Draft Initial Study/Mitigated Negative Declaration (IS/MND)

DRAFT Permanent Sealing of Orphan Well in Orange County

Lead Agency:
California Department of Conservation
Geologic Energy Management Division
CEQA Program
715 P Street, MS 1803
Sacramento, California 95814

Prepared by:
Rincon Consultants, Inc.
250 East 1st Street, Suite 1400
Los Angeles, California 90012

In Coordination with:

MRS Environmental, Inc. and CalGEM

August 2025

TABLE OF CONTENTS

LIST OF FIGURES

LIST OF TABLES

APPENDICES

LIST OF ACRONYMS

AB	Assembly Bill
API	American Petroleum Institute
AQMP	Air Quality Management Plan
BMPs	Best Management Practices
CAAQS	California Ambient Air Quality Standards
CAL FIRE	California Department of Forestry and Fire Protection
CalGEM	California Geologic Energy Management Division
Caltrans	California Department of Transportation
CARB	California Air Resources Board
CBC	California Building Code
CCR	California Code of Regulations
CDFW	California Department of Fish and Wildlife
CDWR	California Department of Water Resources
CEQA	California Environmental Quality Act
CERCLA	Comprehensive Environmental Response, Compensation, and Liability Act
CESA	California Endangered Species Act
CFR	Code of Federal Regulations
CNPS	California Native Plant Society
CO	Carbon Monoxide
CO_2	Carbon Dioxide
CO_2e	Carbon Dioxide Equivalent
CRHR	California Register of Historical Resources
CRPR	California Rare Plant Rank
CTR	California Toxics Rule
CWA	Clean Water Act
dB	Decibel
dBA	Decibels (A-Weighted)
DOC	California Department of Conservation
DPM	Diesel Particulate Matter
EPA	United States Environmental Protection Agency
ES	Endangered Species

FESA	Federal Endangered Species Act
FHSZ	Fire Hazard Severity Zone
FTA	Federal Transit Administration
GHG	Greenhouse Gas
GSAs	Groundwater Sustainability Agencies
GSP	Groundwater Sustainability Plan
GWP	Global Warming Potential
IPCC	Intergovernmental Panel on Climate Change
IS/MND	Initial Study/Mitigated Negative Declaration
Leq	One-Hour Equivalent Noise Level
LHMP	Local Hazard Mitigation Plan
LSTs	Localized Significance Thresholds
MBTA	Migratory Bird Treaty Act
MLD	Most Likely Descendant
MMs	Mitigation Measures
NAAQS	National Ambient Air Quality Standards
NCP	National Oil and Hazardous Substances Pollution Contingency Plan
NO_x	Nitrogen Oxides
NPDES	National Pollutant Discharge Elimination System
NRHP	National Register of Historic Places
O_3	Ozone
OCFA	Orange County Fire Authority
OCWD	Orange County Water District
permanent sealing	Plugging and Abandoning
PM_{10}	Particulate Matter of 10 Microns or Less
$PM_{2.5}$	Particulate Matter of 2.5 Microns or Less
PPV	Peak Particle Velocity
PRC	California Public Resources Code
PTO	Potential to Occur
RCRA	Resource Conservation and Recovery Act
RMP	Risk Management Plan
ROGs	Reactive Organic Gases

RWQCB	Regional Water Quality Control Board
SARWQCB	Santa Ana Regional Water Quality Control Board
SB	Senate Bill
SCAB	South Coast Air Basin
SCAQMD	South Coast Air Quality Management District
SDWA	Safe Drinking Water Act
SGMA	Sustainable Groundwater Management Act
SSC	Species of Special Concern
SWRCB	State Water Resources Control Board
TAC	Toxic Air Contaminant
UIC	Underground Injection Control
USC	United States Code
USDW	Underground Sources of Drinking Water
USFWS	United States Fish and Wildlife Service
VMT	Vehicle Miles Traveled
VOCs	Volatile Organic Compounds
WEAP	Worker Environmental Awareness Program

INITIAL STUDY/MITIGATED NEGATIVE DECLARATION

1.0 INTRODUCTION

The Permanent Sealing of Orphan Well in Orange County (Project) involves the State of California's plugging and abandoning (permanent sealing) of one (1) orphan well on the eastern side of Orange County, California. The well, identified as Well #1 (API[1]: 0405907151), is in the Brea-Olinda Oil Field north of Brea, California. Figure 1-1 depicts the well location from a regional context and Figure 1-2 depicts the well location in local context.

1.1 PROJECT NAME

Permanent Sealing of Orphan Well in Orange County

1.2 LEAD AGENCY NAME AND ADDRESS

California Department of Conservation
California Geologic Energy Management Division (CalGEM)
715 P Street, MS 1803
Sacramento, California 95814

1.3 CONTACT PERSON, PHONE NUMBER, AND EMAIL ADDRESS

Robert Schaaf, Phone: (714) 699-0640,
Robert.Schaaf@conservation.ca.gov

1.4 PROJECT PROPONENT NAME AND ADDRESS

California Department of Conservation
California Geologic Energy Management Division
715 P Street, MS 1803
Sacramento, California 95814

1.5 PROJECT DESCRIPTION AND PURPOSE

The proposed work involves the permanent sealing of one well. Permanent seal (or plug and abandonment, or permanent sealing) refers to the permanent closure and sealing of a well by placing cement and other approved materials in the former well. The Project would result in the permanent sealing of Well #1.

The Project schedule for Well #1 is estimated to last from three to five days. For well permanent sealing, the well would be cleaned out and then plugged with cement and inert mud to surface. Then, the well casing would be cut down

[1] API refers to the unique well identification number established by the American Petroleum Institute.

to approximately five to 10 feet below ground level, and the site would be backfilled with soil up to ground level. After completion of the permanent sealing operations, the disturbed areas utilized for site access, permanent sealing work, and temporary equipment staging areas would undergo restoration to align with the landscape of the surrounding environment. Permanent sealing work would require some vegetation clearance to allow staging of equipment. Additionally, the vegetation around the well needs to be cleared to prevent fire hazards during the permanent sealing work.

