drains, which are listed as impaired for nutrients, pesticides, herbicides, arsenic and selenium. While arsenic is present at two parts per million (ppm) in the black anhydrite which occurs at the bottom of the gypsum seam, the potential exposure of this material during mining operations would not result in a significant release of arsenic to downstream waters as this material is not mined and typically left in place. Furthermore, the natural concentrations of arsenic in surrounding soils in Imperial County are likely greater than 2 ppm (Bradford et. al., 1996, cited in BLM 2019) and serve as the primary source of arsenic to the Salton Sea. A reduction in discharge from the Quarry watershed would likely result in a reduction of natural arsenic transported to downstream waters.
- Groundwater elevations from the nearest well (approximately seven miles north-northwest of the project site) are approximately 400 feet below the lowest point in the project site. Impacts on groundwater quality from increased localized infiltration during the infrequent but intense storm events would be negligible.
- The potential effect to downstream water quality conditions related to the dust generated from mining activities would not be considered adverse due to required BMPs for dust control and County of Imperial fugitive dust rules. Any potentially adverse effects would be reduced by the mitigation measures provided in the 2008 EIR/EIS.

For these reasons, the Quarry expansion and development of proposed Well No. 3 and associated pipeline would have a less than significant impact on water quality and would not violate any water quality standards or discharge requirements.

**Level of Significance:** Less than significant.

**Mitigation Measures:** None required.

### **Viking Ranch Restoration Site**

The Hydrology Study (Dudek 2018) did not evaluate the impacts of the development of proposed Well No. 3 and associated pipeline, but noted that the 2008 EIR/EIS covered the potential impacts of these project components in detail, and further noted that the installation of the proposed water supply line to the Quarry would result in temporary construction related impacts to a number of ephemeral drainages, but these impacts would be less than significant as the anticipated impacts would not permanently modify the existing drainages.

During restoration activities on the site, erosion control and pollution prevention BMPs would be required as part of the SWPPP prepared for the site. These BMPs would likely include scheduling ground disturbing activities outside of the rainy season and stabilizing soils by seeding exposed soils and using straw mulch or mats. Additional BMPs are provided in the HMMP (Dudek 2021) prepared for the site including inspecting and repairing onsite equipment regularly to prevent leaks of hazardous substances. Implementation of BMPs would be overseen by the project biologist or a qualified SWPPP practitioner.

**Level of Significance:** Less than significant.

**Mitigation Measures:** None required.

### **Old Kane Springs Road Preservation Site**

No development or other ground disturbing activities would be implemented on the Old Kane Springs Road site. Thus, no impacts to water quality would occur.

**Level of Significance:** Less than significant.

**Mitigation Measures:** None required.

**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**

### **Quarry, Well No. 3, and Associated Pipeline**

Quarry operations and development of Well No. 3 and the associated pipeline would occur in substantially the same locations and in the same manner as previously described and evaluated in both the 2008 EIR/EIS and the 2019 SEIS. However, since publication of the 2008 EIR/EIS, an updated groundwater conditions memorandum (Todd 2018; Appendix G-2) was prepared for the project. Following is a summary of the findings of the 2018 Groundwater Memorandum.

- *Coyote Wells Valley*. The updated groundwater conditions memorandum focused on groundwater conditions in the Coyote Wells Valley Basin, where USG has developed and maintained a monitoring program and implemented performance standards that serve as an early warning to changes in the Coyote Wells Valley Basin. Water levels and water quality data are compiled, analyzed, and reported annually. Only limited changes have occurred in the basin from groundwater users. Changes in the basin since 2008 do not change the findings in the 2008 EIR/EIS.
- *Borrego Valley-Borrego Springs*. The Borrego Valley has been subdivided into the Borrego Springs Subbasin and Ocotillo Wells Subbasin. Critical overdraft conditions in the Borrego Springs Subbasin are a long-term concern that are being addressed through the SGMA process. However, the intensive pumping in this basin is not likely the cause of sudden changes in San Felipe Creek flows because the Borrego Springs pumping has continued over many years at a considerable distance from San Felipe Creek. Changes in the basin since 2008 do not change the findings in the 2008 EIR/EIS.
- *Borrego Valley-Ocotillo Wells*. Existing Well No. 2 and proposed Well No. 3 are in the Ocotillo Wells Subbasin, adjacent to and upstream of San Felipe Creek. Pumping from Well No. 2 is unlikely to have caused changes in San Felipe Creek because of its small pumping, pumping from the deep aquifer, distance from San Sebastian Marsh, and existence of intervening fault barriers. Other pumping in the basin is ongoing and minor. Changes in the basin since 2008 do not change the findings of the 2008 EIR/EIS.
- *Ocotillo-Clark Valley*. San Sebastian Marsh is in Ocotillo-Clark Valley Basin, and thus, this basin was considered in the updated groundwater conditions memorandum. While a systematic impact analysis was not conducted, Todd (2018) notes that groundwater pumping has changed recently in proximity to San Sebastian Marsh. Specifically, groundwater pumping has been reduced by the conversion of historical agricultural lands to a solar farm. While speculative, it is possible that recent cessation of agricultural pumping from deep aquifers, with reduction of irrigation return flows that provide recharge to shallow aquifers, has resulted in downstream loss of creek flow.

Based on the analysis and conclusions of the updated groundwater conditions memorandum, the new information provided in the updated groundwater conditions memorandum does not change the conclusions of the 2008 EIR/EIS with regard to groundwater resources. No new or more severe impacts would occur.

**Level of Significance:** Less than significant.

**Mitigation Measures:** None required.

#### **Off-site Mitigation Sites**

No development or other activities which could affect groundwater levels are proposed at the Viking Ranch or Old Kane Spring sites. Thus, there would be no impact and no mitigation is required.

**Level of Significance:** No impact.

**Mitigation Measures:** None required.

**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**

**Quarry Expansion Area**

Quarry operations would occur in substantially the same locations and in the same manner as previously described and evaluated in both the 2008 EIR/EIS and the 2019 SEIS. However, since publication of the 2008 EIR/EIS, an updated Hydrologic and Water Quality Study (2018 Hydrologic Study) (Dudek 2018; Appendix G-1) was prepared for the project. Following are excerpts from the 2018 Hydrologic Study which describes and analyzes the anticipated changes to drainage volumes and patterns on and downstream of the project site.

Runoff in the existing, unnamed ephemeral creek bed would be decreased by the proposed Quarry operations. As described in greater detail below, the proposed site grading would capture runoff from the easterly portion of the watershed and convey it into a new drainage system while runoff from the westerly portion would be directed around Quarry operations by the proposed berm and continue to drain into Fish Creek to the north. For this reason, the watershed was analyzed by Dudek as two separate drainage areas corresponding to two separate drainage paths. Hydrology maps are included in Appendix H of Appendix G-1 for the existing and proposed conditions.

Table 4.6-1, “Existing Conditions Unit Hydrograph Peak Flowrate,” and Table 4.6-2, “Proposed Conditions Unit Hydrograph Peak Flowrate,” show the expected peak flows from the unit hydrograph analyses for the existing and proposed conditions. All input and results from the hydrology model are provided in Appendix H of Appendix G-1.

**Table 4.6-1  
Existing Conditions Unit Hydrograph Peak Flowrate**

2 Year (cfs)	5 Year (cfs)	10 Year (cfs)	25 Year (cfs)	100 Year (cfs)
750	1,500	2,200	3,500	5,800

Source: Dudek 2018

**Table 4.6-2  
Proposed Conditions Unit Hydrograph Peak Flowrate**

Watershed	2 Year (cfs)	5 Year (cfs)	10 Year (cfs)	25 Year (cfs)	100 Year (cfs)
Westerly	450	900	1,300	2,000	3,300
Easterly	350	700	1,011	1,600	2,600

Source: Dudek 2018

***Easterly Drainage Area***

Although the conveyance of potential flow through the Quarry was not modeled, it is reasonable to assume that most, if not all, runoff generated within the easterly section of the Quarry watershed would be captured and retained within the proposed excavated pits. Any flows exceeding excavation pit storage would be conveyed downstream into the Fish Creek alluvial fan system with a decreased total volume and potentially reduced peak flow rate. Based on the proposed topography within the Quarry, stormwater



captured in the extraction pits would eventually percolate into the local aquifer and/or evaporate. For these reasons, drainage in the easterly drainage area would not result in flooding on or offsite.

Because drainage flows in the easterly drainage area would be impounded onsite and would primarily evaporate or percolate into the ground, the project would not result in on or off-site flooding or significantly increase sediment or otherwise-polluted runoff entering Fish Creek or downstream waterways.

### ***Westerly Drainage Area***

The project proposes an earthen berm along the western edge of the proposed Quarry extent in order to direct surface flows generated within the western half of the Quarry watershed northward to Fish Creek, around Quarry activities.

Analysis of the HEC-RAS model results (Appendix H of Appendix G-1) were used by Dudek (2018) to identify locations along the current berm design that would potentially overtop, allowing surface flow into the Quarry. The HEC-RAS 100-year event model indicated five stations where the berm would not provide the required 2-feet of freeboard. Further, the model could not rule out the potential for runoff from a 100-year event to overtop the berm in additional locations. Model stations spaced 500 feet apart may not have captured sections of the berm where water would exceed the proposed 5-foot berm height. For example, the berm intersects the main channel where the channel banks are taller than 8 feet (adjacent Phase 2); at this location the berm would act as a check dam, impounding all flow and overtopping directly into the Quarry excavation pits. Overtopping of the proposed berm could further reduce surface flows and sediment loading to Fish Creek Wash downstream.

To address the identified deficiencies in the existing berm design, Dudek (2018) recommended modifications including, at a minimum, a 50-foot-wide conveyance channel on the western side of the berm. To assist with the conveyance of surface flows around the berm, Dudek further recommended that the berm design include armoring of the westerly bank of the berm with rock riprap to decrease the likelihood and severity of erosion damage to the berm for flows generated by a 25-year design storm. The 25-year storm was selected because the berm is not intended to protect life, property, or civil improvements. In a larger storm event, it would be expected that the riprap armoring would fail and the berm would suffer significant damage or failure. These recommendations would be incorporated into the final berm design by a qualified Civil Engineer as required by Mitigation Measure 4.6-1 below.

### ***Downstream Waterways***

As demonstrated above, the project is expected to result in the downstream reduction of surface flow and sediment loading to the Fish Creek Alluvial Fan. The potential reduction in accompanying groundwater recharge at the apex of the Fish Creek Alluvial Fan would likely be offset by increased recharge within the coarse alluvium of the Quarry watershed and is overall considered minimal with the project site contributing less than 1 percent of the total Ocotillo Lower Felipe HA land cover. As the perennial surface waters in the lower San Felipe River are not dependent on surface flows from Fish Creek Wash, the project would have no impact on creek flows or the associated habitat for desert pupfish (see Section 4.2, “Biological Resources”).

In conclusion, the overall drainage patterns of the project site would remain unchanged with any runoff that does not evaporate or percolate into the coarse alluvium ultimately draining to the Fish Creek Alluvial Fan. Because drainage within the Easterly Drainage Area would be impounded, total volumes and peak flow rate

would decrease thus no flooding or other adverse impacts would occur. With implementation of Mitigation Measure 3.3-7 as provided in the 2008 EIR/EIS and Mitigation Measure 4.6-1 as provided below, drainage within the Westerly Drainage Area would be directed northward to the Fish Creek Alluvial Fan consistent with existing conditions and no flooding or other adverse impacts would occur.

**Level of Significance Before Mitigation:** Potentially significant.

**Mitigation Measures:** *Implement the following existing mitigation measures (see Section 4.6.4 for the full text of each measure):*

- 2008 EIR/EIS
  - Mitigation Measure 3.3-7

**Mitigation Measure:** *Implement the following new mitigation measure:*

**Mitigation Measure 4.6-1:** *The final design for the proposed berm along the westerly edge of the Quarry shall incorporate the recommendations provided in the Hydrologic and Water Quality Study prepared by Dudek dated April 2018 and appended to this SEIR. These recommendations include a 50-foot-wide conveyance channel on the western side of the berm and armoring of the westerly bank of the berm with rock riprap.*

**Level of Significance After Mitigation:** Less than significant.

### **Well No. 3 and Associated Pipeline**

Development of Well No. 3 and the associated pipeline would occur in substantially the same locations and in the same manner as previously described and evaluated in both the 2008 EIR/EIS and the 2019 SEIS. The 2018 Hydrology Study did not evaluate the impacts of Well No. 3 and associated pipeline, but noted that the 2008 EIR/EIS covered the potential impacts of these project components in detail, and further noted that the installation of the proposed pipeline would result in temporary construction related impacts to a number of ephemeral drainages, but these impacts would be less than significant as the anticipated impacts would not permanently modify the existing drainages.

**Level of Significance:** Less than significant.

**Mitigation Measures:** None required.

### **Viking Ranch Restoration Site**

Restoration activities would result in substantial changes to the existing drainage patterns on the Viking Ranch site. According to the 2021 HMMP (Dudek), the overall Viking Ranch site would be graded to be compatible with the surrounding native land surface elevations with rough contour grading of ephemeral channels taking place to create micro-topographic variances as shown in Figure 2-6, “Viking Ranch Conceptual Restoration Plan.” The design is intended to re-establish braided flow patterns across the site, consistent with adjacent Coyote Creek wash. Final grading plans and specifications would be prepared by a registered landscape architect and, or civil engineer in consultation with the project biologist and the final grade would be reviewed and approved by the project biologist. As the proposed restoration activities would restore natural hydrologic functioning of the site consistent with the surrounding Coyote Creek wash, no

flooding or other adverse effects would occur. As discussed in Impact 4.6-1, proposed seeding of graded areas would minimize potential erosion once restoration is complete.

**Level of Significance:** Less than significant.

**Mitigation Measures:** None required.

#### **Old Kane Springs Road Preservation Site**

No grading, development, or other activities which could alter the existing drainage patterns on the Old Kane Springs site are proposed. There would be no impacts to drainage patterns and no erosion or siltation, flooding on or offsite, impediment of flood flows, or release of polluted runoff would occur.

**Level of Significance:** Less than significant.

**Mitigation Measures:** None required.

#### **Impact 4.6-4: The Project Could Release Pollutants in the Event of Inundation From Flood, Tsunami, or Seiche**

As described previously, portions of the project site are located within a FEMA flood zone as depicted in Figure 4.6-2. The floodplain encompasses the drainage which flows through the center of the valley and adjacent portions of the Quarry, as well as portions of the proposed pipeline alignment, and the proposed site of Well No. 3.

Quarry operations and development of Well No. 3 and the associated pipeline would occur in substantially the same locations and in the same manner as previously described and evaluated in both the 2008 EIR/EIS and the 2019 SEIS. As these project components would remain essentially unchanged, no new or more severe flooding impacts at these sites would occur under the proposed project.

If inundation from a flood event were to occur during project construction at the Viking Ranch site, hazardous materials such as gasoline, diesel fuel, equipment lubricants, and other pollutants could enter floodwaters. However, project BMPs would limit construction to outside of the rainy season thereby minimizing the potential for flooding. Furthermore, all hazardous substances would be stored properly, in accordance with product labeling and applicable state and local regulations.

Neither of the off-site mitigation sites are located close enough to the Pacific Ocean to be affected by a tsunami wave. A seiche is a standing wave in an enclosed or partially enclosed body of water. The off-site mitigation sites are similarly not close enough to any enclosed waterbodies to be affected by a seiche wave. Therefore, this impact would be less than significant, and no mitigation is required.

**Level of Significance:** Less than significant.

**Mitigation Measures:** None required.

**Impact 4.6-5: The Project Could Conflict with or Obstruct Implementation of a Water Quality Control Plan or Sustainable Groundwater Management Plan**

As described previously, the project site is subject to the Water Quality Control Plan for the Colorado River Basin (Basin Plan). As described in Impacts 4.6-1 through 4.6-7 above, the project would not result in any significant hydrology or water quality impacts. Therefore, the proposed project would not interfere with the implementation of the Basin Plan. This impact would be less than significant, and no further mitigation is required.

**Level of Significance:** Less than significant.

**Mitigation Measures:** None required.

# SECTION 4.7: LAND USE AND PLANNING

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## SECTION 4.7: LAND USE AND PLANNING

This section of the subsequent environmental impact report (SEIR) describes the existing land use conditions on and around the project impact area including existing land uses, adopted general plan land use classifications and zoning designations, and other applicable management plans and policies pertinent to the project. This chapter also describes the applicable plans and policies that guide land use and development in the project area, and it evaluates the project's consistency with these plans and policies and other existing land use regulations, as they relate to environmental protection.

This section identifies any potentially significant land use impacts and, if necessary, appropriate mitigation measures to avoid or reduce such impacts. Pursuant to Section 15358(b) of the CEQA Guidelines, mitigation measures are proposed only to address physical impacts that may result from the project.

### **4.7.1 Environmental Setting**

The project site and offsite mitigation properties are located within the Colorado Desert, marked by land with relatively low elevations, some areas even below sea level. This area is characterized by a series of low-lying mountain ranges opening to the Salton Sea and Imperial Valley. Predominant land uses include open space, agriculture, and scattered rural residences.

#### **4.7.1.1 Land Use Conditions at the Time of the 2008 EIR/EIS**

##### **Quarry**

At the time the 2008 EIR/EIS was published, the 2,048-acre Quarry consisted of approximately 1,668 acres of private land and 380 acres of unpatented placer mining claims on federal land administered by the BLM. At that time, approximately 339 acres of surface disturbances had occurred. Major components of the Quarry facility included quarries, overburden storage sites, crushing facilities, agricultural product silos, railroad, utilities, and other equipment.

##### **Well No. 3 and Associated Pipeline**

The site of proposed Well No. 3 and associated pipeline alignment are located north and northeast of the Quarry and about six miles south of State Highway 78 in an area characterized by the 2008 EIR/EIS as flat desert open space. The well site and western segment of the pipeline alignment are located on private land owned by USG Corporation while the central and eastern segments of the pipeline alignment are on federal land managed by the BLM. A portion of the northwest segment of the proposed pipeline alignment crosses the Anza Borrego Desert State Park. No development was present in 2008.

##### **Surrounding Land Uses**

The 2008 EIR/EIS noted that east, southeast, and south of the Quarry is the Fish Creek Mountain Wilderness Area and to the north, west and south is the Anza Borrego Desert State Park. The areas on either side of Split Mountain Road are characterized by large rural residential properties with a few scattered residences. At the intersection of Split Mountain Road and Highway 78 is Ocotillo Wells and the 14,000-acre Ocotillo Wells State Vehicular Recreation Area.

### **4.7.1.2 Land Use Conditions at Present**

#### **Quarry**

The overall land uses on and surrounding the Quarry remain unchanged from those described in the 2008 EIR/EIS. As of 2022, approximately 437 acres of surface disturbances have occurred at the Quarry (BLM 2019). The Quarry facilities, narrow-gauge railroad, and adjacent unpaved direct access road are the only structures or infrastructure in the vicinity of the project site.

#### **Well No. 3 Site and Pipeline Alignment**

The land use conditions on and surrounding the site of Well No. 3 and associated pipeline alignment remain essentially unchanged from those described in the 2008 EIR/EIS. Both the well site and pipeline alignment remain undeveloped with no structures or other improvements. The nearest sensitive receptors are rural residences north and northwest of the well site and pipeline alignment.

#### **Viking Ranch Restoration Site**

The Viking Ranch Restoration Site consists of approximately 207 acres of former agricultural land located about 0.5 miles east of the north end of Di Gorgio Road, northeast of the town of Borrego Springs in San Diego County. The topography of the site slopes gently from the northwest to the southeast. The existing vegetation is highly disturbed due to past use as an orchard and consists of sparse, patchy vegetation with scattered tree stumps and branches (Dudek 2021). Surrounding land uses include privately owned orchards to the south and the Anza-Borrego Desert State Park in all other directions. The nearest sensitive receptor is a rural residence located approximately 900 feet west of the southwest corner of the site.

#### **Old Kane Springs Road Preservation Site**

The Old Kane Springs Road Preservation Site consists of approximately 120 acres of privately owned desert open space along Old Kane Springs Road located in the far eastern portion of San Diego County. The site is bisected by Old Kane Springs Road and an associated overhead power transmission line supported by wooden poles. The topography of the site slopes gently from the southwest down to the northeast. Vegetation communities present on the site include scrub/chapparral and riparian/bottomland habitat. The predominant surrounding land use is undeveloped desert, some of which is privately owned, but most is part of the Anza Borrego Desert State Park.

#### **Land Use Designations and Zoning**

The Quarry, Well No. 3 Site, and Pipeline Alignment parcels are located in Imperial County and are subject to the land use regulations of the Imperial County General Plan and Imperial County Zoning Ordinance. These sites are generally designated S-2 (Open Space/Preservation). The Quarry parcels (including the expansion area) are zoned either S-2 (Open Space/Preservation) or BLM (see Table 2-1, “Assessor’s Parcel Numbers”). The proposed site of Well No. 3 is primarily zoned S-2 (Open Space/Preservation), with one parcel zoned STATE (APN 033-010-016). The S-2 Zone is the County’s Open Space Preservation Zone. The primary intent of this zoning designation is to preserve the significant cultural, biological, and open space resource areas of the county. Permitted uses in the S-2 zone include agriculture and accessory uses, mineral extraction, pasturing and grazing, solar energy generation, public buildings, and storage. Additional industrial, manufacturing, commercial, energy, and recreational uses are allowed with issuance of a CUP. The minimum lot size in the S-2 zone is 20 acres and the maximum height limit is 40 feet. The BLM and STATE zoning designations indicate parcels which are owned by the federal and State governments and not subject to County zoning requirements (Imperial County 2022).