Well #1 (API: 0405907151) is surrounded by other operating oil and gas wells. Access is available via an existing dirt road, with nearby flat terrain for staging permanent sealing equipment. No facilities or pipelines are associated or connected to the well. All permanent sealing and construction activities would utilize existing roads and previously disturbed areas to the maximum extent feasible. However, the clearance of vegetation surrounding the wellsite remains necessary to mitigate fire hazards and facilitate adequate space for potential equipment additions and maneuverability during the permanent sealing operations. Estimated surface disturbance is approximately half an acre. No tree removals would occur.

A detailed Project description of the permanent sealing process is provided in Section 2.0 below.

1.6 PROJECT LOCATION

Photos of Well #1 and equipment utilized for permanent sealing are included in Appendix A. Well #1 (API: 0405907151) is located in an unincorporated area of Orange County, in the Brea-Olinda Oil Field, north of Brea, California. The well is located in Section 2 of Township 3 South, Range 10 West, San Bernardino Meridian, within Assessor's Parcel Number 304-151-59.

Figure 1-1. Regional Location

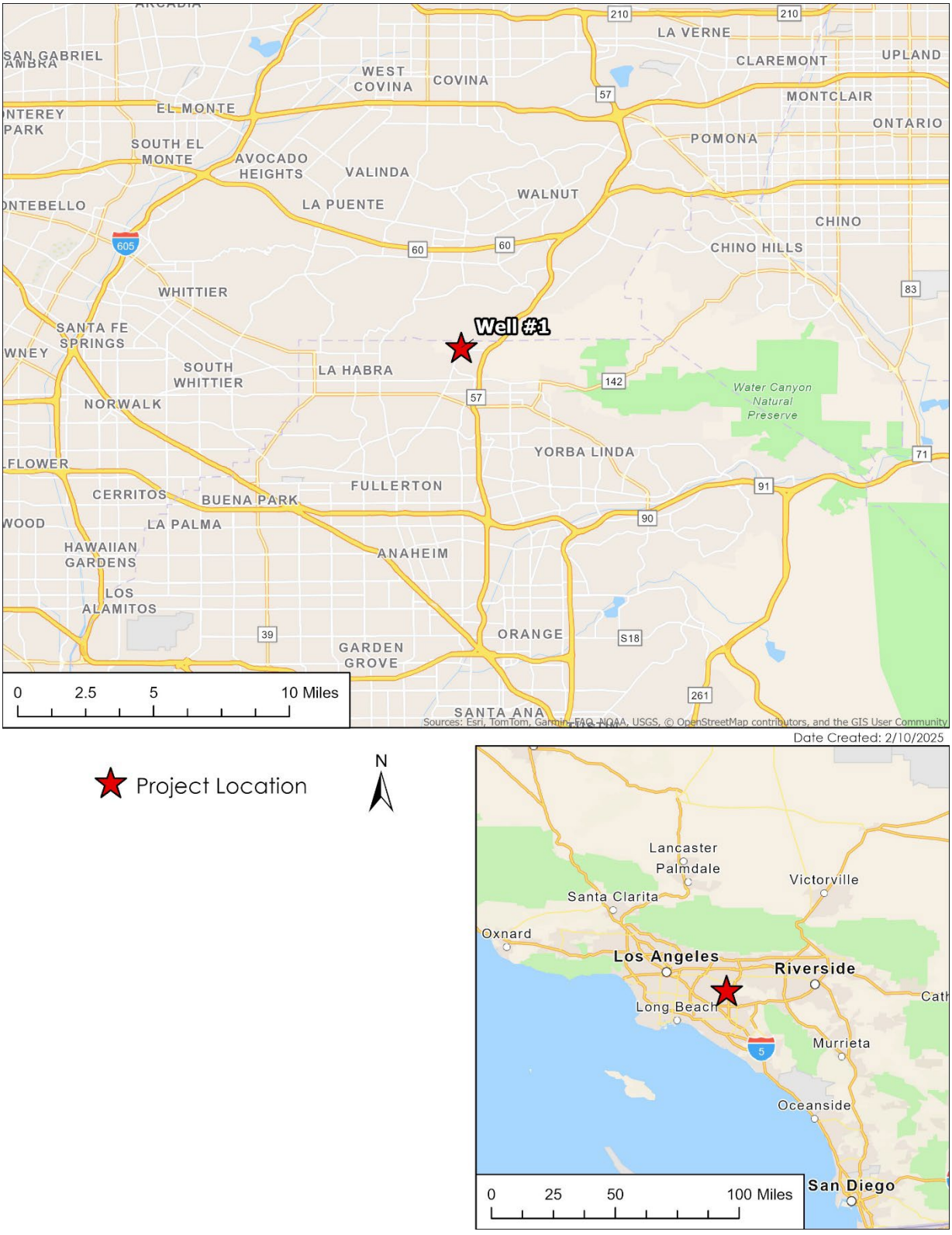

Figure 1-2. Well #1 Location

2.0 PROJECT DESCRIPTION

The Project is generally comprised of permanent sealing, as discussed below.

2.1 PERMANENT SEALING

A workover rig and cement truck are required to permanent sealing the well and temporary equipment such as pumps and return bins may be needed. There would not be any permanent facilities constructed, and no expansion of associated facilities would be required. Various mobile temporary equipment would be used as well as vehicles to transport personnel and materials to and from the site on established access roads. Table 2.1-1 provides a list of the standard equipment and operating time required to permanent sealing a single well, particularly when complex well permanent sealing is not anticipated.

Table 2.1-1. Typical Equipment Required for Plugging and Abandoning (permanent sealing) a Single Well

Equipment	No. of Units	Brake Horsepower	No. Days Use per Well	No. of Hour Operated per Day	Total Hours Operated to Complete Well Permanent Sealing
Workover rig (or coiled-tubing unit)	1	450	5	12	60
Rig Generator	1	415	5	12	60
Cement Truck	1	400	4	3	12
Cement Pump Trailer	1	500	4	3	12
Truck Mobilization	1	450	2	5	10
Bulk Truck (water)	2	400	2	3	12
Vacuum Truck	1	400	2	5	10
Truck (wire-line)	1	300	2	3	6
Crane	1	425	3	2	6
Backhoe	1	100	1	6	6
Utility Tractor	1	100	1	6	6

The rig is conveyed to the site on a heavy truck and is stationed at the wellsite to perform well permanent sealing. While the rig is on location until the permanent sealing work is complete, there would be periodic light vehicle traffic on the lease roads to and from the site to transport workers and equipment. The well casing would be cut off five to 10 feet from surface after it is plugged. Then,

the site would be backfilled with soil. The maximum depth of grading would be approximately six inches below ground surface.

All permanent sealing and decommissioning activities would occur only between the hours of 7:00 a.m. and 7:00 p.m. No nighttime activities would be conducted, and all activities and deliveries would occur within this timeframe, unless in rare circumstances, where the activity is for an operational safety purpose to prevent well failure during permanent sealing or an emergency situation. No lane or road closures are proposed as a part of the Project.

California Code of Regulations (CCR), Title 14, Section 1776 requires auxiliary holes, such as rat holes, to be filled with earth and compacted properly; all construction materials, cellars, production pads, and piers to be removed and the resulting excavations filled with earth and compacted properly to prevent settling. Well locations within pads would be graded and cleared of equipment, trash, or other waste materials.

All waste, including sanitary items, rubbish, debris, and other discarded materials, would be carefully managed and regularly removed in accordance with federal, state, and local regulations for proper handling, storage, and disposal to prevent spills or contamination. Fuels and lubricants would only be stored in designated areas. Refueling would take place within bermed and designated areas. An oil spill response kit and spill response equipment would be located on site and on-vehicle. Enough supply of sorbent and barrier materials would be available to contain any runoff from contaminated areas. Hot work would be performed on designated areas under a hot work program that would ensure proper training, monitoring and water is available to reduce the potential for fires and other hot-work related issues.

Additionally, any excess concrete at a given well location would be broken down and taken to a recycling facility. The amount of concrete and other facilities to be removed are estimated to vary by site but would be generally less than five truckloads.

Hazardous materials would be removed and disposed of in accordance with both state and federal guidelines. The Orange County Environmental Health Division oversees the Hazardous Waste Inspection Program in Orange County, ensuring proper handling, storage, and transportation of hazardous waste. Orange County follows state laws outlined in the California Health and Safety Code, Chapter 6.5, and state regulations found in CCR, Title 22, Division 4.5. There would be sampling and running fluid analysis on unknown fluids remaining in tanks, sumps, and other containers, as directed, to categorize their contents as

hazardous or nonhazardous as defined in Section 25117, Division 20, Chapter 6.5, of the California Health and Safety Code. A state licensed transporter would be responsible for safely moving and disposing of waste in designated areas, ensuring compliance with all waste disposal regulations at the federal, state, and local levels.

2.2 BEST MANAGEMENT PRACTICES

CalGEM is committed to preventing or minimizing any potential impact(s) on the environment arising from the Project. This commitment includes implementing protective measures and/or mitigation measures (MMs), such as conducting biological surveys for presence of endangered species, applying protective measures, and developing contingency plans to safeguard the safety and well-being of the public and the environment throughout the Project's lifespan.

a. Pre-disturbance Biological Survey. The well is located in an oil field that falls within state or federal endangered species (ES) areas, identified through the California Natural Diversity Database search by oil field, conducted in February 2024. A 5-mile radius was used for areas with small field boundaries.

To address potential biological disturbances, a comprehensive biological survey will be conducted on site to ascertain the presence of any ES. The survey will assess the expected work area, including the structural debris field, areas proximate to the Project site, access routes, expected parking areas, and expected water crossings. The biological survey will determine:

I. If any specific biological concerns exist on the site;

II. If any Best Management Practices (BMPs) are applicable to the site, or whether any BMPs are needed;

III. Whether biological monitoring is needed during permanent sealing and site restoration activities.

b. Protective Measures. Following biological survey of the area, CalGEM and its contractor will collaborate with California Department of Fish and Wildlife (CDFW) trustees to prepare avoidance measures if an ES is observed in the area. These measures aim to ensure of unlikely adverse effects on existing endangered species. CalGEM will require strict adherence to these practices during the Project:

1. permanent sealing operations will use existing pads, lease roads or areas already disturbed. The work will focus on the previously built well pads.

Staging areas will be set up on these pads, roads, or other pre-disturbed locations. There would not be any impact on undisturbed areas due to site activities.

2. No more than three months prior to moving a rig, excavator, bins, and other heavy equipment to a well or facility location, a Qualified Biologist will conduct a biological survey for ES to examine the portions of the Project area to be disturbed. The survey will provide 100 percent coverage of the well pad or facility pad that is being used. The biologist will flag all potential ES areas. Where feasible, an avoidance buffer of 50 ft or greater around this flagged area will be maintained.
3. Before starting any work in the Project area, all individuals involved or working there will undergo an awareness education program. This program will include a presentation by a biologist who is knowledgeable about the life cycles and habitats of potential ES within the Project area.
4. Work is scheduled for daylight hours, from sunrise to sunset, and no work would occur outside of the 7:00 a.m. to 7:00 p.m. timeframe. In an emergency situation or for operational safety purposes to prevent well failure during permanent sealing, nighttime work may occur but is not anticipated. If nighttime work is required due to an emergency, and the site is close to public areas, precautions will be taken to reduce noise and light disturbances. This may include enclosing the work area with tape or fencing. The site will be well illuminated, and all vehicles will operate at speeds of five mph or less during emergency nighttime hours. All temporary construction lighting fixtures required during nighttime hours will be shielded and focused downward. Any local municipal codes will be followed. The Project does not require the use of herbicide for any reason.