The Quarry and Well No. 3 and the associated pipeline are associated with surface mining operations and are consistent with the Recreation/Open Space designation of the Imperial County General Plan (Imperial County 2015). Title 9, Land Use Ordinance, requires approval of a CUP to allow surface mining operations on lands zoned S-2.

The offsite mitigation properties are in San Diego County and are subject to the land use regulations of the San Diego County General Plan and San Diego County Zoning Ordinance. The Viking Ranch Restoration Site is designated Semi-Rural Residential (SR-4). The Old Kane Springs Road preservation site is designated Rural Lane (RL-30) (San Diego County 2011). Both properties are zoned by San Diego County as S92 (General Rural). This zoning designation is intended to provide approximate controls for land, which is rugged terrain, watershed, dependent on ground water for a water supply, desert, susceptible to fire and erosion, or subject to other environmental constraints (County of San Diego 2022).

#### **4.7.2 Regulatory Setting**

The Quarry, Well No. 3 site, and proposed pipeline alignment are each located in unincorporated Imperial County and are subject to the goals and objectives of the Imperial County General Plan (County General Plan). Additionally, these sites are subject to the land use regulations contained in the Imperial County Zoning Ordinance. Applicable Imperial County planning policies and zoning regulations that pertain to the project site are described below followed by a discussion of the project's consistency or inconsistency with each relevant objective.

The offsite mitigation properties (Viking Ranch Restoration Site and Old Kane Springs Road Preservation Site) are in unincorporated San Diego County and are subject to the goals and policies of the San Diego County General Plan as well as the land use regulations contained in the San Diego County Zoning Ordinance.

Potential conflicts with planning policies as contained in the Imperial County General Plan, the San Diego County General Plan, and other applicable regulatory and management plans do not inherently result in a significant effect on the environment. Instead, "effects analyzed under CEQA must be related to a physical change in the environment" (CEQA Guidelines Section 15358(b)). CEQA Guidelines Section 15125(d) provides that an EIR shall discuss any inconsistencies between a proposed project and the applicable general plan in the setting section of the document rather than as an impact (see Table 4.7-1, "Project Consistency with Local Planning Documents," below). Appendix G of the CEQA Guidelines indicates that a project would result in a significant impact related to land use and planning if it would "conflict with any land use plan, policy, or regulation adopted for the purpose of avoiding or mitigating an environmental effect." Therefore, while this section of the SEIR provides an analysis of the project's consistency with applicable plans, policies, and regulations, any impacts that may result from such conflicts are analyzed elsewhere in this SEIR.

##### **4.7.2.1 Imperial County General Plan**

The Imperial County General Plan consists of ten elements: Land Use, Housing, Circulation and Scenic Highways, Noise, Seismic and Public Safety, Agricultural, Conservation and Open Space, Geothermal/Alternative Energy and Transmission, Water, and Parks and Recreation. The General Plan designates land use categories which identify locations and describe the type and maximum allowable density of ultimate development. This subsection lists those General Plan goals, objectives, and policies that

pertain to land use and planning and apply to the proposed project. A project consistency analysis is provided in Table 4.7-1.

***Conservation and Open Space Element***

**Objective 1.1:** Encourage uses and activities that are compatible with the fragile desert environment and foster conservation.

**Objective 4.2:** Require that mineral extraction and reclamation operations be performed in a way that is compatible with surrounding land uses and minimize adverse effects on the environment.

**Objective 4.3:** Safeguard the use and full development of all mineral deposits.

**Objective 4.4:** Regulate the development adjacent to or near all mineral deposits and geothermal operations due to the potential for land subsidence.

***Land Use Element***

**Objective 3.2:** Preserve agriculture and natural resources while promoting diverse economic growth through sound land use planning.

**Objective 3.3:** Attain County growth and development patterns that are orderly, safe, and efficient utilizing appropriate financing resources.

**Objective 3.6:** Recognize and coordinate planning activities as applicable with the Bureau of Land Management (BLM), and the California Desert Conservation Plan.

**Objective 3.8:** Utilize non-agricultural land as a resource to diversify employment opportunities and facilitate regional economic growth. Uses must be consistent with each site's resource constraints, the natural environment, and the County Conservation and Open Space Element.

**Goal 7:** Identify and protect areas of regionally-significant mineral resources which are in locations suitable for extractive uses.

**Objective 7.1:** Provide adequate space and land use classifications to meet current and projected economic needs for extractive activities.

**Objective 7.2:** Require that extractive uses are designed and operated to avoid air and water quality degradation, including groundwater depletion, other adverse environmental impacts, and comply with the State Surface Mining and Reclamation Act and County Surface Mining Ordinance.

**Objective 9.1:** Preserve as open space those lands containing watersheds, aquifer recharge areas, floodplains, important natural resources, sensitive vegetation, wildlife habitats, historic and prehistoric sites, or lands which are subject to seismic hazards and establish compatible minimum lot sizes.

**Objective 9.7:** Implement a review procedure for land use planning and discretionary project review which includes the Imperial County Air Pollution Control District.

#### **4.7.2.2 Imperial County Zoning Ordinance**

The zoning for the project site is principally S-2 (Open Space/Preservation), but portions of the site are also federally, or state owned and not subject to County zoning regulations (see Table 2-1). The S-2 zoning designation is the County’s Open Space Preservation Zone which is intended to preserve the significant cultural, biological, and open space resource areas of the county. Permitted uses in the S-2 zone include agriculture and accessory uses, mineral extraction, pasturing and grazing, solar energy generation, public buildings, and storage. Additional industrial, manufacturing, commercial, energy, and recreational uses are allowed with the issuance of a CUP. The minimum lot size in the S-2 zone is 20 acres and the maximum height limit is 40 feet. The BLM and STATE zoning designations indicate parcels which are owned by the federal and State governments and not subject to County zoning requirements (Imperial County 2022).

Mining activities may be permitted within any County zoning designation, including lands designated as Open Space Preservation, subject to the provisions of the County Surface Mining and Reclamation Ordinance. As the local land use authority, Imperial County authorizes mining activities on unincorporated lands through the issuance of surface mining permits and approval of reclamation plans pursuant to Imperial County Code of Ordinances, Title 9, Land Use Code, Division 20, Surface Mining and Reclamation. The provisions of the County’s Surface Mining and Reclamation Ordinance apply to all lands within the county, both public and private. As provided by this ordinance, surface mining operations are permitted only upon County approval of a surface mining permit (or existence of vested rights), reclamation plan, and financial assurances for reclamation. Thus, the existing quarry and the proposed project are consistent with the County Zoning Ordinance.

#### **4.7.2.3 Imperial County Surface Mining and Reclamation Ordinance**

As the local land use authority, Imperial County authorizes surface mining activities on unincorporated lands through the issuance of surface mining permits pursuant to Imperial County Code of Ordinances, Title 9: Land Use Code, Division 20: Surface Mining and Reclamation. The Quarry currently operates under such a county surface mining permit (CUP 08-0004), which was approved by Imperial County. This permit regulates the mining of gypsum and authorizes reclamation. Quarrying operations are vested.

The provisions of the County’s Surface Mining and Reclamation Ordinance (Section 6.80 et. seq. of the County Ordinance Code) are summarized below and apply to all lands within the County, both public and private. As provided by this ordinance, surface mining operations are permitted only upon County approval of a surface mining permit (or determination of a vested right), reclamation plan, and financial assurances for reclamation.

An objective of SMARA is to create a mineral lands inventory by designating certain areas of California as being important for the production and conservation of existing and future supplies of mineral resources. Pursuant to Section 2790 of SMARA, the State Mining and Geology Board has designated certain mineral resource areas to be of regional significance.

The project area and the Viking Ranch restoration site and Old Kane Springs Road preservation site are in areas that have not yet been mapped as part of a Mineral Land Classification study (DOC 2022). However,

the Fish Creek Mountains gypsum deposit constitutes the largest reserves of this commodity in California and the Quarry is the largest gypsum quarry in the country and sole active gypsum quarry in Imperial County (Imperial County 2006). Thus, the site of the Quarry and the larger gypsum deposit are considered a locally important mineral deposit.

No locally important mineral resources are identified at either the Viking Ranch restoration site or the Old Kane Springs Road preservation site (San Diego County 2011).

#### **4.7.2.4 San Diego County General Plan**

The San Diego County General Plan was last updated in 2011 and consists of seven elements: Land Use, Mobility, Conservation and Open Space, Housing, Safety, Noise, and Environmental Justice. The following San Diego County General Plan goals and policies that pertain to land use and planning and apply to the proposed project. A project consistency analysis is provided in Table 4.7-1.

##### **Land Use Element**

- Goal LU-4:** Inter-jurisdictional Coordination. Coordination with the plans and activities of other agencies and tribal governments that relate to issues such as land use, community character, transportation, energy, other infrastructure, public safety, and resource conservation and management in the unincorporated County and the region.
- Policy LU-4.2:** Review of Impacts of Projects in Adjoining Jurisdictions. Review, comment, and coordinate when appropriate on plans, projects, and proposals of overlapping or neighboring agencies to ensure compatibility with the County’s General Plan, and that adjacent communities are not adversely impacted.
- Goal LU-5:** Climate Change and Land Use. A land use plan and associated development techniques and patterns that reduce emissions of local greenhouse gases in accordance with state initiatives, while promoting public health.
- Policy LU-5.3:** Rural Land Preservation. Ensure the preservation of existing open space and rural areas (e.g., forested areas, agricultural lands, wildlife habitat and corridors, wetlands, watersheds, and groundwater recharge areas) when permitting development under the Rural and Semi Rural Land Use Designations.
- Goal LU-6:** Development—Environmental Balance. A built environment in balance with the natural environment, scarce resources, natural hazards, and the unique local character of individual communities.
- Policy LU-6.1:** Environmental Sustainability. Require the protection of intact or sensitive natural resources in support of the long-term sustainability of the natural environment.
- Policy LU-6.2:** Reducing Development Pressures. Assign lowest-density or lowest-intensity land use designations to areas with sensitive natural resources.

**Policy LU-6.8:** Oversight of Open Space. Require that open space associated with future development that is intended to be preserved in perpetuity either be: 1) Retained in private ownership of the property owner or a third party with a restrictive easement that limits use of the land as appropriate; or 2) Transferred into public ownership of an agency that manages preserved open space. The owner of the open space will be responsible for the maintenance and any necessary management unless those responsibilities are delegated through an adopted plan or agreement. Restrictive easements shall be dedicated to the County or a public agency (approved by the County) with responsibilities that correspond with the purpose of the open space. When transferred to a third party or public agency, a funding mechanism to support the future maintenance and management of the property should be established to the satisfaction of the County.

**4.7.2.5 San Diego County Zoning Ordinance**

The offsite mitigation properties are in San Diego County and are subject to the land use regulations of the San Diego County General Plan and San Diego County Zoning Ordinance. The Viking Ranch Restoration Site is designated Semi-Rural Residential (SR-4). The Old Kane Springs Road preservation site is designated Rural Lane (RL-30) (San Diego County 2011). Both properties are zoned by San Diego County as S92 (General Rural). This zoning designation is intended to provide approximate controls for land, which is rugged terrain, watershed, dependent on ground water for a water supply, desert, susceptible to fire and erosion, or subject to other environmental constraints (County of San Diego 2022).

**4.7.2.6 Project Consistency with Local Planning Documents**

See Table 4.7-1, “Project Consistency with Local Planning Documents,” below for an analysis of relevant policies and their consistency with the proposed project.

**Table 4.7-1  
 Project Consistency with Local Planning Documents**

Goals/Objectives/Policies	Consistency Analysis
<b>IMPERIAL COUNTY GENERAL PLAN AGRICULTURAL ELEMENT</b>	
As discussed in the Initial Study prepared for the project (see SEIR Appendix A), the project site and surrounding area do not contain important agricultural soils or active agricultural operations; are not within an area zoned for agricultural use; and are not subject to a Williamson Act Contract. Therefore, the goals and policies contained in the Agricultural Element are not relevant to the proposed project and are not analyzed here for consistency.	
<b>IMPERIAL COUNTY GENERAL PLAN CIRCULATION AND SCENIC HIGHWAYS ELEMENT</b>	
As discussed in the Initial Study prepared for the project (see SEIR Appendix A), a portion of State Route (SR) 78 in the project area is eligible for designation as a state scenic highway. However, the project site and off-site mitigation sites are located two or more miles from SR 78 and are not visible from the highway. Therefore, the goals and policies contained in the Circulation and Scenic Highways Element are not relevant to the proposed project and are not analyzed here for consistency.	
<b>IMPERIAL COUNTY GENERAL PLAN CONSERVATION AND OPEN SPACE ELEMENT</b>	
<b>Objective 1.1:</b> Encourage uses and activities that are compatible with the fragile desert environment and foster conservation.	<b>Consistent.</b> The quarry and well site are disturbed environments, and the proposed pipeline alignment is within an existing right-of-way along the narrow-gauge railroad. The location and design of the proposed improvements were developed to avoid disturbance to sensitive environments.

Goals/Objectives/Policies	Consistency Analysis
<b>Objective 1.4:</b> Ensure the conservation and management of the County's natural and cultural resources.	<b>Consistent.</b> With implementation of the mitigation measures provided in the SEIR, the project would not adversely affect the natural and cultural resources of the project site and off-site mitigation sites.
<b>Objective 1.6:</b> Promote the conservation of ecological sites and preservation of cultural resource sites through scientific investigation and public education.	<b>Consistent.</b> The project's potential effects on ecological sites are evaluated in Section 4.2, "Biological Resources," of this SEIR. With implementation of the mitigation measures provided therein, the project would have no significant adverse effects on ecological sites. The project proposes to restore and/or preserve two ecological sites, the Viking Ranch site and the Old Kane Springs Road site.  As determined in Section 4.4, "Cultural Resources," with mitigation the project would have less than significant impacts on cultural resource sites. This determination is based on cultural resources reports prepared for the project by qualified archaeologists.
<b>Objective 2.2:</b> Develop management programs, including preservation of habitat for flat-tailed horned lizard, desert pupfish, and burrowing owl.	<b>Consistent.</b> As determined in Section 4.2, "Biological Resources," the project would have less than significant impacts on flat-tailed horned lizard, desert pupfish, and burrowing owl.
<b>Objective 2.4:</b> Use the CEQA and NEPA process to identify, conserve and restore sensitive vegetation and wildlife resources.	<b>Consistent.</b> The project has been reviewed pursuant to CEQA and NEPA as detailed in Section 1.0, "Introduction," of this SEIR. Potential impacts to sensitive vegetation and wildlife species are addressed in Section 4.3, "Biological Resources," of this SEIR.
<b>Objective 2.6:</b> Attempt to identify, reduce, and eliminate all forms of pollution; including air, noise, soil, and water.	<b>Consistent.</b> The project's air quality and water quality effects are evaluated in Section 4.1, "Air Quality," and Section 4.6, "Hydrology and Water Quality," of this SEIR. The project's noise and soil related effects were evaluated in the Initial Study (Appendix A) and determined to be less than significant. Where necessary, mitigation measures are provided to reduce potentially significant impacts to less than significant levels.
<b>Objective 3.1:</b> Protect and preserve sites of archaeological, ecological, historical, and scientific value, and/or cultural significance.	<b>Consistent.</b> As determined in Section 4.4, "Cultural Resources," (Impacts 4.4-1 and 4.4-2), the project would have less than significant impacts on historical and archaeological resources. As determined in Section 4.8, "Tribal Cultural Resources" (Impact 4.8-1), the project would have a less than significant impact on tribal cultural resources.
<b>Objective 3.3:</b> Engage all local Native American Tribes in the protection of tribal cultural resources, including prehistoric trails and burial sites.	<b>Consistent.</b> As described in Section 4.8, "Tribal Cultural Resources," Imperial County staff notified relevant tribes of the proposed project; consultation was not requested.
<b>Objective 4.2:</b> Require that mineral extraction and reclamation operations be performed in a way that is compatible with surrounding land uses and minimize adverse effects on the environment.	<b>Consistent.</b> Through the NEPA and CEQA processes, the project's adverse effects on surrounding land uses and the environment have been identified and avoided or minimized through mitigation where necessary.
<b>Objective 4.3:</b> Safeguard the use and full development of all mineral deposits.	<b>Consistent.</b> The project would expand and modernize the Quarry allowing for its continued operation and full development of the mineral resources on the site.

Goals/Objectives/Policies	Consistency Analysis
<b>Objective 4.5:</b> Preserve significant geological features such as rock outcroppings, the Algodones Dunes, Imperial Sand Dunes, Salton Buttes, and Shell Beds in Yuha Basin.	<b>Consistent.</b> No significant geological features have been identified on the project site or offsite mitigation sites beyond the gypsum resource itself. Mining activities would be limited to the gypsum resource and would not affect surrounding geologic features.
<b>Objective 5.1:</b> Encourage the conservation and enhancement of the natural beauty of the desert and mountain landscape.	<b>Consistent.</b> As discussed in the Initial Study (Appendix A), the proposed project would not result in any new or more severe existing impacts related to aesthetics and visual resources.
<b>Objective 6.8:</b> Discourage the use of hazardous materials in areas of the County where significant water pollution could pose hazards to humans or biological resources.	<b>Consistent.</b> Mining and construction activities routinely involve the use and storage of hazardous substances such as fuels, oils, lubricants, and paints. The project does not propose any changes to Quarry operations and would not result in any new or more severe impacts related to hazardous materials spills or leaks. See the Initial Study prepared for the project in Appendix A for more further discussion.
<b>Objective 6.9:</b> Identify and protect watersheds and key recharge areas for the protection of water quality and groundwater.	<b>Consistent.</b> See Section 4.6, “Hydrology and Water Quality,” of this SEIR for a detailed evaluation of the project’s potential impacts to water quality and groundwater. Most drainage generated on the project site would evaporate or percolate into the ground due to the arid conditions of the region. Any runoff would continue to be directed to the Fish Creek Alluvial Fan.
<b>Objective 6.10:</b> Encourage water conservation and efficient water use among municipal and industrial water users, as well as reclamation and reuse of wastewater.	<b>Consistent.</b> The project would pump water from the underlying aquifer at proposed Well No. 3 for use as dust suppression within the Quarry. As determined in Section 4.6, “Hydrology and Water Quality,” of this SEIR, proposed pumping would not adversely affect groundwater supplies, surface flows, or recharge. Due to the arid conditions of the project site, water reclamation and reuse is not feasible.
<b>Objective 7.1:</b> Ensure that all projects and facilities comply with current Federal, State, and local requirements for attainment of air quality objectives.	<b>Consistent.</b> See Section 4.1, “Air Quality,” of this SEIR. The project would comply with all applicable air quality objectives.
<b>Objective 7.4:</b> Enforce and monitor environmental mitigation measures relating to air quality.	<b>Consistent.</b> Project mitigation measures will be compiled in a Mitigation Monitoring and Reporting Program (MMRP) that will specify the timing of implementation and responsible party to ensure mitigation is fully implemented as intended.
<b>Objective 7.5:</b> Coordinate efforts with Imperial County Transportation Commission (ICTC) and other appropriate agencies to reduce fugitive dust from unpaved streets.	<b>Consistent.</b> The project would allow for groundwater pumping for use as dust suppression within the Quarry including along unpaved access roads.
<b>Objective 8.9:</b> Conserve desert lands, within the County’s jurisdiction for wildlife protection, recreation, and aesthetic purposes.	<b>Consistent.</b> When mining operations are completed, the Quarry would be reclaimed as open space providing wildlife habitat.
<b>Biological Resource Conservation Policy 1</b> Provide a framework for the conservation and enhancement of natural and created open space which provides wildlife habitat values.	<b>Consistent.</b> When mining operations are completed, the Quarry would be reclaimed as open space providing wildlife habitat.
<b>Biological Resource Conservation Policy 2</b> Landscaping should be required in all developments to prevent erosion on graded sites and, if the area is contiguous with undisturbed wildlife habitat, the plan should include revegetation with native plant species.	<b>Consistent.</b> When mining operations are completed, the Quarry would be reclaimed as open space including revegetation with native plant species. Restoration of the Viking Ranch site would include seeding of all graded areas with a native seed mix.