If an ES is unexpectedly encountered during Project activities, all potentially harmful work to the ES will stop immediately until the species leaves the area on its own. United States Fish and Wildlife Service (USFWS) and CDFW will be promptly notified. A Qualified Biologist will be sent to collaborate with the relevant agencies on mitigation efforts.

While unexpected, other potential risks to the public arising from this work include the generation of air pollution during intrusive procedures, as well as noise and other physical hazards, unanticipated roadblocks or closures, waste materials, and the potential for damage to public utilities. The protocols

implemented to address any prospective hazards to the community are detailed below:

1. Air Contaminants: Visual monitoring of air quality will be conducted throughout the duration of activities. In the event that dust levels exceed the stipulated requirements of the Air Pollution Control District/Air Quality Management District and are observed emanating from the work area, operations will be promptly halted, and measures to suppress dust will be expeditiously enacted including the use of water trucks.
2. Limiting Access: Whenever work activities are being executed in close proximity to the public, the designated work zone will be enclosed by tape or fencing. These measures will serve to demarcate the field teams from the public.
3. Stockpiles: All soil stockpiles will be managed in rigorous adherence to the approved, Project-specific waste management plan. They will be meticulously positioned atop plastic sheeting and securely anchored by additional layers of plastic sheeting on top of the soils during periods of inactivity. Only the actively utilized face of the soil stockpile will be exposed during periods of active work. The waste will be systematically partitioned and secured to prevent public access.

c. Contingency Plans. A site-specific Health and Safety Plan will be developed following the guidelines set forth in the CCR, Title 8, Section 5192 and CalGEM guidance. This plan will encompass a comprehensive set of measures, including contingency plans, to ensure the safety and well-being of the public and the environment during field operations. This will involve delivering an emergency response plan, outlining procedures for notification, immediate action, and reporting in the event of an emergency during State permanent sealing work.

1. Before commencing any site work, a thorough job hazard analysis will be conducted to identify potential risks and hazards throughout the Project's duration. These may include scenarios like blowouts, fires, serious accidents, as well as gas and water leaks. As part of this analysis, a certified Health and Safety Officer will be identified. This officer will be responsible for conducting in-person audits of the sites every two weeks. They will then submit a written report to the Division, outlining the identified risks and their corresponding MMs throughout the Project's duration.

2. Preparing a Project-specific Emergency Response Plan that covers the following:
    a. Identify all relevant government agencies (federal, state, and local) having jurisdiction over the Project in case of an emergency, including potential emergency situations;
    b. Outline notification and response processes, and identify roles and responsibilities;
    c. Describe the training provided to ensure the Emergency Response Plan is effectively implemented, including any required certifications;
    d. Outline procedures for the mitigation of a release or threatened release to minimize any potential harm or damage to people, property, or the environment;
    e. Identify evacuation plans and procedures, including immediate notice, for all Project site(s);
    f. Include spill contingency planning developed in accordance with CCR, Title 14, Section 1722.9.
3. Conducting emergency response trainings and drills prior to initiation of work and at the beginning of each subsequent month until the Project work is complete.
4. Conducting safety meeting with all crew members. Topics include safe driving protocols, emergency driving procedures in case of an accident, and evacuation procedures in case of a natural disaster.
5. Updating the Emergency Response Plan and/or Spill Contingency Plan if any issues are identified during the emergency response drill and must have CalGEM approve the updated plan prior to implementation.

    In the event of an emergency or incident, the California Governor's Office of Emergency Services, CalGEM, and other agencies will be notified, consistent with state requirements and the release reporting matrix: https://www.caloes.ca.gov/FireRescueSite/Documents/Release%20Reporting%20Matrix.pdf. In the event the permanent sealing is on Bureau of Land Management land, the appropriate Bureau of Land Management representative will be notified of the emergency as well.

6. Any discharge or threatened discharge of oil into waters of the state will be immediately reported and proceed with spill response activities consistent with the State Oil Spill Contingency Plan, incorporated references and attachments, and other applicable federal, state or local spill response plans. The State Oil Spill Contingency Plan can be found here: https://nrm.dfg.ca.gov/FileHandler.ashx?DocumentID=172767&inline
7. Incident and spill response activities will be managed utilizing the Incident Command Structure in accordance with the Incident Management Handbook [https://www.atlanticarea.uscg.mil/Portals/7/Ninth%20District/Documents/USCG_IMH_2014_COMDTPUB_P3120.17B.pdf?ver=2017-06-14-122531-930]
8. In the event of an emergency or incident that arises due to the work, CalGEM, with the assistance of the permanent sealing contractor (Contractor), will manage the incident as the responsible acting party consistent with state requirements and the Project-specific Emergency Response Plan. Contractor will cooperate with federal, state, and local government officials to develop a unified command structure for emergency response, if that becomes necessary.

d. Fire Response Planning. The Applicant shall ensure that fire response capabilities are in place during the entire Project, including the following:

1. Cutting and welding shall comply with California Fire Code 3305.6 and National Fire Protection Association 51B;
2. Fire Watch shall conform to California Fire Code (CCR, Title 24, Part 9) 3305.5;
3. Fire extinguishers are required in accordance with California Fire Code 3316 and 906;
4. All construction equipment used for any vegetation clearing shall be equipped with spark arrestors, and monitoring and training to prevent vehicle traffic off roadways to ensure activities do not impact dry brush and lead to fire.

2.3 APPLICABLE AGENCY REQUIREMENTS

This Project includes activities in Orange County jurisdiction. The primary issue related to local codes is noise limits on construction. Orange County

Municipal Code (Section 4-6-7) indicates "*Noise sources associated with construction, repair, remodeling, or grading of any real property, provided said activities do not take place between the hours of 8:00 p.m. and 7:00 a.m. on weekdays, including Saturday, or at any time on Sunday or a Federal holiday*."

2.3.1 Project Approvals and Permits Under CEQA

Upon Project approval, CalGEM would adopt this Initial Study/Mitigated Negative Declaration (IS/MND) as the lead agency pursuant to CEQA.

Additionally, the following permits, reviews, consultations, and approvals would be required to be completed or approved prior to the commencement of the Project (refer to Table 2.3-1).

Table 2.3-1. Project Approvals and Permits

Level	Agency	Permit/Approval
Federal	United States Bureau of Land Management	Sundry Notice for wells located within Federal leases
State	California Department of Conservation, Geologic Energy Management Division (CalGEM)	Well permitting
State	California Department of Fish and Wildlife (CDFW)	Biological species oversight/permits
State	State Water Resources Control Board in Coordination with CalGEM	Construction Stormwater Pollution Prevention Plan
Local	Orange County Fire Authority (OCFA) Planning & Development	Well permitting and hotwork
Local	Orange County Public Works	Grading permits
Local	South Coast Air Quality Management District (SCAQMD)	Authority to Construct Permits Current Permit to Operate

3.0 SUMMARY OF FINDINGS

3.1 ENVIRONMENTAL FACTORS POTENTIALLY AFFECTED

This Project would potentially affect the environmental factors checked below, involving at least one impact that is "Potentially Significant" or "Potentially Significant Unless Mitigation Incorporated" as indicated by the checklist on the following pages.

Table 3.1-1. Environmental Issues and Potentially Significant Impacts

☐ Aesthetics	☐ Agriculture and Forest Resources	☐ Air Quality
☒ Biological Resources	☒ Cultural Resources	☐ Energy
☐ Geology and Soils	☐ Greenhouse Gas Emissions	☐ Hazards and Hazardous Materials
☐ Hydrology and Water Quality	☐ Land Use and Planning	☐ Mineral Resources
☐ Noise	☐ Population and Housing	☐ Public Services
☐ Recreation	☐ Transportation	☒ Tribal Cultural Resources
☐ Utilities and Service Systems	☐ Wildfire	☒ Mandatory Findings of Significance

3.2 ENVIRONMENTAL DETERMINATION

☐ On the basis of this initial evaluation: I find that the Project COULD NOT have a significant effect on the environment, and a NEGATIVE DECLARATION will be prepared.

☒ I find that although the Project could have a significant effect on the environment, there will not be a significant effect in this case because revisions in the Project have been made by or agreed to by the Project proponent. A MITIGATED NEGATIVE DECLARATION will be prepared.

☐ I find that the Project MAY have a significant effect on the environment, and an ENVIRONMENTAL IMPACT REPORT is required. I find that the Project MAY have a "potentially significant impact" or "potentially significant unless mitigated" impact on the environment, but at least one effect 1) has been adequately analyzed in an earlier document pursuant to applicable legal standards, and 2) has been addressed by MMs based on the earlier analysis

as described on attached sheets. An ENVIRONMENTAL IMPACT REPORT is required, but it must analyze only the effects that remain to be addressed.

☐ I find that although the Project could have a significant effect on the environment, because all potentially significant effects (a) have been analyzed adequately in an earlier ENVIRONMENTAL IMPACT REPORT or NEGATIVE DECLARATION pursuant to applicable standards, and (b) have been avoided or mitigated pursuant to that earlier ENVIRONMENTAL IMPACT REPORT or NEGATIVE DECLARATION, including revisions or MMs that are imposed upon the Project, nothing further is required.

_____	_____
Signature	*Date*
_____	_____
Printed Name	*Agency*

4.0 ENVIRONMENTAL ANALYSIS AND INITIAL STUDY CHECKLIST

The evaluation of environmental impacts provided in this Initial Study is based in part on the impact questions contained in Appendix G of the State CEQA Guidelines; these questions, which are included in an impact assessment matrix for each environmental category (Aesthetics, Agriculture/Forestry Resources, Air Quality, Biological Resources, etc.), are "intended to encourage thoughtful assessment of impacts." Each question is followed by a check-marked box with column headings that are defined below.

Potentially Significant Impact. This column is checked if there is substantial evidence that a Project-related environmental effect may be significant. If there are one or more "Potentially Significant Impacts," a Project Environmental Impact Report would be prepared.

Less than Significant with Mitigation. This column is checked when the Project may result in a significant environmental impact, but the incorporation of identified Project revisions or MMs would reduce the identified effect(s) to a less than significant level.

Less than Significant Impact. This column is checked when the Project would not result in any significant effects. The Project's impact is less than significant even without the incorporation of Project-specific MMs.

No Impact. This column is checked when the category does not apply.

Detailed descriptions and analyses of impacts from Project activities and the basis for significance determinations are provided for each environmental factor on the following pages.