Goals/Objectives/Policies	Consistency Analysis
<p><b>Cultural Resources Conservation Policy 1</b>                      Identify and document significant historic and prehistoric resources, and provide for the preservation of representative and worthy examples; and recognize the value of historic and prehistoric resources, and assess current and proposed land uses for impacts upon these resources.</p>	<p><b>Consistent.</b> Historic and prehistoric resources on the project site and offsite mitigation sites are described and evaluated in SEIR Section 4.3, "Cultural Resources." None of the identified resources was determined to be significant. Implementation of Mitigation Measures 3.8-3 and 4.4-1 would ensure proper management of any cultural resources discovered during ground disturbing activities.</p>
<p><b>Mineral Resources Conservation Policy 1</b>                      Control the extraction of mineral resources in order to assure minimal disturbance to the environment, conservation of significant mineral deposits, and to protect mining operations from encroachment by incompatible land use.</p>	<p><b>Consistent.</b> Quarry operations are carried out consistent with an approved mining permit and mitigation requirements resulting from the NEPA/CEQA review process. These requirements are intended to avoid or minimize environmental effects. The proposed project would not change current Quarry operations or effect adjacent land uses.</p>
<p><b>Protection of Air Quality and Addressing Climate Change Policy 1</b>                      Reduce PM<sub>10</sub> and PM<sub>2.5</sub> emissions from unpaved roads, agricultural fields, and exposed Salton Sea lakebed.</p>	<p><b>Consistent.</b> See SEIR Section 4.2, "Air Quality." The project's estimated emissions are shown in Table 4.2-4, "Jurisdictional Resources within the Old Kane Springs Road Preservation Site." As shown, the Quarry Expansion and Modernization project would not exceed ICAPCD thresholds and would be reduced compared to the emissions estimates provided in the 2008 EIR/EIS.</p> <p>Mitigation Measure 4.2-1a and 4.2-1b would require implementation of measures during proposed restoration activities on the Viking Ranch site to minimize air emissions such as fugitive dust, including stabilization of unpaved roads.</p>
<p><b>Open Space and Recreation Conservation Policy 1</b>                      Identification of lands appropriate for open space conservation shall be included in the development review process. The application of regulatory controls must be non-confiscatory, non-arbitrary, and reasonable. It is not the intent of any of these measures to deny any landowners the reasonable use of his land, or be considered a "taking" under the law.</p>	<p><b>Consistent.</b> When mining operations are completed, the Quarry would be reclaimed and maintained as open space.</p>
<p><b>Open Space and Recreation Conservation Policy 2</b>                      The County shall participate in conducting detailed investigations into the significance, location, extent, and condition of natural resources in the County.</p>	<p><b>Consistent.</b> The technical studies prepared for the project identify and determine the significance of natural resources on and adjacent the project site including biological, cultural, and water resources. The reader is referred to SEIR Appendices D-1 to D-4, E-1, H-1, and H-2.</p>
<b>IMPERIAL COUNTY GENERAL PLAN HOUSING ELEMENT</b>	
<p>The proposed project does not include any residential development and the project site and off-site mitigation sites are located in rural area away from residences. None of the goals, objectives, or policies contained in the Imperial County Housing Element apply to the proposed project and are not analyzed here for project consistency.</p>	
<b>IMPERIAL COUNTY GENERAL PLAN LAND USE ELEMENT</b>	
<p><b>Goal 7:</b> Identify and protect areas of regionally-significant mineral resources which are in locations suitable for extractive uses.</p>	<p><b>Consistent.</b> The Plaster City Quarry is a regionally significant mineral resource. The project would expand and modernize the Quarry allowing for its continued operation and full development of the mineral resources on the site.</p>
<p><b>Objective 7.1:</b> Provide adequate space and land use classifications to meet current and projected economic needs for extractive activities.</p>	<p><b>Consistent.</b> The project would expand and modernize the Quarry allowing for its continued operation and full development of the mineral resources on the site.</p>
<p><b>Objective 7.2:</b> Require that extractive uses are designed and operated to avoid air and water quality degradation, including groundwater depletion, other adverse environmental impacts,</p>	<p><b>Consistent.</b> Quarry operations are carried out consistent with SMARA, the County's Surface Mining Ordinance, and an approved mining permit as well as mitigation</p>



Goals/Objectives/Policies	Consistency Analysis
and comply with the State Surface Mining and Reclamation Act and County Surface Mining Ordinance.	requirements resulting from the NEPA/CEQA review process. These requirements are intended to avoid or minimize environmental effects. See SEIR Section 4.1, “Air Quality,” and 4.6, Hydrology and Water Quality, for further discussion of the project’s potential impacts to air and water quality and groundwater levels and recharge potential.
<b>Objective 9.1:</b> Preserve as open space those lands containing watersheds, aquifer recharge areas, floodplains, important natural resources, sensitive vegetation, wildlife habitats, historic and prehistoric sites, or lands which are subject to seismic hazards and establish compatible minimum lot sizes.	<b>Consistent.</b> When mining operations are completed, the Quarry would be reclaimed and maintained as open space.
<b>Objective 9.7:</b> Implement a review procedure for land use planning and discretionary project review which includes the Imperial County Air Pollution Control District.	<b>Consistent:</b> The ICAPCD was provided opportunities to review and comment on the proposed project both during the initial stages of the project and through the Environmental Evaluation Committee (EEC).
<b>IMPERIAL COUNTY GENERAL PLAN NOISE ELEMENT</b>	
The 2008 EIR/EIS determined that all potential impacts related to noise under the USG Expansion/Modernization Project, which includes the Quarry expansion and development of Well No. 3 and the associated pipeline, would be less than significant and no mitigation was required. The Initial Study prepared for the proposed project (see SEIR Appendix A) further determined that noise impacts resulting from the proposed changes to the project would also be less than significant and no mitigation is required. The goals, objectives, and policies of the Noise Element are not relevant to the proposed project and are not analyzed for project consistency here.	
<b>IMPERIAL COUNTY GENERAL PLAN PARKS ELEMENT</b>	
As discussed in the Initial Study The project does not propose any new housing or employment or otherwise cause increased demand for parks. The project also does not include the development of any parks or other recreational facilities. The goals, objectives, and policies of the Parks Element are not relevant to the proposed project and are not analyzed for project consistency here.	
<b>IMPERIAL COUNTY GENERAL PLAN RENEWABLE ENERGY AND TRANSMISSION ELEMENT</b>	
<b>Objective 2.1:</b> To the extent practicable, maximize utilization of IID’s transmission capacity in existing easements or rights-of-way. Encourage the location of all major transmission lines within designated corridors, easements, and rights-of-way.	<b>Consistent:</b> The proposed transmission line would not be an IID facility but would be installed within the existing right-of-way of the narrow gauge railroad.
<b>Objective 2.2:</b> Where practicable and cost-effective, design transmission lines to minimize impacts on agricultural, natural, and cultural resources, urban areas, military operation areas, and recreational activities.	<b>Consistent:</b> The proposed transmission line would be installed within the existing right-of-way of the narrow-gauge railroad which has been previously disturbed. As discussed throughout this SEIR development of the proposed pipeline and powerline would not significantly affect any agricultural, natural, recreational, or cultural resources. The project site is not located in an urban or military operation area.
<b>IMPERIAL COUNTY GENERAL PLAN SEISMIC AND PUBLIC SAFETY ELEMENT</b>	
<b>Objective 1.1:</b> Ensure that data on geological hazards is incorporated into the land use review process, and future development process.	<b>Consistent.</b> Geological hazards on the project site and offsite mitigation sites are addressed in the Initial Study provided as Appendix A to this SEIR. No significant impacts were identified.
<b>Objective 1.2:</b> Regulate development within flood-way areas in accordance with Federal Emergency Management Agency (FEMA).	<b>Consistent:</b> The project does not propose any inhabitable development.
<b>Objective 1.4:</b> Require, where possessing the authority, that avoidable seismic risks be avoided; and that measures, commensurate with risks, be taken to reduce injury, loss of life, destruction of property, and disruption of service.	<b>Consistent.</b> Geological hazards on the project site and offsite mitigation sites are addressed in the Initial Study provided as Appendix A to this SEIR. No significant impacts were identified.

Goals/Objectives/Policies	Consistency Analysis
<b>Objective 1.7:</b> Require developers to provide information related to geologic and seismic hazards when siting a proposed project.	<b>Consistent:</b> Geological hazards on the project site and offsite mitigation sites are addressed in the Initial Study provided as Appendix A to this SEIR. No significant impacts were identified.
<b>Objective 1.8:</b> Reduce fire hazards by the design of new developments.	<b>Consistent.</b> The project does not proposed any habitable development. Impacts related to wildfire hazards are evaluated in the project's Initial Study which is provided as Appendix A of the SEIR.
<b>Objective 1.9:</b> Encourage the reclamation of lands where mining, irrigation, landfills, solid waste, hazardous materials/waste storage or disposal, and natural soil erosion has occurred, so as to pose no danger to public health and safety.	<b>Consistent:</b> The project site will be reclaimed in accordance with the approved reclamation plan for the Quarry.
<b>Objective 2.5:</b> Minimize injury, loss of life, and damage to property by implementing all state codes where applicable.	<b>Consistent:</b> The project would comply with all applicable state codes as described throughout SEIR Chapter 4.0.
<b>Objective 3.2:</b> Minimize the possibility of hazardous materials/waste spills.	<b>Consistent:</b> See SEIR Section 4.6, "Hydrology and Water Quality." Impact 4.6-1 assesses the project potential impacts to surface and groundwater quality. During restoration activities at the Viking Ranch site, BMPs would be required as part of the SWPPP prepared for the project to minimize potential water quality degradation. These measures include routinely inspecting vehicles and equipment for leaks.
<b>IMPERIAL COUNTY SURFACE MINING AND RECLAMATION ORDINANCE (COUNTY CODE OF ORDINANCES DIVISION 20)</b>	
Quarry operations are carried out consistent with SMARA, the Imperial County Surface Mining and Reclamation Ordinance, and an approved mining permit. Quarry operations would remain essentially unchanged with project implementation. Thus, the Quarry would continue to operate consistent with the County's Surface Mining and Reclamation Ordinance and the associated mining permit.	

### 4.7.3 Significance Thresholds and Analysis Methodology

#### 4.7.3.1 Significance Criteria

##### 2008 EIR/EIS Significance Criteria

The 2008 EIR/EIS evaluated the project's land use impacts using the following significance criteria:

The project would normally have a significant effect on the environment if it would:

- Conflict with existing land uses;
- Conflict with adopted environmental plans and local community goals; or
- Conflict with established recreational, educational, religious or scientific uses of the area, or substantially degrade or reduce the quantity or quality of the area available for existing or future recreational opportunities.

##### CEQA Appendix G Thresholds of Significance

Based on Appendix G of the CEQA Guidelines, the proposed project would have a significant impact to land use and planning if it would:

- a) physically divide an established community; or

- b) cause a significant environmental impact due to a conflict with any land use plan, policy, or regulation adopted for the purpose of avoiding or mitigating an environmental effect.

#### **4.7.3.2 Analysis Methodology**

The project description was compared to the local governing plans that are applicable to the physical location of the project site. It was determined which policies within those plans are applicable to the project. In this case, the project is a quarry expansion, development of a well and associated pipeline, and restoration/preservation of open space. Therefore, only policies related to those proposed activities and included in the analysis.

#### **4.7.4 Project Impacts and Mitigation Measures**

##### **4.7.4.1 2008 EIR/EIS Impact Analysis**

Under the 2008 EIR/EIS, land use and planning impacts were determined to be less than significant, and no mitigation was required.

##### **4.7.4.2 2019 SEIS Impact Analysis**

#### **Project Revisions**

The proposed Quarry expansion and development of Well No. 3 and associated pipeline remain essentially unchanged and in substantively the same locations as those evaluated in the 2008 EIR/EIS. However, as a result of mitigation required in the 2008 EIR/EIS, two off-site mitigation sites have been identified and are now proposed for restoration and/or preservation as part of the project. These sites and proposed restoration activities were not evaluated in the 2008 EIR/EIS and could create a new or increased significant impact.

#### **Changed Circumstances**

As discussed previously, the overall land use conditions on and near the project site have remained essentially unchanged since publication of the 2008 EIR/EIS. There are no changed circumstances related to land use and planning.

#### **New Information**

Current regulatory requirements are addressed above. No new information of substantial importance is available that was not known and could not have been known with the exercise of reasonable diligence at the time the 2008 EIR/EIS was certified.

#### **Significance Determination**

Based on project revisions that may create a new or increased significant impact, the County has amplified and augmented the analysis contained in the 2008 EIR/EIS. This evaluation is provided in the following impact analysis.

##### **4.7.4.3 Subsequent Environmental Analysis**

#### **Impact 4.7-1: Physically Divide an Established Community**

Overall land use patterns in the project area have not changed since completion of the 2008 EIR/EIS. There are no established communities adjacent the Quarry or the proposed locations of Well No. 3 and the

associated pipeline. Continuation of Quarry operations and construction of Well No. 3 and an underground pipeline would not create a physical barrier to movement or growth. Similarly, the proposed off-site mitigation sites are not within or near an established community. No development is proposed on either site. Therefore, the proposed project would have no potential to physically divide an established community.

**Level of Significance:** No impact.

**Mitigation Measure:** None required.

#### **Impact 4.7-2: Conflict with Land Use Plans, Policies, and Regulations**

The proposed project would not conflict with applicable land use plans, policies, and regulations adopted for the purpose of avoiding or mitigating an environmental effect.

Conflicts between a project and applicable land use policies do not constitute significant physical environmental impacts in and of themselves. A policy inconsistency is considered a significant adverse environmental impact only when it is related to a policy adopted for the purpose of avoiding or mitigating an environmental effect, and if it is anticipated that the inconsistency would result in a significant adverse physical impact based on established significance criteria.

Expansion of the Quarry and development of Well No. 3 and associated pipeline would be consistent with the existing Imperial County General Plan land use designations for the site. Furthermore, as demonstrated in Table 4.7-1, the project would not substantially conflict with any applicable land use policies adopted by Imperial County or San Diego County for the purpose of avoiding or mitigating environmental effects. As a result, no significant land use impacts related to the project's consistency with land use policies would occur. Therefore, this impact would be less than significant.

**Level of Significance:** Less than significant.

**Mitigation Measure:** None required.

# SECTION 4.8: TRIBAL CULTURAL RESOURCES

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## SECTION 4.8: TRIBAL CULTURAL RESOURCES

This section of the draft subsequent environmental impact report (Draft SEIR) describes the tribal cultural resources (TCRs) at the project site and off-site mitigation sites, presents the regulatory framework within which TCRs are evaluated, and analyzes the potential impacts to TCRs that could occur as a result of the proposed changes to the project. Cultural resources are addressed in greater detail in Section 4.3, “Cultural Resources.”

The information in this section is based primarily on County correspondence with pertinent tribes per the AB 52 tribal notification process as well as the cultural resources report (2018 CRR) prepared for the US Gypsum Company Expansion/Modernization Project (Pacific Legacy, Inc. 2018) (Appendix E, “Cultural Resources Report”). The 2018 CRR investigates an Area of Potential Effect (APE) that encompasses both the project site (Quarry, Well No. 3 site, pipeline alignment) and an area to the south where a waterline replacement project has been completed. The following discussion summarizes information and findings from the 2018 CRR that pertain only to the project site.

### **4.8.1 Environmental Setting**

This section summarizes the available information regarding TCRs on and in the vicinity of the project site including descriptions of the ethnography of the project area and the results of the tribal notification process completed for the 2008 EIR/EIS.

#### **4.8.1.1 Tribal Cultural Resources Conditions at the Time of the 2008 EIR/EIS**

Tribal Cultural Resources are defined as site features, places, cultural landscapes, and sacred places or objects that are of cultural value to a tribe and are either on or are eligible for listing on the California Historic Register or a local historic register. Tribal Cultural Resources were added as a resource category to the CEQA Guidelines Appendix G Environmental Checklist in 2016 per Assembly Bill 52 (AB 52). Thus, Tribal Cultural Resources were not explicitly addressed in the 2008 EIR/EIS. The 2002 CRR did; however, provide a description of the ethnography of the project area and include a summary of the County’s tribal notification efforts for the project.

#### **Ethnography**

According to the 2002 CCR, Kumeyaay inhabit the area currently encompassed by western Imperial County, and comprise groups formerly identified as Tipai and Ipai (Carrico 1983; Cline 1979; Hedges 1975; Ladastida and Caldeira 1995; Luomala 1978; and Shipek 1991, cited in Paleo Solutions 2018). Kumeyaay territory extends east nearly to Yuma, AZ, southwest to Todos Santos Bay, west to the Pacific Ocean, and northwest to the San Luis Rey River and San Felipe Creek. Quechan and Cahuilla border Kumeyaay territory to the east and north, respectively. Kumeyaay language, formerly called Diegueño, is part of the Hokan stock of the Yuman language family (Langdon 1990, cited in Paleo Solutions 2018). Kumeyaay were organized into autonomous tribelets under the control of a chief (kwaaypaay) who had at least one assistant (Ladastida and Caldeira 1995; Luomala 1978; and Shipek 1991, cited in Paleo Solutions 2018). The position of chief was inherited from father to eldest son. The chief directed ceremonies and resolved differences within the group. Kroeber (1925:712, cited in Paleo Solutions 2018) suggests that Tipai and Ipai populations numbered approximately 3,000 at the time of contact, circa 1770–1790. Subsequent to contact, the Native American

population decreased, and in 1821 Mission San Diego records document a population of 1,711, which would have included Kumeyaay (Luomala 1978, cited in Paleo Solutions 2018). Kumeyaay relied heavily on seasonally available vegetal foods on valley floors and in the foothills and mountains (Ladastida and Caldeira 1995, cited in Paleo Solutions 2018). In the spring, blossoms and buds were collected from blooming plants in the foothills. During the summer, cactus fruits, agave, and mesquite pods were collected in valleys. Small animals were hunted during both seasons. During the fall and winter months, Kumeyaay moved into the mountains seeking shelter and food. Rockshelters and overhangs provided shelter from winter rain and snow, and acorns, pinyon nuts, and small game provided food. Kumeyaay material culture includes: seed processing implements such as the mortar and pestle and milling stones; baskets which were used for seed winnowing and storage; plain and decorated reddish-brown ceramic vessels were used for both cooking and storing water; and the bow and arrow (Ladastida and Caldeira 1995, cited in Paleo Solutions 2018). Structures built by the Kumeyaay varied in form depending on the season. For example, summer residential structures often consisted only of a windbreak while winter residential structures were semi-subterranean pit houses with a with-tie pole framework and brush thatch. Kumeyaay also built ceremonial structures, such as rock-supported brush fence circles, for events such as harvest dances (Luomala 1978 and Shipek 1991, cited in Paleo Solutions 2018). Kumeyaay primarily interacted and traded among themselves but did involve neighboring groups in certain trading activities. For example, coastal groups traded salt, dried seafood, and abalone shells with interior valley groups for gourds, acorns, agave, and mesquite pods. Kumeyaay also traded for granite to manufacture mortar and pestles, and Quechans traded with the Kumeyaay for acorns and acorn flour (Luomala 1978 and Shipek 1991, cited in Paleo Solutions 2018).

### **Tribal Consultation**

A sacred lands search was conducted as part of the 2002 CRR. A list of Native American contacts for the project area was obtained from the Native American Heritage Commission. The sacred lands search did not identify any cultural resources or culturally sensitive areas either within or near the project site. All groups and/or individuals on the list provided by the Native American Heritage Commission were contacted regarding the 2008 EIR/EIS but consultation was not requested.

#### **4.8.1.2 Cultural Resources Conditions at Present**

The following discussion is based primarily on the *Cultural Resources Report for the US Gypsum Company Expansion/Modernization Project Supplemental EIS, Imperial, California* prepared by Pacific Legacy, Inc. in 2018 (2018 CRR) (see Appendix E).

### **Ethnography**

No changes have occurred, and no new information has become available regarding the ethnography of the project area since the 2008 EIR/EIS.

### **Tribal Consultation**

NEPA does not require tribal notification or consultation; thus, no further correspondence with tribes occurred as part of the 2019 SEIS.

### **Viking Ranch Restoration Site**

A records search for potential cultural resources was conducted by Dudek archeologists for the Viking Ranch Restoration Site. No cultural resources have been recorded on the site or within a 1-mile buffer area (Dudek 2021).



## **Old Kane Springs Road Preservation Site**

The Old Kane Springs Road Preservation Site is undeveloped open space with no structures or other improvements.

### **4.8.2 Regulatory Setting**

The following sections discuss federal, State, and local regulations pertaining to biological resources that warrant consideration during the environmental review of the project.

#### **4.8.2.1 Federal**

There are no applicable federal programs or policies related to TCRs.

#### **4.8.2.2 State**

##### **Assembly Bill 52**

Assembly Bill (AB) 52 specifies that a project that may cause a substantial adverse change in the significance of a TCR, as defined, is a project that may have a significant effect on the environment. AB 52 requires a lead agency to consult with a California Native American tribe that is traditionally and culturally affiliated with the geographic area of the proposed project, if the tribe: (1) requests in writing consultation to the lead agency, (2) to be informed by the lead agency of proposed projects in that geographic area and the tribe requests consultation, prior to determining whether a negative declaration, mitigated negative declaration, or EIR is required for a project pursuant to CEQA. AB 52 specifies examples of mitigation measures that may be considered to avoid or minimize impacts on TCRs.

California Public Resources Code (PRC) Section 21080.3.1 requires that prior to the release of a negative declaration, mitigated negative declaration, or EIR for a project, the lead agency shall begin consultation with a California Native American tribe that is traditionally and culturally affiliated with the geographic area of the proposed project if:

- The California Native American tribe requested to the lead agency, in writing, to be informed by the lead agency through formal notification of proposed projects in the geographic area that is traditionally and culturally affiliated with the tribe, and
- The California Native American tribe responds, in writing, within 30 days of receipt of the formal notification, and requests the consultation.

Within 14 days of determining that an application for a project is complete or a decision by a public agency to undertake a project, the lead agency shall provide formal notification to the designated contact of, or a tribal representative of, traditionally and culturally affiliated California Native American tribes that have requested notice, which shall be accomplished by means of at least one written notification that includes a brief description of the proposed project and its location, the lead agency contact information, and a notification that the California Native American tribe has 30 days to request consultation pursuant to PRC Section 21080.3.1.

These requirements do not apply to subsequent or supplement EIRs.

### 4.8.2.3 Local

#### Imperial County General Plan

The goals, objectives, and policies in the *Imperial County General Plan* are intended to inform decision makers, the general public, public agencies, and those doing business in the County of the County's position on land use-related issues and to provide guidance for day-to-day decision-making. The following objectives and policies contained within the *Imperial County General Plan Conservation Element* pertain to cultural resources for the proposed project:

##### **Conservation and Open Space Element**

**Goal 3:** Preserve the spiritual and cultural heritage of the diverse communities of Imperial County.

**Objective 3.1:** Protect and preserve sites of archaeological, ecological, historical, and scientific value, and/or cultural significance.

**Objective 3.3:** Engage all local Native American Tribes in the protection of tribal cultural resources, including prehistoric trails and burial sites.

#### Imperial County Surface Mining Ordinance

The Imperial County Surface Mining Ordinance was enacted to ensure the continued availability of important mineral resources, while regulating surface mining operations as required by SMARA, PRC Section 2207, and state regulations for surface mining and reclamation practice (California Code of Regulations [CCR], Title 14, Division 2, Chapter 8, Subchapter 1, Sections 3500 et seq.), to ensure prevention or mitigation of adverse effects on the environment, including damage to archaeological and historical resources.

#### San Diego County General Plan

The goals and policies of the *San Diego County General Plan* provide direction to future growth and development in the county. The following goals and policies from the *San Diego County General Plan Conservation Element* relate to tribal cultural resources and apply to proposed actions at the Viking Ranch Restoration Site and Old Kane Springs Road Preservation Site, located in unincorporated San Diego County.

##### **Conservation and Open Space Element**

**Goal 3:** Preserve the spiritual and cultural heritage of the diverse communities of Imperial County.

**Goal COS-7:** Protection and Preservation of Archaeological Resources. Protection and preservation of the County's important archeological resources for their cultural importance to local communities, as well as their research and educational potential.

**Policy COS-7.1:** Archaeological Protection. Preserve important archaeological resources from loss or destruction and require development to include appropriate mitigation to protect the quality and integrity of these resources.

- Policy COS-7.2:** Open Space Easements. Require development to avoid archeological resources whenever possible. If complete avoidance is not possible, require development to fully mitigate impacts to archaeological resources.
- Policy COS-7.3:** Archaeological Collections. Require the appropriate treatment and preservation of archaeological collections in a culturally appropriate manner.
- Policy COS-7.4:** Consultation with Affected Communities. Require consultation with affected communities, including local tribes to determine the appropriate treatment of cultural resources.
- Policy COS-7.5:** Treatment of Human Remains. Require human remains be treated with the utmost dignity and respect and that the disposition and handling of human remains will be done in consultation with the Most Likely Descendant (MLD) and under the requirements of Federal, State and County Regulations.

### **4.8.3 Significance Criteria and Analysis Methodology**

#### **4.8.3.1 Significance Criteria**

##### **2008 EIR/EIS Significance Criteria**

The 2008 EIR/EIS evaluated the project's cultural resources impacts using the following significance criteria:

The project would be considered to have a significant effect on cultural resources if it would:

- Disturb cultural resources that are either listed or eligible to be listed in the NRHP; as registered or eligible to be registered as a state Historic Landmark; or included in any responsible local inventory of historical properties;
- Disturb previously unknown important archaeological or historical resources;
- Have the potential to cause physical change which would affect unique ethnic cultural values; or
- Restrict existing religious or sacred uses within the potential impact area.

##### **CEQA Appendix G Significance Criteria**

Based on Appendix G of the CEQA Guidelines, the proposed project would have a significant impact to cultural resources if it would:

- a) Cause a substantial adverse change in the significance of a historical resource pursuant to § 15064.5;
- b) Cause a substantial adverse change in the significance of an archaeological resource pursuant to § 15064.5;
- c) Disturb any human remains, including those interred outside of dedicated cemeteries.

#### **4.8.3.2 Analysis Methodology**

The evaluation of potential impacts to cultural resources is based on the findings of the 2018 CRR (Appendix E). Through a combination of a comprehensive records search for previously identified cultural resources

and a field investigation to identify and record newly discovered resources the 2018 CRR confirmed the location of significant cultural resources within the APE for the project. Based on this information, the proposed locations of project activities were compared to determine potential impacts to resources.

#### **4.8.4 Project Impacts and Mitigation Measures**

##### **4.8.4.1 2008 EIR/EIS Impact Analysis**

The 2008 EIR/EIS determined that impacts to known prehistoric and historic resources within the USG Expansion/Modernization Project area would be less than significant. However, it was noted that excavation in previously undisturbed areas could uncover unknown resources. The 2008 EIR/EIS includes the following mitigation measure to address potential impacts to unknown cultural resources:

***Mitigation Measure 3.8-3:** If any archaeological resources are encountered during implementation of the Proposed Action, construction or any other activity that may disturb or damage such resources shall be halted, and the services of a qualified archaeologist shall be secured to assess the resources and evaluate the potential impact. Such construction or other activity may resume only after the archaeological resources have been assessed and evaluated and a plan to avoid or mitigate any potential impacts to a level of insignificance has been prepared and implemented.*

##### **4.8.4.2 2019 SEIS Impact Analysis**

The 2019 SEIS further evaluated the proposed project under the National Environmental Policy Act (NEPA) and provided the following additional mitigation to address the potential for inadvertent discovery of buried artifacts which may be considered significant tribal cultural resources:

***Mitigation Measure 3.6-1:** Develop and Implement a Plan for Archaeological Monitoring, Post-Review Discovery, and Unanticipated Effects. Avoidance and protection measures for cultural resources within the Project APE will be outlined in a Construction Monitoring and Inadvertent Discovery Plan. This Plan will be prepared and approved prior to the implementation of any of the action alternatives. It will describe worker awareness training, avoidance measures, and monitoring procedures that will be implemented to protect known cultural resources from Project impacts. It will also detail the procedures that will be used to assess, manage, and mitigate potential impacts on inadvertent discoveries during Project implementation.*

***Mitigation Measure 3.6-2:** Develop a Maintenance Notification Agreement for Future Maintenance of Pipeline Rights-of-Way. A Maintenance Notification Agreement will be outlined prior to the authorization of any pipeline right-of-way grant to ensure continued avoidance of archaeological resources during the life of the grant. This agreement will identify the schedule and data needs that will be submitted by USG to BLM when maintenance is needed on any of the pipelines authorized for this project. The BLM archaeologist will review this data to determine if and where archaeological monitors are needed during future maintenance activities.*

##### **4.8.4.3 Substantial Project Changes**

###### **Project Revisions**

The proposed Quarry expansion, and the proposed Well No. 3 and associated pipeline, are substantially in the same location and same configuration as the features that were evaluated in the 2008 EIR/EIS. Therefore,

any minor revisions would not create a new or increase a significant impact related to cultural resources. However, the restoration of the Viking Ranch site and preservation of the Old Kane Springs Road site are proposed in response to mitigation required by the 2019 SEIS, and these are new actions under the proposed project.

### **Changed Circumstances**

No changed circumstances related to the project would create a new or increased significant impact related to cultural resources.

### **New Information**

The BLM requires that areas not subject to cultural resources inventory survey for over 10 years must be re-examined. Therefore, areas that were investigated for the USG Expansion/Modernization Project in 2002 were again inventoried in 2018. An updated Cultural Resources Report (2018 CRR) was completed as part of the 2019 SEIS. The 2018 CRR included an archival and records search and a pedestrian inventory of the USG Expansion/Modernization Project APE. As a result of the pedestrian survey, 18 cultural resources were newly discovered including one archaeological site and 17 isolated finds within the Quarry and one prehistoric archaeological site and three isolated finds within the well site and associated pipeline alignment.

Due to the identification of newly discovered cultural resources within the project site, the 2019 SEIS recommended implementation of mitigation measures 3.6-1 and 3.6-2 to address the potential for inadvertent discovery of buried resources.

### **Significance Determination**

Based on project revisions that may create a new or increased significant impact, the County has amplified and augmented the analysis contained in the 2008 EIR/EIS. This evaluation is provided in the following impact analysis.

#### **4.8.4.4 Subsequent Environmental Analysis**

**Impact 4.8-1: Would the Project Adversely Affect the Significance of a Tribal Cultural Resources, As Defined in PRC § 21074**

#### **Quarry, Well No. 3, and Associated Pipeline**

As discussed in Section 4.3, the 2002 CRR and 2018 CRR concluded that, with mitigation, the project would not result in any significant impacts to archeological sites. As discussed in greater detail in Impact 4.3-1, the two prehistoric archaeological sites (PLI-2018-1 and PLI-2018-2) identified in the APE would not be disturbed by project activities due to their locations away from active mining and proposed construction. Numerous isolated cultural resources were also identified within the APE; however, isolated finds are not eligible for listing in the NRHP and were not evaluated further. Furthermore, the tribal notification process completed for the project failed to identify any tribal cultural resources in the project area. As there are no known Tribal Cultural Resources within the APE, the project would have a less than significant impact and no mitigation is required. However, implementation of the existing mitigation measures listed below would further reduce the potential to disturb significant tribal cultural resources by requiring construction monitoring, work to halt in the event of a find and, requiring proper treatment of discovered resources.

**Level of Significance Before to Mitigation:** Less than significant

**Mitigation Measures:** *Implement the following existing mitigation measures:*

- 2008 EIR/EIS:
  - Mitigation Measure 3.8-3
- 2019 SEIS:
  - Mitigation Measure 3.6-1
  - Mitigation Measure 3.6-2

**Level of Significance After Mitigation:** Less than significant

### **Viking Ranch Restoration Sites**

Implementation of Mitigation Measures 4.3-1 and 4.3-2 would reduce potential impacts to TCRs by requiring construction monitoring, requiring work to halt in the event of a find and, proper treatment of discovered resources. Mitigation Measure 4.3-2 requires work to halt in the event human remains are discovered and requires the remains to be properly treated in consultation with the most likely descendent (MLD) and in accordance with federal, state, and local laws. Therefore, this impact would be less than significant with mitigation.

**Level of Significance Before Mitigation:** Less than significant.

**Mitigation Measures:** *Implement Mitigation Measures 4.3-1 and 4.3-2.*

**Level of Significance After Mitigation:** Less than significant.

### **Old Kane Springs Road Preservation Site**

No ground disturbing activities or development are proposed at the Old Kane Springs Road Preservation Site. Therefore, there would be no potential to adversely affect Tribal Cultural Resources at this site.

**Level of Significant:** No impact

**Mitigation Measures:** None required.

# CHAPTER 5: CUMULATIVE IMPACTS

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## 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):

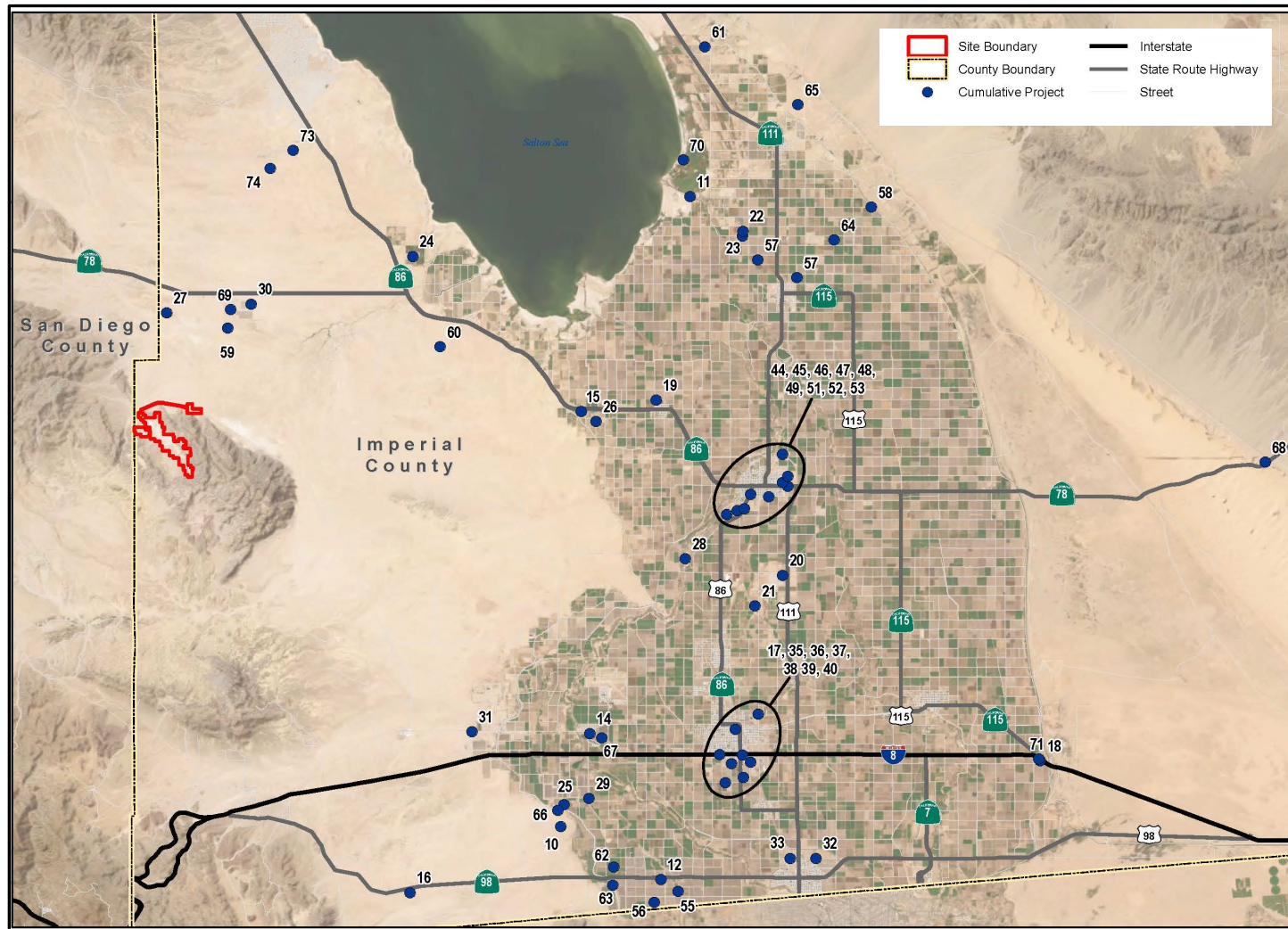
*List Method:* A list of past, present, and reasonably anticipated future projects producing related or cumulative impacts, including those projects outside the control of the agency.

*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**

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### 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

<b>Figure 5-1 Map Key</b>	<b>Project Name</b>	<b>Description of Project</b>	<b>Size or Extent</b>	<b>Jurisdiction/ Landowner</b>	<b>Status</b>
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"> <li>• New double circuit 230 kV collector system, connecting six substations;</li> <li>• Two new substations;</li> <li>• New 1,500-kV AC line to connect Arizona Public Service's North Gila substation to IID's Highline substation; and,</li> <li>• A new 500 kV DC transmission line from the Salton Sea area to the San Onofre Nuclear Generating Station substation.</li> </ul>		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.

# CHAPTER 6: ALTERNATIVES

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# CHAPTER 6: ALTERNATIVES

## 6.1 INTRODUCTION

This chapter describes a range of project alternatives and compares the associated potential environmental impacts to those of the proposed project. Section 6.2, “CEQA Requirements for Alternatives Analysis,” discusses the California Environmental Quality Act (CEQA) requirements for considering alternatives to the project. Section 6.3, “Summary of Project Objectives and Impacts,” provides a summary of the project and its significant and unavoidable impacts. Section 6.4, “Alternatives Formulation Process and Description of Project Alternatives,” discusses the alternatives formulation process and describes the alternatives evaluated. Finally, Section 6.5, “Alternatives Impact Analysis and Summary,” provides an analysis of the alternatives as compared to the project, and Section 6.6, “Environmentally Superior Alternative,” identifies the *environmentally superior alternative*, as required by CEQA. Table 6-1, “Alternatives Impact Comparison Summary,” in Section 6.5, summarizes the conclusions of the alternatives analysis.

## 6.2 CEQA REQUIREMENTS FOR ALTERNATIVES ANALYSIS

The CEQA Guidelines specify that an EIR must describe a reasonable range of alternatives to the project, or to the location of the project, which could feasibly attain most of the basic project objectives (Guidelines §15126.6(a)). The alternatives analysis must focus on alternatives that are capable of eliminating or substantially reducing the significant adverse impacts caused by the project (Guidelines §15126.6(c)), and alternatives to the “*whole of the project*” rather than the project’s component parts.<sup>1</sup> An EIR must include an alternatives analysis even if the EIR concludes that the project will not cause any significant adverse impacts.

The “no project” alternative, which considers impacts that would occur if existing conditions continued, must be considered (Guidelines §15126.6(e)), and the EIR must also identify the environmentally superior alternative. If the “no project” alternative is the environmentally superior alternative, the EIR must identify an environmentally superior alternative from among the other alternatives (Guidelines §15126.6(e)(2)). The EIR should not consider alternatives “whose effect cannot be reasonably ascertained and whose *implementation is remote and speculative*” (Guidelines §15126.6(f)(3), emphasis added). An EIR need not evaluate an alternative that is considered speculative, theoretical, or unreasonable. Not every potentially feasible alternative need be considered; rather, the relevant test is whether a “*reasonable range*” of feasible alternatives is considered for that particular project (Guidelines §15126.6(a)).

## 6.3 SUMMARY OF PROJECT OBJECTIVES AND IMPACTS

### 6.3.1 Project Objectives

The CEQA Guidelines provide that “the range of potential alternatives...shall include those that could feasibly accomplish most of the basic objectives of the project...” (§15126.6(c)). The overall goal of the project is to develop a groundwater water and associated pipeline to support expansion of the quarry and to fulfill

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<sup>1</sup> *Big Rock Mesas Property Association v. Board of Supervisors of the County of Los Angeles* (2d Dist. 1977) 73 Cal. App. 3d 218).

mitigation requirements by restoring and preserving two off-site properties. As defined in Section 2.4, “Project Objectives,” of Chapter 2, “Project Description,” specific project objectives include the following:

- 1) Secure permits and approvals to continue and fully develop quarrying gypsum reserves;
- 2) Maximize the recovery of known gypsum reserves needed for the Plant to fulfill its estimated operational design life;
- 3) Meet market demands for gypsum products;
- 4) Develop and maintain a replacement Quarry water supply designed to meet dust suppression requirements;
- 5) Concurrently reclaim Quarry site for post-mining uses as Open Space;
- 6) Secure permits and approvals to develop a water source to support the mining of gypsum reserves at the Quarry; and
- 7) Provide compensatory mitigation for potential impacts to waters of the state as a result of project implementation in compliance with State of California Fish & Game Code Section 1600 and the Porter Cologne Act.

### **6.3.2 Significant and Unavoidable Impacts of the Proposed Project**

After applying CEQA standards of significance to the entire range of adverse impacts that would result from implementation of the project, no new or more severe significant and unavoidable impacts have been identified through the analysis presented in Sections 4.1 through 4.8. nor in Chapter 5, “Cumulative Impacts.”

As stated above, all of the projects potentially significant impacts could be reduced to less than significant levels through implementation of mitigation measures identified in Chapter 4, “Environmental Analysis.” The alternatives evaluation summary table (Table 6-1) in Section 6.5 includes a list of each of the project impacts identified in Chapter 4 of this SEIR and identifies their significance both with and without the identified mitigation measures as compared to the impacts under each alternative. Significant impacts that could be mitigated to a level of less than significant were also considered in the alternatives formulation process, particularly those that address impacts to jurisdictional waters, air pollutant emissions, impacts to wildlife species and their habitats.

## **6.4 ALTERNATIVES FORMULATION PROCESS AND DESCRIPTION OF PROJECT ALTERNATIVES**

This section discusses the County’s process for formulating alternatives to the project for analysis in this SEIR including a discussion of alternatives considered but eliminated from further consideration and the reasons for their elimination. The section then provides a description of the project alternatives that are evaluated in Section 6.5.

Project alternatives were developed by Imperial County based on the previous environmental review completed for the project and on input from the project applicant, other responsible agencies, and the public scoping process. Alternatives were evaluated for inclusion in the SEIR based on the following criteria:

- Was the alternative evaluated in the 2008 EIR/EIS?
- Does the alternative fulfill all or most of the project objectives (see Section 6.3.1, above)?

- Does the alternative avoid or reduce effects to the physical environment compared to the proposed project?
- Is the alternative feasible to implement?

Alternatives that met most, or all, of the criteria listed above were carried forward for analysis and are detailed in Section 6.4.2, “Alternatives Evaluated in Detail,” below. Those that did not meet the above criteria or were eliminated from further analysis in the 2008 EIR/EIS are listed below, along with the reasons for elimination.

#### 6.4.1 Alternatives Considered but Rejected from Further Analysis

The following alternatives have been considered by Imperial County but rejected from further analysis for the reasons discussed below.