4.1 AESTHETICS

AESTHETICS – Would the Project:	**Potentially Significant Impact**	**Less Than Significant with Mitigation**	**Less Than Significant Impact**	**No Impact**
a) Have a substantial adverse effect on a scenic vista?	☐	☐	☒	☐
b) Substantially damage scenic resources, including, but not limited to, trees, rock outcroppings, and historic buildings within a state scenic highway?	☐	☐	☐	☒
c) In non-urbanized areas, substantially degrade the existing visual character or quality of public views of the site and its surroundings? (Public views are those that are experienced from publicly accessible vantage point). If the project is in an urbanized area, would the project conflict with applicable zoning and other regulations governing scenic quality?	☐	☐	☒	☐
d) Create a new source of substantial light or glare which would adversely affect day or nighttime views in the area?	☐	☐	☒	☐

4.1.1 Environmental Setting

The Project site is within a private oil field, located in the northern Orange County foothills, which provide scenic views for the public. The nearest state scenic highway to Well #1 is State Route 91, located approximately nine miles to the southeast (California Department of Transportation [Caltrans] 2024). State Route 91 is also a designated County Viewscape Corridor (County of Orange 2005).

4.1.2 Regulatory Setting

There are no federal or state regulations, laws, or policies pertaining to aesthetics relevant to the Project. Local regulations, laws, and policies pertaining to aesthetics relevant to the Project are included below.

4.1.2.1 Local

Orange County General Plan. The Orange County General Plan Resources Element identifies scenic areas in Orange County as Saddleback Mountain and ocean views of Santa Catalina Island (County of Orange 2012a).

Orange County Code Section 7-9-67. Orange County Code Section 7-9-67 requires lighting and illumination to be confined to the premises where work is conducted.

4.1.3 Impact Analysis

a) Have a substantial adverse effect on a scenic vista?

Less Than Significant. Well #1 is within forested foothills which provide scenic views for the public. The Project would not develop any new structures and would not result in any additions which could result in visual obstructions to the foothills beyond existing conditions. Well #1 is obscured from viewers by existing vegetation within the foothills. Although the well site is at ground level, and thereby not visible to the public, use of a 20-meter-tall workover rig may be visible to residential communities during the temporary Project activities lasting approximately five days. While the workover rig may result in partial obstruction of views of the foothills; however, following permanent sealing, no long-term obstructions would occur beyond existing conditions. Therefore, the Project would have a less than significant impact on scenic vistas.

b) Substantially damage scenic resources, including, but not limited to, trees, rock outcroppings, and historic buildings within a state scenic highway?

No Impact. Due to the distance between Well #1 to State Route 91, varying topography, and intervening structures, the Project site is not visible from State Route 91. The Project would not require the removal of existing trees, rock outcroppings, or historic buildings. Therefore, the Project would not substantially damage scenic resources within a state scenic highway. No impact would occur.

c) In non-urbanized areas, substantially degrade the existing visual character or quality of public views of the site and its surroundings? (Public views are those that are experienced from publicly accessible vantage point). If the project is in an urbanized area, would the project conflict with applicable zoning and other regulations governing scenic quality?

Less Than Significant. The Project site is within an area classified as non-urbanized.[2] Therefore, this analysis examines the potential for the Project to degrade existing visual character or quality of public views of the site and its surroundings. Well #1 is adjacent to existing oil well infrastructure, which is obscured from viewers by existing vegetation within the foothills. The Project involves permanent sealing of a single well, which would involve minimal changes to the existing visuals of the Project site. permanent sealing would not introduce visually incompatible uses because no new development is proposed. Although the Project site is not visible to the public, use of a 20-meter-tall workover rig may be visible during the temporary activities lasting up approximately five days. Once completed, the well would be backfilled with soil. This would ensure the well would be visually consistent with the surrounding foothills and would not result in degraded visual character. Accordingly, the Project would have a less than significant impact related to degrading existing visual character or quality of public views of the Project site and surroundings.

d) Create a new source of substantial light or glare which would adversely affect day or nighttime views in the area?

Less Than Significant. The Project does not involve components which have the potential to cause glare. As described in Section 2.2, *Best Management Practices*, permanent sealing activities are scheduled during daylight hours, and therefore no nighttime lighting is anticipated. In the unlikely event nighttime work is required for emergency situations or operational safety purposes, all temporary lighting would be shielded and focused downward on work areas. Because nighttime lighting is not anticipated and in the event nighttime lighting is required,

[2] PRC Section 21071 defines an unincorporated area as an "Urbanized area" only when the area is completely surrounded by one or more incorporated cities, or located within an urban growth boundary and has an existing residential population of at least 5,000 persons per square mile. Well #1 is within the sphere of influence of the City of Brea (City of Brea 2024). According to the California Department of Finance, the population of Brea is 48,184 (California Department of Finance 2024). According to the United States Census Bureau, Brea is 12.17 square miles (United States Census Bureau 2024a). Accordingly, the population per square mile for Brea is 3,959 persons. Therefore, the well site does not qualify as an urbanized area pursuant to PRC Section 21071.

BMPs to reduce lighting would be implemented, the Project would have a less than significant impact related to creating substantial light or glare.

4.1.4 Mitigation Measures

The Project would not result in significant impacts on aesthetics; therefore, no mitigation is required.

4.2 AGRICULTURE AND FORESTRY RESOURCES

AGRICULTURE AND FORESTRY RESOURCES – Would the Project:	**Potentially Significant Impact**	**Less Than Significant with Mitigation**	**Less Than Significant Impact**	**No Impact**
a) Convert Prime Farmland, Unique Farmland, or Farmland of Statewide Importance (Farmland), as shown on the maps prepared pursuant to the Farmland Mapping and Monitoring Project of the California Natural Resources Agency, to non-agricultural use?	☐	☐	☐	☒
b) Conflict with existing zoning for agricultural use, or a Williamson Act contract?	☐	☐	☐	☒
c) Conflict with existing zoning for, or cause rezoning of, forest land (as defined in Pub. Resources Code, § 12220, subd. (g)), timberland (as defined by Pub. Resources Code, § 4526), or timberland zoned Timberland Production (as defined by Gov. Code, § 51104, subd. (g))?	☐	☐	☐	☒
d) Result in the loss of forest land or conversion of forest land to non-forest use?	☐	☐	☐	☒
e) Involve other changes in the existing environment which, due to their location or nature, could result in conversion of Farmland, to non-agricultural use or conversion of forest land to non-forest use?	☐	☐	☐	☒

4.2.1 Environmental Setting

The Project site is located on the eastern side of Orange County, in the Brea-Olinda Oil Field. No portion of the Project site is located in a reporting Williamson Act contract area (Orange County 2001), nor located in an area designated as Prime Farmland, Farmland of Statewide Importance, or Unique Farmland (California Department of Conservation [DOC] 2023a, 2023b). The Project site is not located on public land with forests or areas designated as timberland or timberland zoned Timberland Production.