- Alternative Quarry Locations
  - This alternative was rejected based on the historic establishment and vested rights of the Quarry as well as the Quarry’s ore representing a unique and significant source of gypsum in the region and on the West Coast. Additionally, off-site locations were considered to be impractical because of: (1) compromised gypsum quality; (2) small deposit size; (3) long distance from USG’S existing Plaster City production plant; and (4) most off-site deposits being owned by USG’S market competitors.
- Inert Material Storage Area
  - This alternative was rejected based on economic, environmental, and technological factors.
- Alternative Mining Methods including Block and Pillar<sup>2</sup>, Block Caving<sup>3</sup>, Long Wall<sup>4</sup>, and Stoping<sup>5</sup>
  - This alternative was rejected based on safety and feasibility concerns posed by highly fractured and soft rock quality.
- Quarry Watershed Modified Mining Footprint
  - Eliminating mining Phases 9, 8, 7, and 6 was considered but was determined to be infeasible for the following reasons: (1) Phases 8 and 9 are at the southernmost terminus of the upper Quarry watershed where the channels are deeply incised by natural erosion and a substantive reduction in losses of waters of the United States is not anticipated and (2) the potential elimination of either Phase 6 or 7 was considered but, similar to issues in the middle Quarry watershed, the elimination of either of these phases would result in an increase in indirect effects on waters of the United States and a loss of functions and services resulting from the isolation and fragmentation of these resources.
- Alternative Offsite Mitigation Sites
  - Numerous potential mitigation sites were identified and evaluated in the Draft Habitat Mitigation and Monitoring Plan (see Appendix D-4). All but the selected Viking Ranch site and Old Kane Springs Road site were rejected from consideration due to low mitigation value, being located

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<sup>2</sup> A mining system in which the mined material is extracted across a horizontal plane, creating horizontal arrays of rooms and pillars.

<sup>3</sup> An underground hardrock mining method that involves undermining an ore body, allowing it to progressively collapse under its own weight.

<sup>4</sup> A form of underground mining where a long wall of material is mined in a single slice.

<sup>5</sup> The opening of large underground rooms, or stopes, by the excavation of ore.

outside of the target watershed, small size and/or different type of aquatic resource, or already being permitted for future development.

## 6.4.2 Alternatives Evaluated in Detail

The alternatives to the proposed project evaluated in the 2008 EIR/EIS included: (1) No Action Alternative, (2) Partial Use of Water from IID, and (3) Full Use of Water from IID. The No Action Alternative is carried over to this SEIR for supplemental evaluation. Alternatives 2 and 3 relate to a project component evaluated in the 2008 EIR/EIS (Plaster City Plant Water Line Replacement) which is not evaluated in this SEIR. For this reason, Alternatives 2 and 3 are not carried over to this SEIR for evaluation.

The following alternatives to the proposed project are described below and evaluated in Section 6.5 of this SEIR:

- Alternative 1: No Project
- Alternative 2: Lower Quarry Watershed Reduced Mining Footprint “A” Alternative
- Alternative 3: Lower Quarry Watershed Reduced Mining Footprint “B” Alternative
- Alternative 4: Middle Quarry Watershed Reduced Mining Footprint Alternative
- Alternative 5: Upper Quarry Watershed Reduced Mining Footprint Alternative

### 6.4.2.1 Features Common to All Project Alternatives

#### Quarry Operations

Surface quarrying methods as described in Chapter 2, “Project Description,” of this SEIR and including the BMPs listed below which are currently in place at the Quarry are common to all of the project alternatives considered. Quarrying operations would be conducted under the proposed project in accordance with the County-approved Mine and Mine Reclamation Plans and a BLM-approved Plan of Operations. Currently permitted quarrying activities would continue at the maximum production of 1.92 million tons per year until the resource is exhausted.

#### Quarry Reclamation Techniques

Certain aspects of reclaiming disturbed quarry areas under all alternatives would occur using the same techniques as described in the currently approved Mine Reclamation Plan. Where feasible, reclamation would occur concurrently during mining operations. Following the removal of gypsum, the disturbed areas would be reclaimed to a state of natural open space. The steepest portion of the hillside quarries would be sloped no steeper than 1H:1V (Horizontal:Vertical) slopes and about 100 feet high. The site access on the north would remain gated. The privately held lands would not be open to public recreational use. The benched hillsides would be recontoured by blasting or dozing the benches to soften the topography.

Once quarrying operations are terminated, equipment and structures would be removed; their foundations would be reduced below grade and covered in place. It is likely that an office or trailer would remain on site for ongoing revegetation monitoring, and for security purposes. The access road would be maintained for access to the main process area site and specific haul roads would be maintained to access reclamation activity and monitoring. Those portions of the rail line at natural surface elevation would remain in place. The length of rail proceeding below original ground line under the rock storage building will be removed and the spur cut backfilled. Ultimately all equipment, power poles, and buildings



would be removed, road access would be restricted by gates, warning signs would be posted, and access to Quarry benches would be blocked by berms and/or boulders.

### **Revegetation**

Revegetation efforts are fully described in the Mine Reclamation Plan and would be varied over the life of the operation. The revegetation techniques are proposed as guidelines that would be followed until new information or techniques become available, which could improve the results of the revegetation activities. Revegetation efforts would use seeds and plants of native species collected locally (on-site and on adjacent areas). The undisturbed portions of the Quarry and areas adjacent to the Quarry provide the targets for achievement through the revegetation effort. The areas to be disturbed by future mining would also provide specimens for direct transplanting of native species, and the undisturbed areas would provide a source of seeds for the revegetation effort.

### **Best Management Practices**

USG has operated the Quarry since 1945 and has established protocols to meet regulatory requirements and to be good stewards of the land on which it operates. The following BMPs have been in place at the Quarry for decades and will continue to be implemented as part of normal operations.

- Dust control measures are based on guidance and strategies presented in the Imperial County 2009 PM<sub>10</sub> State Implementation Plan and are included in current permits issued by the Imperial County Air Pollution Control District (ICAPCD). ICAPCD rules are available at <http://www.co.imperial.ca.us/AirPollution/index.asp?fileinc=comprules>
- All vehicles hauling bulk gypsum are covered with tarps or other means.
- Mine phases are reclaimed when gypsum reserves have been depleted in accordance with the approved Reclamation Plan.
- Quarry mine phases are revegetated as part of reclamation.
- Disturbed areas related to pipeline/transmission line removal and construction are reclaimed to pre-construction conditions.
- A Spill Contingency Plan/HAZWOPER Model Program is maintained with established emergency response protocols for spills of 55 gallons or more of hazardous material or 5 gallons or more of an extremely hazardous material.
- Compliance with existing adopted Mitigation Measures:
- USG maintains an integrated weed management plan to control invasive weeds including tamarisk and fountain grass in cooperation with the BLM and County of Imperial.
- USG maintains on-call contracts with a Designated Biologist who notifies BLM and USFWS prior to any new ground-disturbing activities and conducts pre-construction clearance surveys.
- USG contracts for monitoring with qualified biologists who have authority and responsibility to halt any project activities that violate mandated conservation measures.
- The Designated Biologist ensures that no Quarry expansion activity occurs while Peninsular Bighorn Sheep (PBS) are within a 0.25-mile radius of the activity.
- The Designated Biologist or Biological Monitor visits the Quarry site periodically to administer the Worker Education Awareness Program and ensure compliance with the Integrated Weed

Management Plan, the Reclamation Plan, the Wildlife Mortality Reporting Program, and the PBS Monitoring Plan.

- To the extent feasible, any new site disturbance is conducted outside the nesting season (January 1 through August 31) to avoid potential take of nesting birds or of eggs.
- For project activities in windblown sand habitats on pipeline routes, the Designated Biologist or Biological Monitor is present in each area of active surface disturbance throughout the workday and will examine areas of active surface disturbance for the presence of flat-tailed horned lizard or Colorado fringe-toed lizard.
- Speed limits along all access roads (excluding haul roads) will not exceed 15 miles per hour.
- Shielded downward-directional lighting on all facilities and infrastructure at night will avoid illumination of adjacent natural areas and the night sky.
- Spoils are stockpiled only in previously disturbed areas, or in areas designated for future disturbance (including spoils areas) in the Plan of Operations.
- To avoid entrapment of birds during pipeline construction and removal, all pipes or other construction materials or supplies are covered or capped in storage or laydown areas, and checked for secure covering at the end of each workday.
- The ends of trenches are left as “escape ramps” to avoid wildlife entrapment.
- During pipeline construction, no pipes or tubing of sizes or inside diameters ranging from 1 to 10 inches will be left open either temporarily or permanently.
- No anticoagulant rodenticides of any kind are used within the Plant or Quarry areas.
- All non-construction, non-mining, and food-related wastes are placed in segregated self-closing raven-proof containers (excluding bulk waste bins) and removed regularly from the site to prevent overflow.
- Workers do not feed wildlife.
- Pooled rainwater or floodwater within quarries areas is rare due to the fracturing of the gypsum and bedrock and occurs only during major storm events. Water is pumped for use in daily dust control activity which results in avoidance of attracting wildlife to the active work areas.
- Any injured or dead wildlife encountered during project-related activities shall be reported to the Designated Biologist, Biological Monitor, California Department of Fish and Wildlife (CDFW), or a CDFW-approved veterinary facility as soon as possible for determining the best course of action. For special-status species, the Designated Biologist or Biological Monitor shall notify the BLM, USFWS, and/or CDFW, as appropriate, within 24 hours of the discovery.
- If an active burrowing owl burrow is observed within a work area at any time of year, the Designated Biologist or Biological Monitor, in coordination with BLM, will designate and flag an appropriate buffer area around the burrow where project activities will not be permitted. The buffer area will be based on the nature of project activity and burrowing owl activity (i.e., nesting vs. wintering). The Designated Biologist or Biological Monitor will continue to monitor the site until it is confirmed that the burrowing owl(s) is/are no longer present. Owls shall not be harassed to reduce the length of time owls are present in a construction or excavation site.
- If avoidance of quarrying or pipeline construction within the buffer area is infeasible, burrowing owls may be excluded from an active wintering season burrow in coordination with CDFW and

- in accordance with CDFW guidelines, including provision of replacement burrows prior to the exclusion.
- USG will be responsible for monitoring and reporting PBS activity in the Quarry area during the life of the project in accordance with a PBS monitoring plan approved by the CDFW and USFWS.

#### **6.4.2.2 Alternative 1: No Project**

Under the No Project Alternative, a new Conditional Use Permit (CUP) would not be granted, and the proposed Well No. 3 and associated pipeline would not be constructed. As a result, the Quarry operation would continue to utilize Well No. 2 to produce water for dust suppression. As described in Section 2.2, “Background,” of Chapter 2, Well No. 2 is not a reliable water source and fails to produce sufficient supply to meet demand. In addition, restoration and preservation of the Viking Ranch and Old Kane Springs Road sites would not occur. As a result, impacts to Waters of the US resulting from Quarry expansion could not be fully mitigated as required and mining activities would be curtailed. Thus, Alternative 1 would involve an overall reduction in mining footprint, volume, and duration as well as elimination of construction activities associated with the well, pipeline, and restoration site.

#### **6.4.2.3 Alternative 2: Lower Quarry Watershed Reduced Mining Footprint “A” Alternatives**

Alternative 2 is the same as the proposed project except that Phase 10 would not be mined to its full capacity and Phase 10P would be eliminated entirely from the proposed mining plan in order to reduce losses of waters of the United States. USG would reduce the mining depth in Phase 10, grading north to the base grade of Fish Creek (Figure 6-1, “Alternative 2: Modified Lower Watershed Mining Footprint A”). Phase 10P is considered for elimination given its position in the northernmost end of the Quarry watershed, its close proximity to Fish Creek, and the relatively low quantity of gypsum ore that would be extracted from this phase compared to other phases in the mining plan.

Under this alternative, the stormwater berm would be eliminated south of Phase 2. Instead, the natural topography of the upper Quarry watershed would direct surface water away from Phases 6 through 9. Using natural landforms would reduce the length of the berm by one mile compared with the proposed project and would eliminate the need for a complex system of transverse levees with anchored berms in the upper Quarry watershed. The stormwater berm would begin west of Phase 2, where only one transverse levee would be required, and would extend northward through Phase 10.

Phase 10 mining would occur as proposed to a reduced depth connecting with Phase 10P and progressing at an angle suitable to maintain gravity flow. A conveyance channel roughly 200 feet wide would result at the northernmost boundary of Phase 5, extending north through Phase 10 and 10P until its confluence with Fish Creek. Approximately 5.4 million tons less gypsum ore would be mined under this alternative than under the proposed project. Compared with the maximum permitted production of 1.92 million tons per year, this alternative would reduce the projected mine life by 2.81 years.

This alternative would include construction and operation of Well No. 3 and the associated pipeline similar to the proposed project. The Viking Ranch site and Old Kane Springs site would still be restored and preserved as wildlife habitat to offset impacts to Waters of the US within the project site.

#### **6.4.2.4 Alternative 3: Lower Quarry Watershed Reduced Mining Footprint “B” Alternative**

Alternative 3 is the same as the proposed project except that the mining footprint along the western boundaries of Phases 4 and 5, where Annex Mill Site #4 encroaches into an unnamed ephemeral wash, would be reconfigured to reduce losses of waters of the United States (Figure 6-2, “Alternative 3: Reduced Lower Watershed Mining Footprint B”). Phases 4 and 5 were selected for reconfiguration because of their close proximity to existing administrative/office facilities where blasting is not ideal due to noise and the depth of overburden needing to be stripped in order to mine the gypsum ore. The stormwater berm would be configured as described for Alternative 2 except that it would be modified to exclude the eliminated portions of Phases 4 and 5, include Phases 10 and 10P, and extend northward from Phase 2 through the northern limit of Phase 10P. This alternative would reduce the amount of gypsum ore mined by approximately 11.87 million tons. Compared with the maximum permitted production of 1.92 million tons per year, this alternative would reduce the projected mine life by 6.18 years.

This alternative would include construction and operation of Well No. 3 and the associated pipeline similar to the proposed project. The Viking Ranch site and Old Kane Springs site would still be restored and preserved as wildlife habitat to offset impacts to Waters of the US within the project site.

#### **6.4.2.5 Alternative 4: Middle Quarry Watershed Reduced Mining Footprint Alternative**

Alternative 4 is the same as the proposed project except that Phases 2P, 3P (North) and 3P (South) would be eliminated from the proposed mining plan to reduce losses of waters of the United States. As shown in Figure 6-3, “Alternative 4: Middle Quarry Watershed Phased Elimination,” the proposed stormwater berm would be modified to exclude the eliminated phases, including Phases 10 and 10P, and extend through the northern limit of Phase 10P.

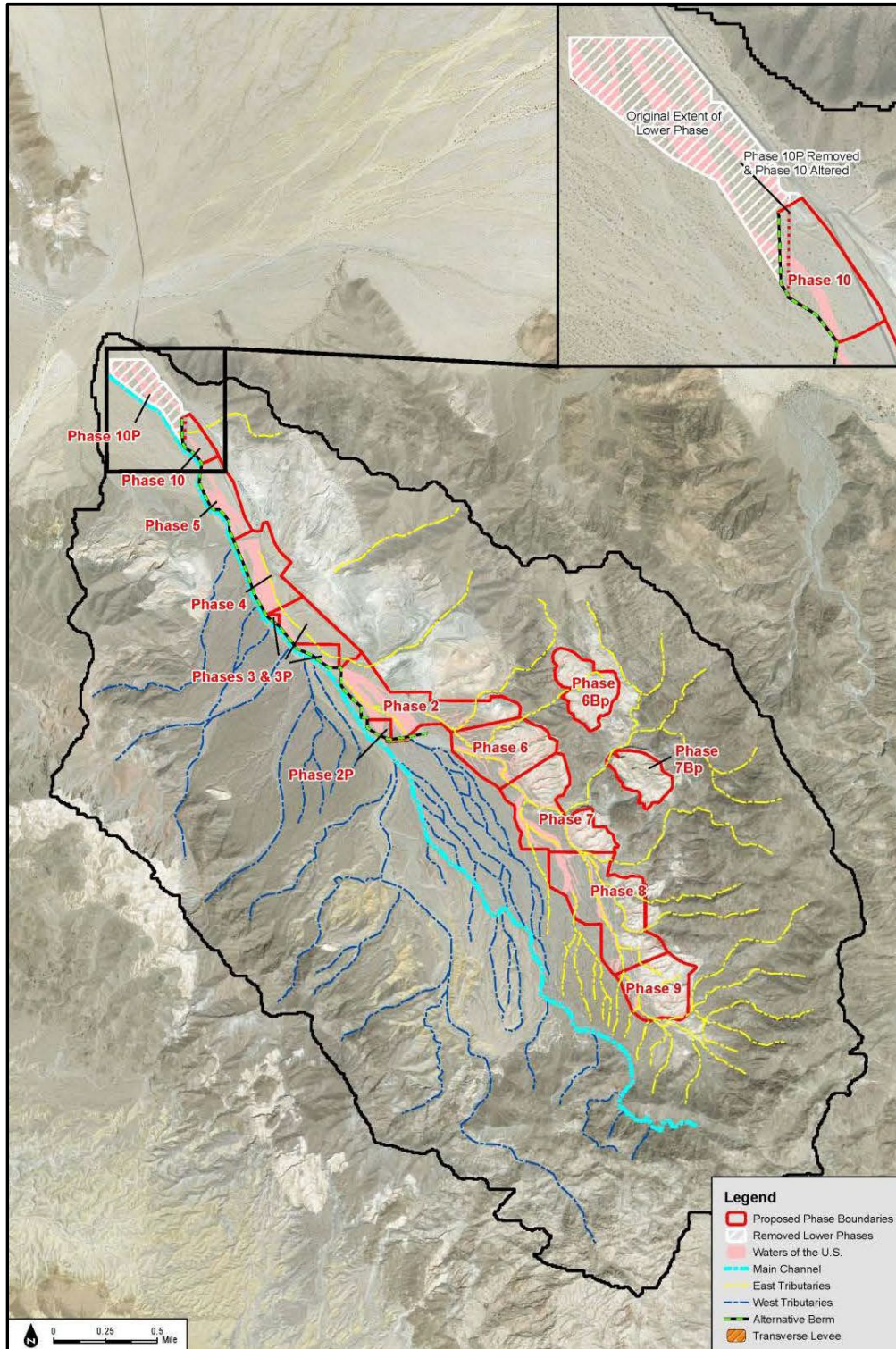
As a result of this reduced mining footprint, approximately 2.33 million tons less gypsum would be mined. At a maximum permitted production of 1.92 million tons per year, this alternative would reduce projected mine life by 1.21 years compared with the proposed project.

This alternative would include construction and operation of Well No. 3 and the associated pipeline similar to the proposed project. The Viking Ranch site and Old Kane Springs site would still be restored and preserved as wildlife habitat to offset impacts to Waters of the US within the project site.

#### **6.4.2.6 Alternative 5: Upper Quarry Watershed Reduced Mining Footprint Alternative**

Alternative 5 is the same as the proposed project except that the mining footprint in Phases 7 and 8 would be reconfigured to reduce losses of waters of the United States (Figure 6-4, “Alternative 5: Upper Quarry Watershed Reduced Mining Footprint”). Under this alternative, the mining boundaries of Phases 7 and 8 would be moved east parallel with the main drainage channel. The stormwater berm would be as described for Alternative 2 but would include all of Phases 10 and 10P.

The overall mining footprint would be reduced by 34 acres, thereby decreasing potential mining beneath the valley alluvium where gypsum ore has been determined to be most abundant. The amount of gypsum ore mined under this alternative would be approximately 13.04 million tons less than under the proposed project. Compared with the maximum permitted production of 1.92 million tons per year, this alternative would reduce the projected mine life by 6.79 years.

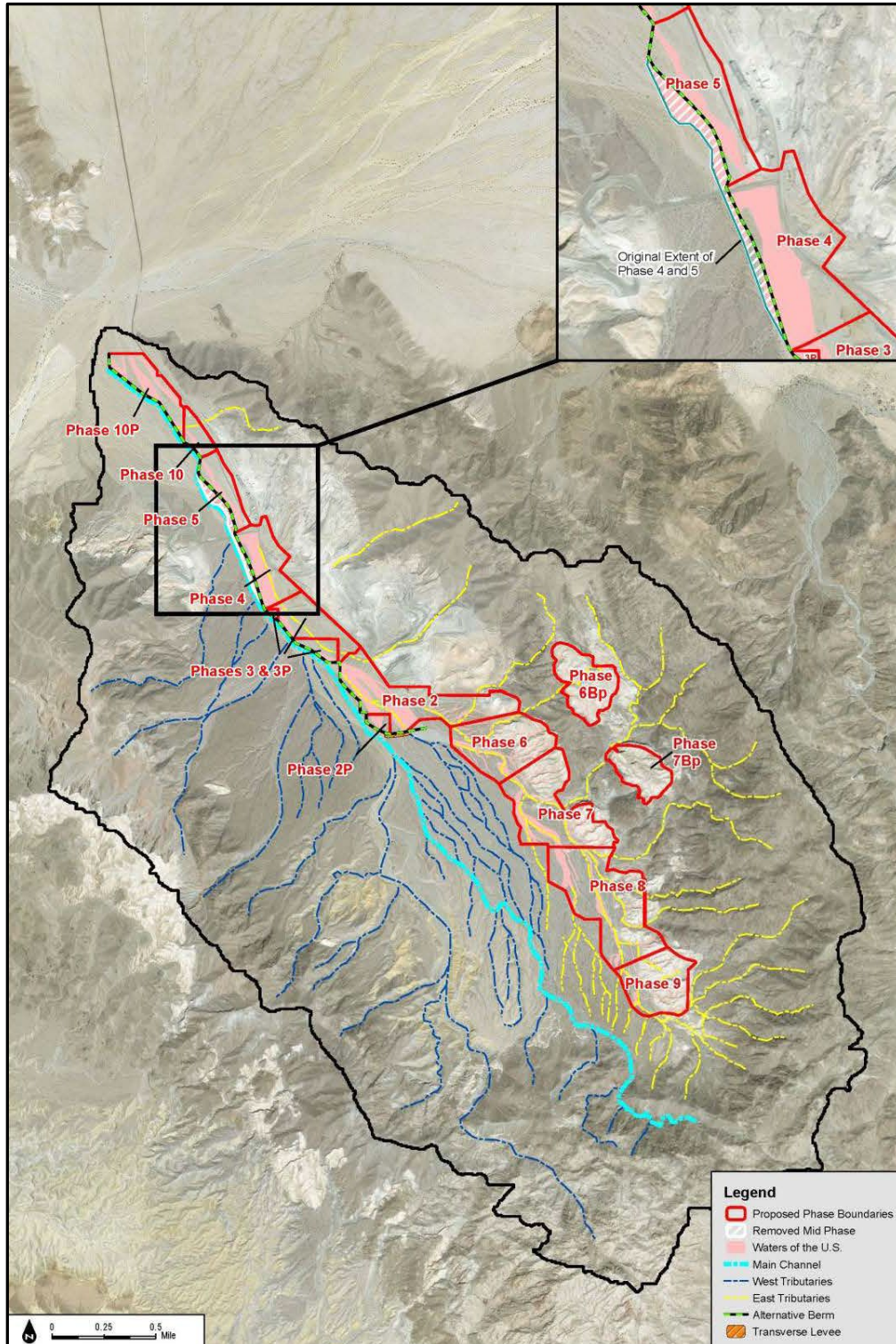


SOURCE: 2019 SEIS; Figure 2-6

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**Figure 6-1**  
**Alternative 2: Modified Lower Watershed Mining Footprint A**

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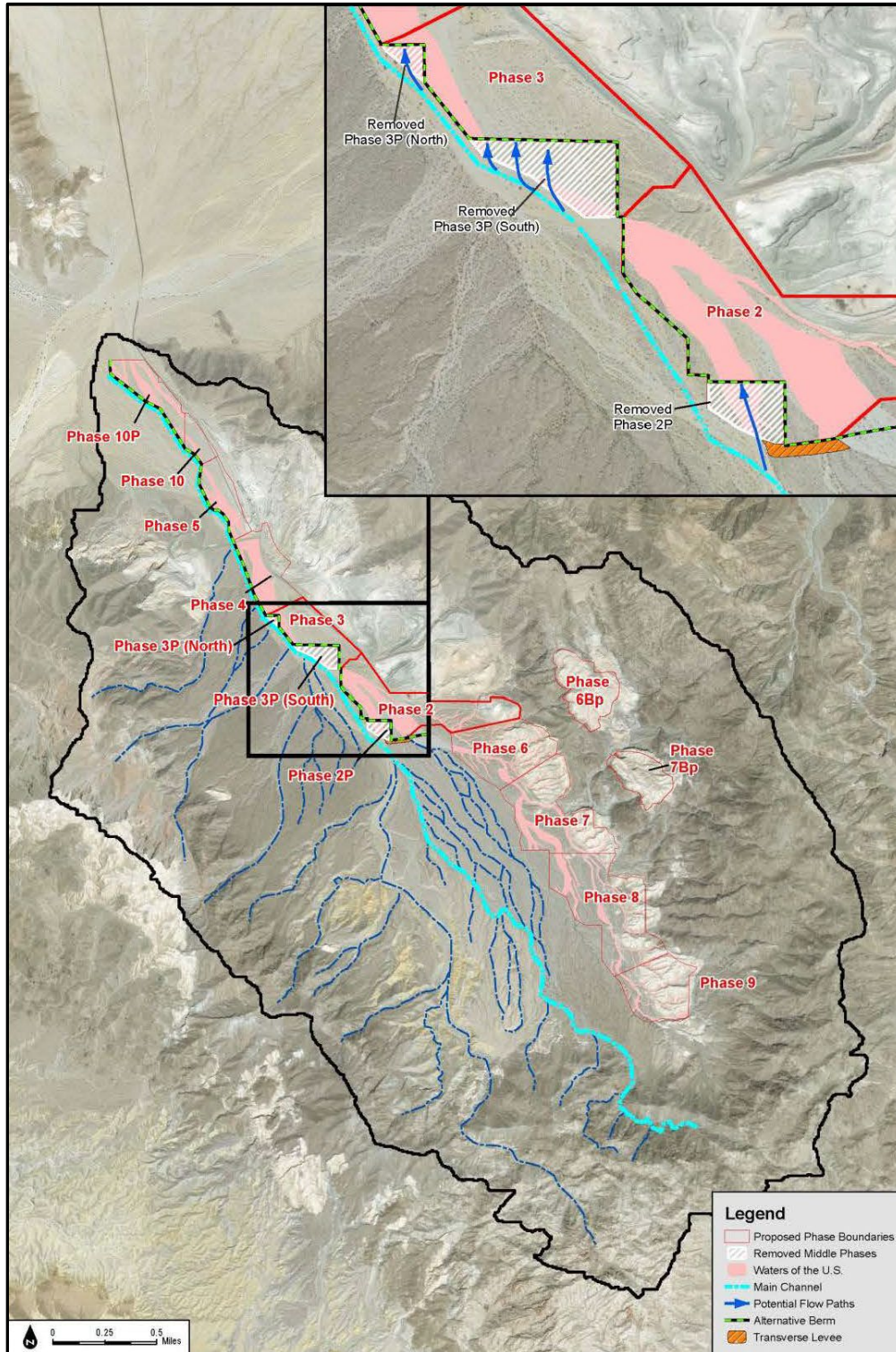
SOURCE: 2019 SEIS; Figure 2-7

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

**Figure 6-2**  
**Alternative 3: Reduced Lower Watershed Mining Footprint B**

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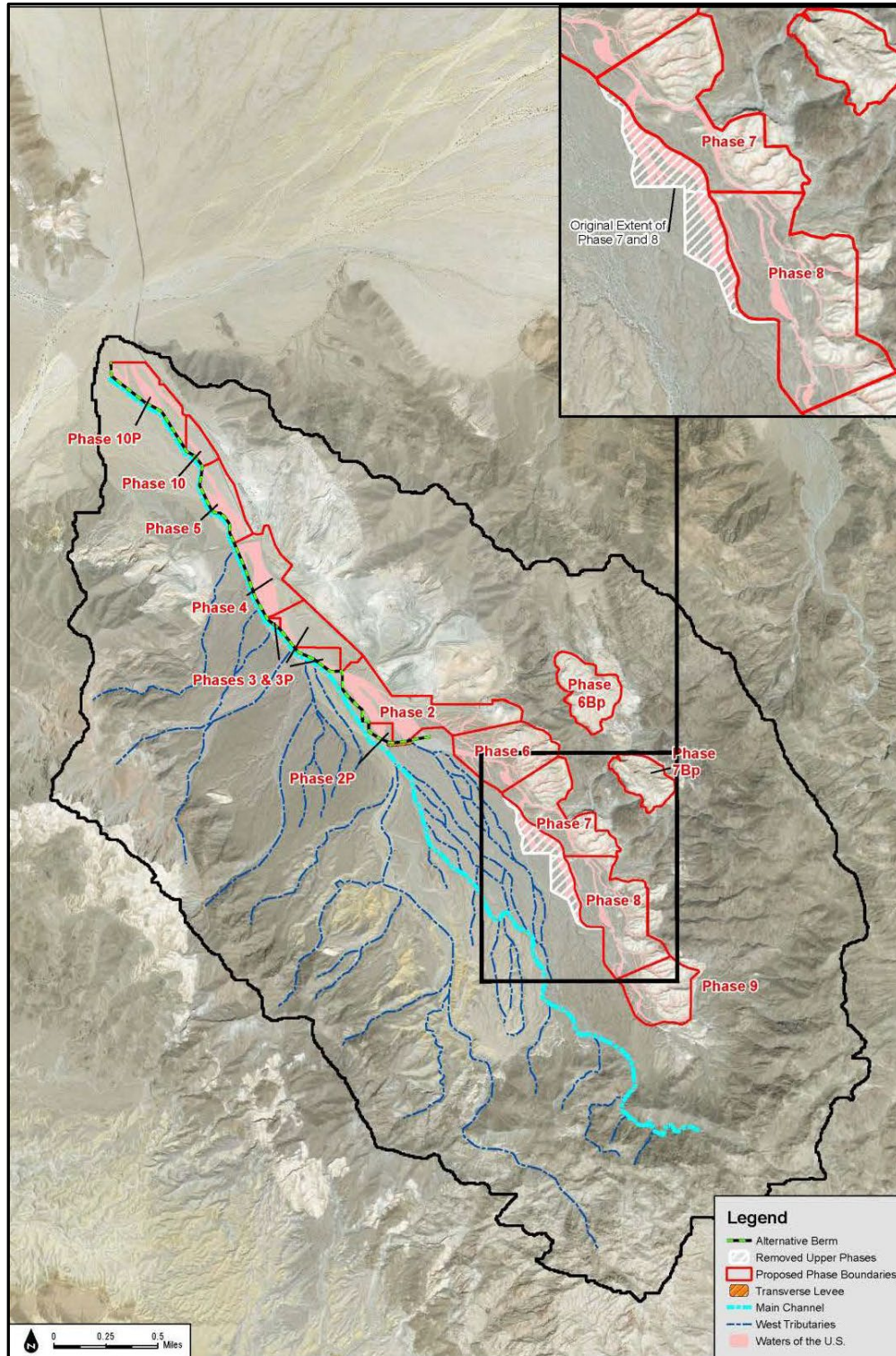


SOURCE: 2019 SEIS; Figure 2-8

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

**Figure 6-3**  
**Alternative 4: Middle Quarry Watershed Phased Elimination**

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SOURCE: 2019 SEIS; Figure 2-9

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**Figure 6-4**  
**Alternative 5: Upper Quarry Watershed Reduced Mining Footprint**

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This alternative would include construction and operation of Well No. 3 and the associated pipeline similar to the proposed project. The Viking Ranch site and Old Kane Springs site would still be restored and preserved as wildlife habitat to offset impacts to Waters of the US within the project site.

## 6.5 ALTERNATIVES IMPACT ANALYSIS AND SUMMARY

The focus of the alternatives analysis in this SEIR is to explore options to mitigate or avoid the project's significant impacts. The analysis of each alternative considers whether the alternative would reduce impacts as compared to the project as proposed. In most cases, the alternatives would create the potential for reducing the magnitude, duration, or frequency of certain project impacts, but would not eliminate the impacts entirely.

As presented in Chapter 4, project impacts prior to the application of mitigation measures are identified as significant, potentially significant, or less than significant. Mitigation measures are identified, when available, for significant and potentially significant impacts, and the resulting impacts are found to be either less than significant (when mitigation would reduce a significant or potentially significant impact to below the threshold of significance) or significant and unavoidable (when either no feasible mitigation is available or when available mitigation would not reduce the impact to below the threshold of significance).

Table 6-1 provides a summary comparison of the impacts of each alternative with impacts of the project. The table lists each project impact and the significance of the project impact both without mitigation and with mitigation identified in this SEIR (if the impact without mitigation is deemed less than significant, no mitigation is needed, and the table simply lists less than significant (LS).

Table 6-1 also identifies the anticipated comparative impact of each alternative as either having no impact (NI) or an impact greater than (+), similar to (=), or less than (-) the corresponding impact of the project. In most cases, the alternatives would result in similar or lessened impacts as compared to the project, but the reduction in impact would not be of sufficient magnitude such that a significant project impact would be reduced to less than significant. For example, Quarry operations could still impact Peninsular bighorn sheep individuals and habitat. Mitigation measures applicable to project impacts would also be available to reduce commensurate impacts of the alternatives. Thus, in instances where a significant project impact would be reduced to less than significant with mitigation, the same mitigation would also reduce the impact of the alternative to less than significant unless otherwise noted.

Each of the project alternatives considered in this analysis is described in Section 6.4, above. The following sections discuss the impacts of each alternative as compared to project impacts identified in Sections 4.1, "Air Quality," through 4.8 and Chapter 5 of this SEIR. Table 6-1 below provides a summary of the comparison and the discussion in the following sections emphasizes those impact areas for which the project would result in one or more significant impacts and the alternative(s) would have the potential to lessen one or more significant impacts of the project.

**Table 6-1  
 Alternatives Impact Comparison Summary**

Impact	Project Impact Significance without/mitigation <sup>1</sup>	Alternatives				
		1 (No Project)	2 (Lower Quarry Watershed Reduced Mining Footprint "A")	3 (Lower Quarry Watershed Reduced Mining Footprint "B")	4 (Middle Quarry Watershed Reduced Mining Footprint)	5 (Upper Quarry Watershed Reduced Mining Footprint)
Impact 4.1-1: Conflict with or Obstruct Implementation of the Applicable Air Quality Plan	LTS/LTS	=	=	=	=	=
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	LTS/LTS	-	-	-	-	-
Impact 4.1-3: Expose Sensitive Receptors to Substantial Pollutant Concentrations	LTS/LTS	=	=	=	=	=
Impact 4.1-4: Result in Other Emissions (Such as Those Leading to Odors) Adversely Affecting a Substantial Number of People	LTS/LTS	=	=	=	=	=
Impact 4.2-1: The Project Could Have Substantial Adverse Effects on Special-Status Plant Species or Plant Communities.	PS/LTS	-	-	-	-	-
Impact 4.2-2: The Project Could Have Substantial Adverse Effects on Special-Status Wildlife Species	PS/LTS	-	-	-	-	-
Impact 4.2-3: The Project Could Have Substantial Adverse Effects on State or Federally Protected Wetlands	PS/LTS	-	-	-	-	-
Impact 4.2-4: The Project Would Not Interfere Substantially with Native Wildlife Movement or Impede Nursery Site Use	PS/LTS	-	-	-	-	-
Impact 4.2-5: The Project Would Not Conflict with Any Local Policies or Ordinances Protecting Biological Resources or	PS/LTS	=	=	=	=	=

Impact	Project Impact Significance without/with Mitigation <sup>1</sup>	Alternatives				
		1 (No Project)	2 (Lower Quarry Watershed Reduced Mining Footprint "A")	3 (Lower Quarry Watershed Reduced Mining Footprint "B")	4 (Middle Quarry Watershed Reduced Mining Footprint)	5 (Upper Quarry Watershed Reduced Mining Footprint)
with Any Adopted Habitat Conservation Plan or Natural Community Conservation Plan.						
Impact 4.3-1: The Project Could Cause a Substantial Adverse Change in the Significance of a Historical Resource Pursuant to §15064.5.	PS/LTS	-	-	-	-	-
Impact 4.3-2: The Project Could Cause a Substantial Adverse Change in the Significance of An Archaeological Resource Pursuant to §15064.5.	PS/LTS	-	-	-	-	-
Impact 4.3-3: The Project Could Disturb Any Human Remains, Including Those Interred Outside of Dedicated Cemeteries	PS/LTS	-	-	-	-	-
Impact 4.4-1: Directly or Indirectly Destroy a Unique Paleontological Resource or Site or Unique Geological Feature	PS/LTS	-	-	-	-	-
Impact 4.5-1: Greenhouse Gas Emissions Generated by Project Activities Could Have a Significant Impact on Global Climate Change.	LTS/LTS	-	-	-	-	-
Impact 4.5-2: Consistency with Applicable GHG Plans, Policies, or Regulations.	LTS/LTS	=	=	=	=	=
Impact 4.6-1: The Project Could Violate Water Quality Standards or Waste Discharge Requirements or Otherwise Substantially Degrade Surface or Ground Water Quality	LTS/LTS	-	-	-	-	-
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	LTS/LTS	-	=	=	=	=

Impact	Project Impact Significance without/with Mitigation <sup>1</sup>	Alternatives				
		1 (No Project)	2 (Lower Quarry Watershed Reduced Mining Footprint "A")	3 (Lower Quarry Watershed Reduced Mining Footprint "B")	4 (Middle Quarry Watershed Reduced Mining Footprint)	5 (Upper Quarry Watershed Reduced Mining Footprint)
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.	PS/LTS	=	-	-	-	-
Impact 4.6-4: The Project Could Release Pollutants in the Event of Inundation from Flood, Tsunami, or Seiche	LTS/LTS	=	=	=	=	=
Impact 4.6-5: The Project Could Conflict with or Obstruct Implementation of a Water Quality Control Plan or Sustainable Groundwater Management Plan	LTS/LTS	=	=	=	=	=
Impact 4.7-1: Physically Divide an Established Community	LTS/LTS	=	=	=	=	=
Impact 4.7-2: Conflict with Land Use Plans, Policies, and Regulations	LTS/LTS	=	=	=	=	=
Impact 4.8-1: Would the Project Adversely Affect the Significance of a Tribal Cultural Resources, As Defined in PRC § 21074	LTS/LTS	-	-	-	-	-



### **6.5.1 Alternative 1: No Project**

Under Alternative 1, proposed Well No. 3 and the associated pipeline would not be constructed and the Quarry would continue to operate without a sufficient or reliable water source for dust suppression. In addition, restoration and preservation of the Viking Ranch and Old Kane Springs Road sites would not occur, nor would the associated beneficial impacts to hydrology and biological resources at those sites. As a result, impacts to Waters of the US resulting from Quarry expansion could not be fully mitigated as required and mining activities would be curtailed. Thus, Alternative 1 would involve an overall reduced mining footprint, volume, and duration as well as elimination of construction activities associated with the well, pipeline, and restoration site.

#### **Air Quality**

Under Alternative 1, the overall footprint, volume and duration of mining would be reduced thus reducing operational air emissions. In addition, the elimination of construction activities at the well site, pipeline alignment, and the Viking Ranch site would substantially reduce temporary construction emissions. Although emissions would be reduced under this alternative, the mitigation measures provided in the 2008 EIR/EIS would still be implemented to further reduce exhaust emissions.

#### **Biological Resources**

Under Alternative 1, the overall mining footprint would be reduced and new impacts to Waters of the US would be eliminated. Impacts to vegetation and wildlife would be similar to those identified in the 2008 EIR/EIS and no new mitigation would be required. Thus, the beneficial effects of the mitigation measures for Peninsular bighorn sheep (PBS) and other special-status species and restoration and preservation of the offsite mitigation sites would not occur.

#### **Cultural Resources**

Because the overall mining footprint would be reduced, the potential for project activities to inadvertently disturb buried cultural resources would also be reduced. However, the mitigation measures provided in Section 4.3, would still be required to fully mitigate the project's impacts to cultural resources.

#### **Geology, Soils, and Paleontological Resources**

Because the overall mining footprint would be reduced, the potential for project activities to inadvertently disturb previously undiscovered paleontological resources would also be reduced. No new mitigation measures beyond those provided in the 2008 EIR/EIS would be required.

#### **Greenhouse Gas Emissions**

Under Alternative 1, there would be a reduction in the total area to be mined as well as a corresponding reduction in total mining volume and duration. The proposed berm would still be constructed as described in the 2008 EIR/EIS resulting in similar construction emissions. However, no construction activities would occur at the well site/pipeline corridor or at the Viking Ranch Restoration Site. Thus, temporary GHG emissions would be reduced compared to the proposed project. However, as water would need to be transported to the quarry, the GHG emissions from those trucks, which would be reduced or eliminated under the project, would be greater than the proposed project. Although emissions would be reduced under this alternative, the existing mitigation measures described in Section 4.5 would still be required to further reduce emissions and fully mitigate the project's GHG impacts.

### **Hydrology and Water Quality**

Under Alternative 1, the Quarry expansion would be limited to areas of the project site not containing Waters of the US; thus, impacts to jurisdictional waters on the project site would be reduced. However, this alternative would also eliminate the proposed restoration and preservation of the offsite mitigation sites. As such, the beneficial impacts of the enhancement and preservation of these offsite jurisdictional waters would not occur under this alternative. The proposed berm would still be constructed but would need to be modified to reflect the new footprint. Overall drainage patterns and related effects would be similar to the proposed project. Water quality impacts would also be similar to the proposed project. As Well No. 3 would not be constructed, groundwater pumping at Well No. 2 would continue at current levels which are below that proposed for Well No. 3. Thus, impacts to groundwater levels and local wells would be reduced compared to the proposed project.

### **Land Use and Planning**

Both the proposed project and Alternative 1 would be consistent with all applicable land use plans, policies and regulations, would not divide a community either directly or indirectly, and would not conflict with any habitat conservation plans. Alternative 1 would result in similar impacts to land use and planning as compared to the proposed project.

### **Tribal Cultural Resources**

Because the overall mining footprint would be reduced, the potential for project activities to inadvertently disturb buried tribal cultural resources would also be correspondingly reduced. However, the mitigation measures provided in Section 4.3 and 4.8 would still be required to fully mitigate the project's potential impacts to tribal cultural resources.