4.2.2 Regulatory Setting

There are no federal or state regulations, laws or policies pertaining to agriculture and forestry that are applicable to the Project. Local regulations, laws, and policies pertaining to agriculture and forestry resources relevant to the Project are included below.

4.2.2.1 Local

Orange County General Plan. The Orange County General Plan Resource Element includes a goal to promote the wise management of agricultural resources in order to protect these resources for existing and future needs.

Policy 2. AGRICULTURE: To encourage to the extent feasible the preservation and utilization of agricultural resources as a natural resource and economic asset.

Orange County Code Section Sec. 7-9-46. Orange County Code Section 7-9-46 permits oil drilling and production of oil, gas and other hydrocarbon substances is any district symbol followed by, as a part of such symbol, parenthetically enclosed letter "(O)." The Project site is in an area zoned by Orange County for General Agriculture (A1(o)) and in an Oil Production Overlay area (County of Orange 2016).

4.2.3 Impact Analysis

a) Convert Prime Farmland, Unique Farmland, or Farmland of Statewide Importance (Farmland), as shown on the maps prepared pursuant to the Farmland Mapping and Monitoring Program of the California Natural Resources Agency, to non-agricultural use?

No Impact. The Project site is not within lands designated as Prime Farmland, Unique Farmland, or Farmland of Statewide Importance (DOC 2023a). Therefore, there would be no impact.

b) Conflict with existing zoning for agricultural use, or a Williamson Act contract?

No Impact. The Project site is located in an area zoned by Orange County for General Agriculture (A1(o)) and in an Oil Production Overlay area (County of Orange 2016). According to the Orange County Municipal Code, Pursuant to Sec. 7-9-46 of the Orange County Municipal code, oil drilling, production of oil, gas and other hydrocarbon substances, and permanent sealing is permitted in this zone. The Project site is not located on land under an active Williamson Act contract. Therefore, no impact would occur.

c) Conflict with existing zoning for, or cause rezoning of, forest land (as defined in Pub. Resources Code, § 12220, subd. (g)), timberland (as defined by Pub. Resources Code, § 4526), or timberland zoned Timberland Production (as defined by Gov. Code, § 51104, subd. (g))?

No Impact. The Project site is not located on public land with forests or areas designated as timberland or timberland zoned Timberland Production. Therefore, no impact would occur.

d) Result in the loss of forest land or conversion of forest land to non-forest use?

No Impact. The Project site is not located on public land with forests or areas designated as timberland or timberland zoned Timberland Production. The Project does not involve the conversion of forest land to non-forest use. Therefore, no impact would occur.

e) Involve other changes in the existing environment which, due to their location or nature, could result in conversion of Farmland, to non-agricultural use or conversion of forest land to non-forest use?

No Impact. Post permanent sealing operations, the disturbed areas utilized for site access, permanent sealing work, and temporary equipment staging would undergo restoration to align with the landscape of the surrounding environment. The Project would not require the conversion of the agricultural land to non-agricultural use. Therefore, no impact would occur.

4.2.4 Mitigation Measures

The Project would not result in significant impacts to agriculture and forestry resources; therefore, no mitigation is required.

4.3 AIR QUALITY

AIR QUALITY - Would the Project:	**Potentially Significant Impact**	**Less Than Significant with Mitigation**	**Less Than Significant Impact**	**No Impact**
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?	☐	☐	☒	☐
d) Result in other emissions (such as those leading to odors) adversely affecting a substantial number of people?	☐	☐	☒	☐

4.3.1 Environmental Setting

The Project site is located within the South Coast Air Basin (SCAB), which is bounded by the Pacific Ocean to the west and the San Gabriel, San Bernardino, and San Jacinto Mountains to the north and east, and includes all of Orange County and the non-desert portions of Los Angeles, Riverside, and San Bernardino Counties, in addition to the San Gorgonio Pass area in Riverside County. The regional climate in the SCAB is semi-arid and is characterized by warm summers, mild winters, infrequent seasonal rainfall, moderate daytime onshore breezes, and moderate humidity. The predominant wind direction at the Project site is northeast to southwest, as recorded by the South Coast Air Quality Management District (SCAQMD) Station's closest monitoring station to the Project site (Station 3166) (SCAQMD 2017). Station 3166 is located approximately 11 miles west of the Project site (SCAQMD 2017).

According to SCAQMD, sensitive receptors include residences, schools, playgrounds, childcare centers, long-term healthcare facilities, rehabilitation centers, convalescent centers, and retirement homes (SCAQMD 2005). The

nearest sensitive receptors to the Project site are single-family residences located approximately 0.37 miles to the south, adjacent to Brea Boulevard, and Kindred Hospital Brea, approximately 0.55 miles to the south.