## **6.5.2 Alternative 2: Lower Quarry Watershed Reduced Mining Footprint "A" Alternative**

The discussion below considers the impacts of Alternative 2 as compared to the proposed project. Under the Lower Quarry Watershed Reduced Mining Footprint "A" Alternative, Phase 10 would not be fully mined, and Phase 10 would be eliminated in order to avoid jurisdictional waters. Also under this alternative, the proposed stormwater berm would be reduced in length and overall mining activity would be reduced/shortened. All other project components would be identical to the proposed project including construction of Well No. 3 and associated pipeline and restoration/preservation of the offsite mitigation sites.

### **Air Quality**

Because proposed mining phases would be reduced or eliminated under this alternative, overall mining volume and duration would be reduced thus reducing operational emissions. Furthermore, the proposed berm would be significantly reduced in length reducing construction time and associated temporary emissions. Although emissions would be reduced under this alternative the mitigation measures described in Section 4.1 would still be required to further reduce emissions and mitigate the project's air quality impacts.

### **Biological Resources**

Under Alternative 2, the total area impacted by mining of Phase 10 would be reduced from 21.4 acres to 6.6 acres thus eliminating direct impacts on the arroyo wash and avoiding the downstream impacts on Fish Creek. Because the overall footprint of the area to be mined would be reduced, this alternative would

proportionally reduce impacts on alluvial wash vegetation and habitat. Effects to annual rock-nettle and other species could be slightly less, depending on local extent of occupied habitat during a given year. Mitigation measures would be the same as identified for the proposed project.

The impacts of Alternative 2 on wildlife would be the same as described for the proposed project but would be quantitatively slightly less due to the reduced Quarry footprint. This alternative would reduce the northernmost extent of the Quarry and thus could have slightly less impact to localized wildlife movement across the canyon, between mountainous habitat to the east and west. Impacts on PBS and barefoot banded gecko would be the same as described for the proposed project but may be quantitatively slightly less due to the reduced Quarry footprint. This alternative, like the proposed project, would not affect Swainson's hawk or desert pupfish. Mitigation measures for wildlife species would be the same as identified for the proposed project.

### **Cultural Resources**

Because the overall footprint of the area to be mined would be reduced, the potential for project activities to inadvertently disturb buried cultural resources would also be reduced. However, the mitigation measures provided in Section 4.3 would still be required to fully mitigate the project's impacts to cultural resources.

### **Geology, Soils, and Paleontological Resources**

Because the overall footprint of the area to be mined would be reduced, the potential for project activities to inadvertently disturb buried paleontological resources would also be reduced. However, the mitigation measures provided in Section 4.4 would still be required to fully mitigate the project's impacts to paleontological resources.

### **Greenhouse Gas Emissions**

Because proposed mining phases would be reduced or eliminated under this alternative, overall mining volume and duration would be reduced thus reducing operational GHG emissions. Furthermore, the proposed berm would be significantly reduced in length reducing construction time and associated temporary emissions. Although emissions would be reduced under this alternative, the mitigation measures described in Section 4.5 would still be required to mitigate the project's GHG impacts.

### **Hydrology and Water Quality**

Alternative 2 would reduce mining of Phase 10 and eliminate mining of Phase 10P and would modify the proposed berm including elimination of the berm between Phases 6 and 9 where a natural topographic break would serve as the storm water barrier instead. This modified berm alignment would allow for an additional 120 acres to discharge into the Quarry, but at least two percent of the total watershed area it is considered minimal and would not represent a change in the modeled hydrologic analysis of the easterly and westerly peak flow rates identified for the proposed project.

The impacts on hydrologic resources associated with this alternative are similar in nature to the proposed project, although they differ in their extent. The total losses of Waters of the US would be reduced from 133.63 acres to 117.62 acres for the mining area and berm alone. Eliminating Phase 10P would eliminate direct impacts on the wash along the boundary of that phase and would avoid indirect downstream impacts from Phase 10P on Fish Creek.

### **Land Use and Planning**

Both the proposed project and Alternative 1 would be consistent with all applicable land use plans, policies and regulations, would not divide a community either directly or indirectly, and would not conflict with any habitat conservation plans. Alternative 1 would result in similar impacts to land use and planning as compared to the proposed project.

### **Tribal Cultural Resources**

Because the overall footprint of the area to be mined would be reduced, the potential for project activities to inadvertently disturb buried tribal cultural resources would also be reduced. However, the mitigation measures referenced in Section 4.8 would still be required to fully mitigate the project's impacts to tribal cultural resources.

### **6.5.3 Alternative 3: Lower Quarry Watershed Reduced Mining Footprint "B" Alternative**

The discussion below considers the impacts of Alternative 3 as compared to the proposed project. Under the Lower Quarry Watershed Reduced Mining Footprint "B" Alternative, the western boundaries of Phases 4 and 5 would be reconfigured to reduce losses of waters of the United States. Also under this alternative, the proposed stormwater berm would be reduced in length and overall mining activity would be reduced/shortened. All other project components would be identical to the proposed project including construction of Well No. 3 and associated pipeline and restoration/preservation of the offsite mitigation sites.

### **Air Quality**

Because proposed mining phases would be reduced or eliminated under this alternative, overall mining volume and duration would be reduced thus reducing operational emissions. Furthermore, the proposed berm would be significantly reduced in length reducing construction time and associated temporary emissions. Although emissions would be reduced under this alternative, the mitigation measures described in Section 4.1 would still be required to mitigate the project's air quality impacts.

### **Biological Resources**

Under Alternative 3, Phases 4 and 5 would be reconfigured to reduce losses of Waters of the US and the berm would be correspondingly modified. The total area impacted in these phases would be 45.09 acres, compared with 53.71 acres under the proposed project, thus reducing direct impacts on the arroyo wash and avoiding the downstream impacts of Fish Creek.

Because the overall footprint of the area to be mined would be reduced, this alternative would proportionally reduce impacts on alluvial wash vegetation and habitat. Effects to annual rock-nettle and other species could be slightly less, depending on local extent of occupied habitat during a given year. Mitigation measures would be the same as identified for the proposed project.

The impacts of Alternative 3 on wildlife would be the same as described for the proposed project but would be quantitatively slightly less due to the reduced Quarry footprint. Impacts on PBS and barefoot banded gecko would be the same as described for the proposed project but may be quantitatively slightly less due to the reduced Quarry footprint. This alternative, like the proposed project, would not affect Swainson's hawk or desert pupfish. Mitigation measures for wildlife species would be the same as identified for the proposed project.

### **Cultural Resources**

Because the overall footprint of the area to be mined would be reduced, the potential for project activities to inadvertently disturb buried cultural resources would also be reduced. However, the mitigation measures provided in Section 4.3 would still be required to fully mitigate the project's impacts to cultural resources.

### **Geology, Soils, and Paleontological Resources**

Because the overall footprint of the area to be mined would be reduced, the potential for project activities to inadvertently disturb buried paleontological resources would also be reduced. However, the mitigation measures provided in Section 4.4 would still be required to fully mitigate the project's impacts to paleontological resources.

### **Greenhouse Gas Emissions**

Because proposed mining phases would be reduced or eliminated under this alternative, overall mining volume and duration would be reduced thus reducing operational GHG emissions. Furthermore, the proposed berm would be significantly reduced in length reducing construction time and associated temporary emissions. Although emissions would be reduced under this alternative, the mitigation measures described in Section 4.5 would still be required to mitigate the project's GHG impacts.

### **Hydrology and Water Quality**

Under Alternative 3, the nature of the impacts on hydrologic resources would be the same as the proposed project. The total loss of Waters of the US would be reduced from 133.63 acres under the proposed project to 125.43 acres.

### **Land Use and Planning**

Both the proposed project and Alternative 1 would be consistent with all applicable land use plans, policies and regulations, would not divide a community either directly or indirectly, and would not conflict with any habitat conservation plans. Alternative 1 would result in similar impacts to land use and planning as compared to the proposed project.

### **Tribal Cultural Resources**

Because the overall footprint of the area to be mined would be reduced, the potential for project activities to inadvertently disturb buried tribal cultural resources would also be reduced. However, the mitigation measures referenced in Section 4.8 would still be required to fully mitigate the project's impacts to tribal cultural resources.

## **6.5.4 Alternative 4: Middle Quarry Watershed Reduced Mining Footprint Alternative**

The discussion below considers the impacts of Alternative 4 as compared to the proposed project. Under the Middle Quarry Watershed Reduced Mining Footprint Alternative, mining Phases 2P, 3P (North) and 3P (South) would be eliminated to reduce losses of waters of the United States. Also under this alternative, the proposed stormwater berm would be reduced in length and overall mining activity would be reduced/shortened. All other project components would be identical to the proposed project including construction of Well No. 3 and associated pipeline and restoration/preservation of the offsite mitigation sites.

### **Air Quality**

Because proposed mining phases would be reduced or eliminated under this alternative, overall mining volume and duration would be reduced thus reducing operational emissions. Furthermore, the proposed berm would be significantly reduced in length reducing construction time and associated temporary emissions. Although emissions would be reduced under this alternative, the mitigation measures described in Section 4.1 would still be required to mitigate the project's air quality impacts.

### **Biological Resources**

Under Alternative 4, Phases 2P, 3P (North) and 3P (South) would be eliminated to reduce losses of Waters of the US and the berm would be correspondingly modified. The removal of these three phases would realign the proposed storm water berm such that it would be nearly perpendicular to flow in the main channel along three significant sections where the phases are proposed for removal (from approximately 300 to 1,300 feet long).

By eliminating these phases, Alternative 4 would slightly reduce mining impacts on upland and alluvial wash vegetation (primarily creosote bush scrub and sparsely vegetated sandy wash). Other impacts on vegetation and habitat would be similar to the proposed project. Effects to annual rock-nettle and other species could be slightly less, depending on local extent of occupied habitat during a given year. Mitigation measures would be the same as identified for the proposed project.

The impacts of Alternative 4 on wildlife, including PBS and barefoot banded gecko, would be the same as described for the proposed project but would be quantitatively slightly less due to the reduced Quarry footprint. This alternative, like the proposed project, would not affect Swainson's hawk or desert pupfish. Mitigation measures for wildlife species would be the same as identified for the proposed project.

### **Cultural Resources**

Because the overall footprint of the area to be mined would be reduced, the potential for project activities to inadvertently disturb buried cultural resources would also be reduced. However, the mitigation measures provided in Section 4.3 would still be required to fully mitigate the project's impacts to cultural resources.

### **Geology, Soils, and Paleontological Resources**

Because the overall footprint of the area to be mined would be reduced, the potential for project activities to inadvertently disturb buried paleontological resources would also be reduced. However, the mitigation measures provided in Section 4.4 would still be required to fully mitigate the project's impacts to paleontological resources.

### **Greenhouse Gas Emissions**

Because proposed mining phases would be reduced or eliminated under this alternative, overall mining volume and duration would be reduced thus reducing operational GHG emissions. Furthermore, the proposed berm would be significantly reduced in length reducing construction time and associated temporary emissions. Although emissions would be reduced under this alternative, the mitigation measures described in Section 4.5 would still be required to mitigate the project's GHG impacts.

### **Hydrology and Water Quality**

Under Alternative 4, the impacts on hydrologic resources would be similar in nature to the proposed project. The direct loss of waters of the US would be reduced from 133.63 acres under the proposed project to 126.78 acres and the same mitigation would be required to address this loss. However, indirect impacts would increase under this alternative as mining would continue in the channel immediately upstream and downstream of Phases 2P, 3P (North), and 3P (South).

### **Land Use and Planning**

Both the proposed project and Alternative 4 would be consistent with all applicable land use plans, policies and regulations, would not divide a community either directly or indirectly, and would not conflict with any habitat conservation plans. Alternative 1 would result in similar impacts to land use and planning as compared to the proposed project.

### **Tribal Cultural Resources**

Because the overall footprint of the area to be mined would be reduced, the potential for project activities to inadvertently disturb buried tribal cultural resources would also be reduced. However, the mitigation measures referenced in Section 4.8 would still be required to fully mitigate the project's impacts to tribal cultural resources.

## **6.5.5 Alternative 5: Upper Quarry Watershed Reduced Mining Footprint Alternative**

The discussion below considers the impacts of Alternative 5 as compared to the proposed project. Under the Upper Quarry Watershed Reduced Mining Footprint Alternative, mining Phases 2P, 3P (North) and 3P (South) would be eliminated to reduce losses of waters of the United States. Also under this alternative, the proposed stormwater berm would be reduced in length and overall mining activity would be reduced/shortened. All other project components would be identical to the proposed project including construction of Well No. 3 and associated pipeline and restoration/preservation of the offsite mitigation sites.

### **Air Quality**

Because proposed mining phases would be eliminated under this alternative, overall mining volume and duration would be reduced thus reducing operational emissions. Furthermore, the proposed berm would be significantly reduced in length reducing construction time and associated temporary emissions. Although emissions would be reduced under this alternative, the mitigation measures described in Section 4.1 would still be required to fully mitigate the project's air quality impacts.

### **Biological Resources**

Under Alternative 5, the proposed mining footprint would be reduced in Phases 7 and 8 and the proposed berm would be modified accordingly. Impacts to Waters of the US would be reduced from 32.12 acres under the proposed project to 20.05 under this alternative. The overall mining footprint would be reduced, thereby decreasing the area of disturbance and slightly reducing impacts to alluvial wash vegetation (primarily creosote bush scrub and catclaw acacia thorn scrub). Other impacts on vegetation and habitat would be similar to the proposed project. Effects to annual rock-nettle and other species could be slightly less, depending on local extent of occupied habitat during a given year. Mitigation measures would be the same as identified for the proposed project.

The impacts of Alternative 5 on wildlife, including PBS and barefoot banded gecko, would be the same as described for the proposed project but would be quantitatively slightly less due to the reduced Quarry footprint. This alternative, like the proposed project, would not affect Swainson's hawk or desert pupfish. Mitigation measures for wildlife species would be the same as identified for the proposed project.

### **Cultural Resources**

Because the overall footprint of the area to be mined would be reduced, the potential for project activities to inadvertently disturb buried cultural resources would also be reduced. However, the mitigation measures provided in Section 4.3 would still be required to fully mitigate the project's impacts to cultural resources.

### **Geology, Soils, and Paleontological Resources**

Because the overall footprint of the area to be mined would be reduced, the potential for project activities to inadvertently disturb buried paleontological resources would also be reduced. However, the mitigation measures provided in Section 4.4 would still be required to fully mitigate the project's impacts to paleontological resources.

### **Greenhouse Gas Emissions**

Because proposed mining phases would be reduced or eliminated under this alternative, overall mining volume and duration would be reduced thus reducing operational GHG emissions. Furthermore, the proposed berm would be significantly reduced in length reducing construction time and associated temporary emissions. Although emissions would be reduced under this alternative, the mitigation measures described in Section 4.5 would still be required to mitigate the project's GHG impacts.

### **Hydrology and Water Quality**

Under Alternative 5, the boundaries of mining phases 7 and 8 would be modified and the proposed berm would be modified accordingly. Under this alternative, the impacts on hydrologic resources would be similar in nature to the proposed project. The direct loss of Waters of the US in the upper Quarry watershed would be reduced from 133.63 acres under the proposed project to 122.35 acres and the same mitigation would be required to address this loss.

### **Land Use and Planning**

Both the proposed project and Alternative 5 would be consistent with all applicable land use plans, policies and regulations, would not divide a community either directly or indirectly, and would not conflict with any habitat conservation plans. Alternative 5 would result in similar impacts to land use and planning as compared to the proposed project.

### **Tribal Cultural Resources**

Because the overall footprint of the area to be mined would be reduced, the potential for project activities to inadvertently disturb buried tribal cultural resources would also be reduced. However, the mitigation measures referenced in Section 4.8 would still be required to fully mitigate the project's impacts to tribal cultural resources.



## **6.6 ENVIRONMENTALLY SUPERIOR ALTERNATIVE**

CEQA §15126.6(e)(2) requires that an EIR identify the environmentally superior alternative. CEQA also requires that if the environmentally superior alternative is the No Project Alternative, the EIR must also identify an environmentally superior alternative from the remaining alternatives. In consideration of the alternatives evaluation presented above, Alternative 1: No Project Alternative would result in fewer impacts as compared to the project and the other alternatives considered. This is due to the fact that Well No. 3 would not be constructed, and additional groundwater would not be pumped from the aquifer that underlies the project site. As such, the County must identify the environmentally superior alternative from the remaining alternatives.

Based on the analysis above and excluding the No Project Alternative, the County concludes that Alternative 5, Upper Quarry Watershed Reduced Mining Footprint Alternative, is the environmentally superior alternative as it would result in the greatest reduction of mining volume and duration and would reduce impacts to Waters of the US by 11.28 acres.

The alternatives analysis and conclusions reached regarding the environmentally superior alternative do not determine the ability of Alternative 5 to be an economically viable option for the Applicant.

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# CHAPTER 7: OTHER CEQA TOPICS

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# CHAPTER 7: OTHER CEQA TOPICS

## 7.1 INTRODUCTION

The California Environmental Quality Act (CEQA) requires the consideration of a range of additional issues extending beyond analysis of project-specific impacts. This section of the subsequent environmental impact report (SEIR) contains analysis of the following additional CEQA-mandated discussions:

- Mandatory Findings of Significance (Section 15065[a] and Section XXI of the Appendix G of CEQA Guidelines)
- energy consumption and conservation (Section 15126.4[b] and Appendix F of CEQA Guidelines), and
- significant unavoidable adverse impacts (Section 15126.2[c]),
- irreversible/irretrievable commitment of resources (Section 15126.2[d]),
- growth-inducing impacts (Section 15126.2[e])

## 7.2 MANDATORY FINDINGS OF SIGNIFICANCE

Based on Appendix G of the CEQA Guidelines, the proposed project would have a significant impact on the CEQA mandatory findings of significance if it would:

- a) Have the potential to substantially degrade the quality of the environment, substantially reduce the habitat of a fish or wildlife species, cause a fish or wildlife population to drop below self-sustaining levels, threaten to eliminate a plant or animal community, substantially reduce the number or restrict the range of a rare or endangered plant or animal or eliminate important examples of the major periods of California history or prehistory;
- b) Have impacts that are individually limited, but cumulatively considerable (“Cumulatively considerable” means that the incremental effects of a 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.); or
- c) Have environmental effects which will cause substantial adverse effects on human beings, either directly or indirectly.

Under the *United States Gypsum Company Expansion/Modernization Project Final Environmental Impact Report/Environmental Impact Statement* (2008 EIR/EIS) these impacts were determined to be less than significant. However, as stated in the Initial Study prepared for the project (see Appendix A-1, “Initial Study,” of this SEIR) project revisions, changed circumstances, and newly available information, discussed at length in Chapters 4 and 5 of this SEIR, could alter this determination. Each mandatory finding of significance is discussed in detail below.

**Impact 7-1: Substantially Degrade the Quality of the Environment, Reduce Habitat of a Fish or Wildlife Species, Cause a Fish or Wildlife Population to Drop Below Self-Sustaining Levels, Threaten to Eliminate a Plant or Animal Community, Substantially Reduce the Number or Restrict the Range of a Rare or Endangered Plant or Animal or Eliminate Important Examples of the Major Periods of California History or Prehistory**

Section 4.2, “Biological Resources,” of this SEIR evaluates the project’s potential impacts to biological resources, including impacts to fish and wildlife populations and movement and impacts to habitats, plant communities, and protected wetlands. The SEIR analysis for this CEQA topic determined that the proposed project would have a less than significant impact on all biological resources with mitigation incorporated. As such, with mitigation incorporated, this impact is also determined to be less than significant with implementation of the mitigation measures referenced below.

Section 4.3, “Cultural Resources,” of this SEIR evaluates the project’s potential impacts to cultural resources including historical resources. Impact 4.3-1 specifically addresses potential impacts to historical resources. There are two recorded historical resource sites within the project site: (1) the Quarry itself and, (2) the Plaster City Railroad (P-13-008139). These are central components of the Quarry operation that remain in continuous operation, are properly maintained, and would not be adversely affected by project implementation. Similarly, the two prehistoric archaeological resource sites identified within the project site would not be affected by project activities. Existing mitigation measures from both the 2008 EIR/EIS and the 2019 SEIS address the potential for project activities to inadvertently disturb unknown cultural resources. With implementation of these mitigation measures, this impact would be less than significant.

**Level of Significance Before Mitigation:** Potentially significant.

**Mitigation Measures:** *Relevant mitigation measures required to reduce this impact to a less than significant level include the following measures from Section 4.2, “Biological Resources,” and Section 4.3, “Cultural Resources,” of this SEIR:*

- 2008 EIR/EIS:
  - Mitigation Measure 3.5-1a
  - Mitigation Measure 3.5-1b
  - Mitigation Measure 3.5-1c
  - Mitigation Measure 3.5-1d
  - Mitigation Measure 3.5-1e
  - Mitigation Measure 3.5-1f
  - Mitigation Measure 3.5-2
  - Mitigation Measure 3.8-3
- 2019 SEIS:
  - Mitigation Measure 3.4-5
  - Mitigation Measure 3.4-6
  - Mitigation Measure 3.4-7

- *Mitigation Measure 3.4-8*
- *Mitigation Measure 3.4-9*
- *Mitigation Measure 3.4-10*
- *Mitigation Measure 3.4-11*
- *Mitigation Measure 3.4-12*
- *Mitigation Measure 3.4-13*
- *Mitigation Measure 3.6-1*
- *Mitigation Measure 3.6-2*

**Level of Significance After Mitigation:** Less than significant.

**Impact 7-2: Impacts that are Individually Limited but Cumulatively Considerable**

Chapter 5 of this SEIR provides an evaluation of the project's potential to result in impacts that are cumulatively considerable. This evaluation determined that, with implementation of the mitigation measures provided in this SEIR, the project would not result in any impacts which are cumulatively considerable. Therefore, this impact would be less than significant.

**Level of Significance Before Mitigation:** Less than significant.

**Mitigation Measure:** None required.

**Level of Significance After Mitigation:** Less than significant.

**Impact 7-3: Environmental Effects which will Cause Substantial Adverse Effects on Human Beings**

Under CEQA, a change to the physical environment that might otherwise be minor must be treated as significant if people will be significantly affected. This factor relates to adverse changes to the environment of human beings generally, and not to effects on particular individuals. While changes to the environment that could indirectly affect human beings will be represented by all of the designated CEQA issue areas, those that could directly affect human beings include aesthetics, air quality, geology and soils, hazards and hazardous materials, hydrology and water quality, noise, population and housing, public services, transportation/traffic, and utilities, which are addressed in this SEIR and the Initial Study (see Appendix A-1).

As discussed throughout Chapter 4 of this SEIR, the project would not result in any significant impacts which cannot be mitigated. The topics of aesthetics, geology and soils, hazards and hazardous materials, noise, population and housing, public services, transportation/traffic, and utilities were determined to be less than significant in the Initial Study and were not evaluated further in the SEIR. Project impacts to air quality are addressed in Section 4.1, "Air Quality," of this SEIS. With implementation of both existing and newly proposed mitigation measures, each air quality impact was determined to be less than significant. In particular, emissions of fugitive dust (Impact 4.1-2) and odorous emissions (Impact 4.1-4), which can create a nuisance to the public, would be less than significant. Furthermore, the project site is located in a rural area composed primarily of open space with few inhabitants. Given the site's distance from established

communities and residential uses, the project would have limited potential to adversely affect human beings. With implementation of the mitigation measures listed below, this impact would be less than significant.

**Level of Significance Before Mitigation:** Potentially Significant.

**Mitigation Measures:** *Implement the following existing and newly proposed mitigation measures:*

- 2008 EIR/EIS:
  - Mitigation Measure 3.6-1a
  - Mitigation Measure 3.6-1b
  - Mitigation Measure 3.6-1c
- SEIR Section 4.1:
  - Mitigation Measure 4.1-1a
  - Mitigation Measure 4.1-1b

**Level of Significance After Mitigation:** Less than Significant.

### 7.3 ENERGY CONSUMPTION AND CONSERVATION

CEQA requires an environmental impact report to include a discussion of mitigation measures to minimize significant effects on the environment relating to “wasteful, inefficient, and unnecessary consumption of energy” (PRC Section 21100[b][3]). Appendix F of the CEQA Guidelines provides guidance for analyzing energy impacts in an EIR, but neither Appendix F itself, nor any authority, requires that an EIR discuss every possible energy impact or conservation measure listed in Appendix F. Energy impacts need only be discussed “to the extent relevant and applicable to the project” (CEQA Guidelines Appendix F, Section II).

Appendix F states that “the goal of conserving energy implies the wise and efficient use of energy. The means of achieving this goal include: (1) decreasing overall per capita energy consumption, (2) decreasing reliance on fossil fuels such as coal, natural gas and oil, and (3) increasing reliance on renewable energy sources” (CEQA Guidelines Appendix F, Section I). In addition, factors suggested in Appendix F for determining and mitigating potentially significant energy impacts may be relevant to this project’s fuel usage and energy consumption. These factors are discussed herein, where relevant, for mobile equipment and electric utility service used by the project.

The proposed Quarry expansion, and the proposed Well No. 3 and associated pipeline, would be substantially in the same locations and same configurations as the features that were evaluated in the 2008 EIR/EIS. The project would not change proposed Quarry operations and would not result in an increase in energy use for transportation purposes or operation of mining equipment or facilities.

Construction of the proposed well and pipeline and restoration of the Viking Ranch site would temporarily consume energy sources for operation of heavy off-road equipment, trucks, and worker and vendor traffic. The emissions for these activities are included in Appendix C-2 and C-3 of this SEIR. Once construction is completed, well operation would require ongoing energy use. The use of solar panels to power the well is not feasible due to the high potential for vandalism of such facilities in the project area. Upon completion of



restoration activities at the Viking Ranch site, energy use would be limited to occasional truck trips for maintenance activities. Similarly, the Old Kane Springs Road site would require a negligible amount of fossil fuel energy for maintenance truck trips.

The project would have limited energy needs and would not result in the wasteful or inefficient use of energy resources.

#### **7.4 SIGNIFICANT ENVIRONMENTAL EFFECTS WHICH CANNOT BE AVOIDED IF THE PROPOSED PROJECT IS IMPLEMENTED**

CEQA Guidelines Section 15126.2(c) requires that the EIR discuss significant environmental effect that cannot be avoided if the project is implemented, even with mitigation incorporated. According to Guidelines Section 15126(c):

Describe any significant impacts, including those which can be mitigated but not reduced to a level of insignificance. Where there are impacts that cannot be alleviated without imposing an alternative design, their implications and the reasons why the project is being proposed, notwithstanding their effect, should be described.

As determined in Chapter 4 of this SEIR, the proposed project would not result in any significant and unavoidable impacts.

#### **7.5 SIGNIFICANT IRREVERSIBLE ENVIRONMENTAL CHANGES THAT WOULD BE CAUSED BY THE PROJECT SHOULD IT BE IMPLEMENTED**

Public Resources Code Section 21100(b)(2)(B) and CEQA Guidelines Section 15126.2(d) require that the EIR discuss significant irreversible environmental changes that would be caused by the project should it be implemented. According to Guidelines Section 15126(d):

Uses of nonrenewable resources during the initial and continued phases of the project may be irreversible since a large commitment of such resources makes removal or nonuse thereafter unlikely. Primary impacts and, particularly, secondary impacts (such as highway improvement which provides access to a previously inaccessible area) generally commit future generations to similar uses. Also, irreversible damage can result from environmental accidents associated with the project. Irrecoverable commitments of resources should be evaluated to assure that such current consumption is justified.

The proposed project was analyzed in the 2008 EIR/EIS for its potential to cause an irreversible or irretrievable commitment of resources. That analysis indicated that the project would commit the use of nonrenewable energy sources for quarrying, mineral resources extracted, water used at the Quarry, and emissions into the air. This section addresses new information available since publication of the 2008 EIR/EIS, new effects of the proposed project may have on these resources within the affected environment, and any effects that were not analyzed in the 2008 EIR/EIS.

A commitment of a resource is considered irreversible when the primary or secondary impacts from its use limit the future options for its use. An irretrievable commitment refers to the use or consumption of a resource that is neither renewable nor recoverable for use by future generations. The use of nonrenewable

resources such as metal, wood, fuel, paper, aggregate and other natural resources such as gypsum ore is considered irretrievable in that they would be used for a certain purpose when they could have been conserved or used for other purposes. This section also considers whether the potential long-term or permanent effects of the project represent the irretrievable or irreversible commitment of waters of the United States and Peninsular bighorn sheep (PBS) critical habitat.

**Gypsum Resources:** The quarrying activities associated with the proposed project would irreversibly commit nonrenewable gypsum resources. Approximately 140 million tons of gypsum ore would be mined over the projected life of the mine, assuming that mining continues at the maximum rate authorized under the current air quality permit. However, the gypsum is privately owned, and would not have been conserved or used for any other purposes.

**Waters of the United States:** The proposed project would result in permanent losses to waters of the United States in the Quarry, and both temporary and permanent impacts along the proposed pipeline alignments as described in Section 4.2 of this document. These impacts would be minimized or avoided through measures described in Section 4.2. Implementation of mitigation required in permits obtained for the project, including permits required under Sections 401 and 404 of the Clean Water Act would reduce the project's impacts on jurisdictional waters both during and after the life of the project. Reclamation in the Quarry and at the site of Well No. 3 and associated pipeline would ensure that the functionality of these waters of the United States would continue after each quarrying phase is completed and at the end of the project life. See also Chapter 4, "Project Alternative," which provides an evaluation of four alternatives that would modify or eliminate proposed mining phases in order to avoid impacts to waters of the US.

**Peninsular Bighorn Sheep Designated Critical Habitat:** The proposed project would affect critical habitat for PBS as described in Section 4.2. The analysis of impacts indicated that the amount of critical habitat impacted by the project would be small compared with the designated critical habitat in Recovery Region 8, identified by the USFWS in the PBS Recovery Plan. Further, the majority of the critical habitat in Recovery Region 8 is either in BLM wilderness or within Anza Borrego State Park and is well protected. The impacts of the proposed project on PBS critical habitat within the mine boundaries is not considered irreversible because the project would restore and revegetate the mine areas after mining operations are complete. Other minimization measures include habitat restoration and revegetation; critical habitat acquisition, preservation, and replacement; monitoring by qualified biologists; preconstruction surveys and relocation of certain special status species out of harm's way; and supporting CDFW's monitoring of specific PBS populations. Critical habitat on public lands affected by the project would be replaced subject to review and approval by the BLM and the USFWS.

**Other Resources:** The operations conducted under the proposed project would consume oil, gasoline, natural gas, diesel, water, and other nonrenewable resources for equipment and other needs. Table 7-1 below shows the rate at which these non-renewable resources were used in the one-year period between 2017 and 2018, according to USG's records, and projects the consumption of these resources for the life of the quarry beyond 2018, assuming 140 million tons of gypsum would be mined. At the conclusion of mining operations, the Quarry and the pipeline rights-of-way would be reclaimed and revegetated allowing the potential for re-use of the land, and no further demand for non-renewable resources would occur with respect to the proposed project.

**Table 7-1  
 Projected Use of Non-Renewable Resources for USG Expansion Project**

<b>Non-Renewable Resource</b>	<b>2017-18 Annual Use for Total Gypsum Mined/Processed (0.78 mt)</b>	<b>Use/Ton</b>	<b>Project Total Use Over Life of Gypsum Reserve (Beginning 2018-19) Total (140 mt)</b>
Grease	4,000 gallons	0.005 gallons	700,000 gallons
Oil	6,247 gallons	0.008 gallons	1,120,000 gallons
Diesel Fuel	129,524 gallons	0.166 gallons	23,240,000 gallons
Gasoline	8,156 gallons	0.010 gallons	1,400,000 gallons
Electricity	38,808,306 KWh	49.754 KWh	6,965,560,000 KWh
Natural Gas	1,393,600 Btu	1.786 Btu	250,040,000 Btu
Propane	77,948 gallons	0.099 gallons	13,860,000 gallons

Source: BLM 2019

## 7.6 GROWTH INDUCING ANALYSIS OVERVIEW

Public Resources Code (PRC) Section 21100(b)(5) specifies that an EIR must address a project’s growth inducing impacts. CEQA Guidelines Section 15126.2(d) requires that the scope of the analysis “discuss the ways in which a proposed project could foster economic or population growth, or the construction of additional housing, either directly or indirectly, in the surrounding environment.”

The effect of the proposed project on factors inducing growth were analyzed in Section 4.4 (Growth Inducing Impacts) of the 2006 Draft EIR/EIS. This section addresses the impacts of the proposed project on growth inducement in the affected environment that have changed or were not analyzed in the previous document.

Typically, the growth inducing potential of a project would be considered significant if it would foster growth or a concentration of population above what is assumed in local and regional land use plans, or in projections made by regional planning authorities. Significant growth impacts could also occur if a project would provide the infrastructure or service capacity to accommodate growth levels beyond those permitted by local or regional plans and policies. Increased development and growth in an area depend on a variety of factors, including employment and other opportunities. Increased production at the Plant could occur if the rate of quarrying were expanded to meet future market demands. USG estimates that it could increase employment at the Plant by up to 140 people, likely from the Ocotillo and El Centro region. The increase represents 0.01% of the total El Centro/Ocotillo regional employment base from which the additional employees are expected to be drawn. New employees hired from within the region likely would not relocate for employment. However, housing is available in the El Centro market area to accommodate the increase. The addition of 140 employees would also create a small, secondary effect on the local economy such as increased commerce and consumer spending in local communities, proportional to the increase in USG employment. Most of the economic effects are expected to occur within the El Centro Region because of its proximity to the project. The likelihood that new employees would come from within the same region as the project suggests that the increase in employment would be neutral with respect to the potential for inducing growth in the area. The infrastructure and facility improvements related to the project would be privately owned by USG and designed specifically to meet the needs of the Quarry and Plant. They would not be available for use by other developers. Therefore, the project would not induce the development of additional housing or other developments that would rely on new utility services. Access to the area

associated with the proposed project already exists; the project would not create new access into areas previously inaccessible for development. The project would not result in direct inducement for population growth, nor would it result in changes to land use designations or utility infrastructure necessary for other developments to induce population growth.

Furthermore, restoration and preservation of the offsite mitigation sites would not induce growth as no development would occur. On the contrary, the sites would be permanently preserved as open space eliminating the potential for growth on the sites in the future.

# **CHAPTER 8: LIST OF PREPARERS**

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# CHAPTER 9: REFERENCE AND RESOURCES

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## CHAPTER 9: REFERENCES AND RESOURCES

### EXECUTIVE SUMMARY

No references.

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No references.

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No references.

**CHAPTER 7, “OTHER CEQA TOPICS”**

No references.

**CHAPTER 8, “LIST OF PREPARERS”**

No references.

**CHAPTER 9, “REFERENCES AND RESOURCES”**

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**CHAPTER 10, “ACRONYMS”**

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# CHAPTER 10: ACRONYMS

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## CHAPTER 10: ACRONYMS

ACHP	Advisory Council on Historic Preservation
ACOE	Army Corps of Engineers
AB	assembly bill
AF/yr	acre-feet per year
AF	acre-feet
APE	area of potential effect
APN	Assessor Parcel Number
ARB	air resources board
ATCM	Airborne Toxic Control Measure
BACT	best available control technology
BAU	business as usual
bgs	below ground surface
BLM	Bureau of Land Management
BMPs	best management practices
BO	biological opinion
CAAQS	California ambient air quality standards
CAFÉ	Corporate Average Fuel Economy
CalEEMod	California Emissions Estimator Model
CAP	Climate Action Plan
CARB	California Air Resources Board
CBC	California Building Code
CCAA	California Clean Air Act of 1988
CCAR	California Climate Action Registry
CCR	California Code of Regulations
CDFG	California Department of Fish and Game (former)
CDFW	California Department of Fish and Wildlife
CEC	California Energy Commission
CEQ	White House Council on Environmental Quality

CEQA	California Environmental Quality Act
CESA	California Endangered Species Act
CFR	Code of Federal Regulations
cfs	cubic feet per second
CGS	California Geological Survey
CH <sub>4</sub>	methane
CNDDDB	California Natural Diversity Database
CNPS	California Native Plant Society
CNRA	California Natural Resources Agency
CO	carbon monoxide
CO <sub>2</sub>	carbon dioxide
CO <sub>2</sub> E	carbon dioxide equivalent
County	Imperial County
CPUC	California Public Utilities Commission
CRHR	California Register of Historical Resources
CRPR	California Rare Plant Rank
CRR	cultural resources report
CUP	conditional use permit
CWA	Clean Water Act
DEIR	draft environmental impact report
DO	dissolved oxygen
DOC	California Department of Conservation
DPW	Imperial County Department of Public Works
DWR	California Department of Water Resources
EDR	Environmental Data Resources
EIR	Environmental Impact Report
EISA	Energy Independence and Security Act of 2007
EMFAC	Emission Factor Model
EPA	U.S. Environmental Protection Agency
ESA	Federal Endangered Species Act
ESA	environmental site assessment

°F	Fahrenheit
FAR	floor area ratio
FEMA	Federal Emergency Management Agency
FESA	Federal Endangered Species Act
FIRM	flood insurance rate map
FMP	flood management plan
ft/s	feet per second
FTHL	flat-tailed horned lizard
GHG	greenhouse gases
GIS	geographic information system
GSA	Groundwater Sustainability Agency
GSP	Groundwater Sustainability Plan
gpd	gallons per day
gpm	gallons per minute
GVWR	Gross Vehicle Weight Rating
GWP	global warming potential
H <sub>2</sub> O	water vapor
HA	hydrologic area
HCP	Habitat Conservation Plan
HDPE	high-density polyethylene pipe
HEC-RAS	Hydrologic Engineering Centers River Analysis System
HFCs	Hydrofluorocarbons
HMMP	Habitat Mitigation and Monitoring Plan
hp	horsepower
HRA	health risk assessment
HA	hydrologic unit
ICAPCD	Imperial County Air Pollution Control District
in/sec	inches per second
IPaC	Information for Planning and Conservation
IS/MND	Initial Study/Mitigated Negative Declaration
IPCC	Intergovernmental Panel on Climate Change

Lb/day	Pounds per day
LCFS	Low Carbon Fuel Standard
LDAMDV	light duty auto – medium duty vehicle
Ldn	day-night noise level (also DNL)
Leq	equivalent noise level
LEV	low-emission vehicle
LUP	linear utility project
MBTA	Migratory Bird Treaty Act
MCL	Maximum Contaminant Levels
mg/L	milligrams per liter
mg/m <sup>3</sup>	milligrams per cubic meter
mL/hr	milliliters per hour
MMRP	mitigation monitoring and reporting plan
MMT	million metric tons
MMTCO <sub>2</sub> E	million metric tons of CO <sub>2</sub> E
mph	miles per hour
MRZs	Mineral Resource Zones
msl	mean sea level
MT	million tons
MTC	Metropolitan Transportation Commission
MW	megawatts
N	Nitrate
NAAQS	national ambient air quality standards
NAGPRA	Native American Graves Protection and Repatriation Act
NAS	National Academy of Sciences
NCDC	National Climatic Data Center
ND	negative declaration
NCCP	Natural Community Conservation Plan
NEPA	National Environmental Policy Act
NF <sub>3</sub>	nitrogen trifluoride
NHTSA	Department of Transportation's National Highway Traffic Safety Administration

NOI	Notice of Intent
NRHP	National Register of Historic Places
N <sub>2</sub> O	nitrous oxide
NO <sub>2</sub>	nitrogen dioxide
NO <sub>x</sub>	oxides of nitrogen
NOA	notice of availability
NOAA	National Oceanic and Atmospheric Administration
NOC	notice of completion
NO	nitric oxide
NOP	notice of preparation
NPDES	National Pollutant Discharge Elimination System
NRCS	Natural Resources Conservation Service
NWI	National Wetland Inventory
O <sub>3</sub>	ozone
OEHHA	Office of Environmental Health Hazard Assessment
OES	Imperial County Office of Emergency Services
OHWM	ordinary high water mark
ONRW	Outstanding National Resource Waters
OPR	Governor's Office of Planning and Research
OSHA	U.S. Department of Labor Occupational Safety and Health Administration
PBS	Peninsular bighorn sheep
PFCs	perfluorocarbons
PFYC	Potential Fossil Yield Classification
PG&E	Pacific Gas and Electric Company
PM <sub>10</sub>	respirable particulate matter
PM <sub>2.5</sub>	particulate matter
ppm	parts per million
PRC	Public Resources Code
PRMMP	Paleontological Resources Monitoring and Mitigation Plan
PSD	prevention of significant deterioration
PV	photovoltaic

QSP	qualified SWPPP practitioner
RAQS	Regional Air Quality Strategy
ROG	reactive organic gases
ROW	right of way
RPO	Resource Protection Ordinance
RPS	Renewables Portfolio Standard
RWQCB	Regional Water Quality Control Board
SCAG	Southern California Association of Governments
SCS	sustainable communities strategy
SDAB	San Diego Air Basin
SDAPCD	San Diego County Air Pollution Control District
SEIR	subsequent environmental impact report
SEIS	Subsequent environmental impact statement
SF <sub>6</sub>	hexafluoride
SFHA	Special Flood Hazard Area
SGMA	Sustainable Groundwater Management Act
SIP	State Implementation Plan
SMARA	Surface Mining and Reclamation Act
SMO	surface mining ordinance
SMP	surface mining permit
SO <sub>2</sub>	sulfur dioxide
SO <sub>x</sub>	sulfur oxides
SR	State Route
SSAB	Salton Sea Air Basin
SWPPP	Stormwater Pollution Prevention Plan
SWRCB	State Water Resources Control Board
TACs	toxic air contaminants
TCR	tribal cultural resources
TDS	total dissolved solids
TMDL	total maximum daily load
tpy	tons per year

VOC	volatile organic compounds
UBC	Uniform Building Code of 1997
USBR	U.S. Bureau of Reclamation
USDA	United States Department of Agriculture
USACE	U.S. Army Corps of Engineers
USEPA	U.S. Environmental Protection Agency
USFWS	U.S. Fish and Wildlife Service
USG	United States Gypsum
USGS	U.S. Geological Survey
VDECS	Verified Diesel Emission Control Strategies
WEAP	worker education awareness program
WDR	Waste Discharge Requirement
WMMA	West Mesa Management Area
WSA	Water Supply Assessment
yr	year

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