4.3.1.1 Overview of Air Pollution

The federal Clean Air Act and state Clean Air Act mandate the control and reduction of certain air pollutants. Under these laws, the United States Environmental Protection Agency (EPA) and the California Air Resources Board (CARB) have established the National Ambient Air Quality Standards (NAAQS) and the California Ambient Air Quality Standards (CAAQS) for "criteria pollutants" and other pollutants. Some pollutants are emitted directly from a source (e.g., vehicle tailpipe, an exhaust stack of a factory) into the atmosphere, including carbon monoxide (CO), volatile organic compounds (VOCs)/reactive organic gases (ROGs)[3], nitrogen oxides (NO_x), particulate matter with diameters of 10 microns or less (PM_{10}) and 2.5 microns or less ($PM_{2.5}$), sulfur dioxide, and lead. Other pollutants are created indirectly through chemical reactions in the atmosphere, such as ozone (O_3), which is created by atmospheric chemical and photochemical reactions primarily between VOC and NO_x. Secondary pollutants include oxidants, O_3, and sulfate and nitrate particulates (smog). Air pollutants can be generated by the natural environment, such as when high winds suspend fine dust particles).

Air pollutant emissions are generated primarily by stationary and mobile sources. Stationary sources can be divided into two major subcategories:

- Point sources occur at a specific location and are often identified by an exhaust vent or stack. Examples include boilers or combustion equipment that produce electricity or generate heat.
- Area sources are widely distributed and include such sources as residential and commercial water heaters, painting operations, lawn mowers, agricultural fields, landfills, and some consumer products.

Mobile sources refer to emissions from motor vehicles, including tailpipe and evaporative emissions, and can also be divided into two major subcategories:

- On-road sources that may be legally operated on roadways and highways.

[3] CARB defines VOC and ROG similarly as, "any compound of carbon excluding CO, CO_2, carbonic acid, metallic carbides or carbonates, and ammonium carbonate," with the exception that VOC are compounds that participate in atmospheric photochemical reactions. For the purposes of this analysis, ROG and VOC are considered comparable in terms of mass emissions, and the term VOC is used in this IS/MND.

- Off-road sources include aircraft, ships, trains, and self-propelled construction equipment.

4.3.2 Regulatory Setting

The following information on SCAQMD regulations and thresholds of significance are relevant to the Project.

4.3.2.1 Air Quality Standards and Attainment

As the local air quality management agency, SCAQMD is required to monitor air pollutant levels to ensure that the NAAQS and CAAQS are met and, if they are not met, to develop strategies to meet the standards. Depending on whether the standards are met or exceeded, the SCAB is classified as being in "attainment" or "nonattainment." In areas designated as non-attainment for one or more air pollutants, a cumulative air quality impact exists for those air pollutants. As the local air quality management agency, SCAQMD must monitor air pollutant levels to ensure that the NAAQS and CAAQS are met. If they are not met, the SCAQMD must develop strategies for their region to meet the standards. The SCAB is currently designated nonattainment for the O_3 NAAQS and CAAQS, the PM_{10} CAAQS, and the $PM_{2.5}$ NAAQS and CAAQS. SCAB is either unclassified or designated attainment for all other NAAQS and CAAQS (SCAQMD 2018).

Air Quality Management Plan

To meet the NAAQS and CAAQS, SCAQMD has adopted a series of Air Quality Management Plans (AQMP) that serve as a regional blueprint to develop and implement an emission reduction strategy that will bring the area into attainment with the standards in a timely manner. The most significant air quality challenge in the SCAB is to reduce NO_x emissions to meet the 2037 O_3 standard deadline for the non-Coachella Valley portion of the SCAB, as NO_x plays a critical role in the creation of O_3. The 2022 AQMP includes strategies to ensure the SCAQMD contributes to furthering the district's ability to meet the 2015 federal O_3 standards (SCAQMD 2022). The 2022 AQMP builds on the measures already in place from the previous AQMPs and includes a variety of additional strategies, such as regulation, accelerated deployment of available cleaner technology, BMPs, co-benefits from existing programs, incentives, and other Clean Air Act measures to meet the 8-hour O_3 standard.

The SCAQMD's strategy to meet the NAAQS and CAAQS distributes the responsibility for emission reductions across federal, state, and local levels and industries. Most of these emissions are from heavy-duty trucks, ships, and other state and federally regulated mobile source emissions that the majority of which

are beyond SCAQMD's control. SCAQMD has limited control over truck emissions with rules such as Rule 1196. In addition to federal action, the 2022 AQMP relies on substantial future development of advanced technologies to meet the standards, including the transition to zero- and low-emission technologies. The AQMP also incorporates the transportation strategy and transportation control measures from Southern California Association of Governments' 2020-2045 Regional Transportation Plan/Sustainable Communities Strategy (Connect SoCal) (Southern California Association of Governments 2020).

Air Emission Thresholds

SCAQMD approved the CEQA Air Quality Handbook in 1993. Since then, SCAQMD has provided supplemental guidance on their website to address changes to the methodology and nature of CEQA. Some of these changes include recommended thresholds for emissions associated with both construction and operation of the Project are used to evaluate a Project's potential regional and localized air quality impacts (SCAQMD 2023). Table 4.3-1 presents the significance thresholds for regional construction-related criteria air pollutant and precursor emissions being used for the purposes of this analysis.

Table 4.3-1. SCAQMD Regional Significance Thresholds

Criteria Air Pollutant	Construction Threshold
VOC	75 pounds per day
NO_x	100 pounds per day
CO	550 pounds per day
SO_x	150 pounds per day
PM_{10}	150 pounds per day
$PM_{2.5}$	55 pounds per day

Notes: VOC: volatile organic compounds; NOx: nitrogen oxides; CO: carbon monoxide; SOx: sulfur oxides; PM10: particulate matter measuring 10 microns in diameter or less; PM2.5: particulate matter measuring 2.5 microns in diameter or less.

Source: SCAQMD 2023.

In addition to the above regional thresholds, the SCAQMD has developed Localized Significance Thresholds (LSTs) in response to concern regarding exposure of individuals to criteria pollutants in local communities. LSTs have been developed for NO_x, CO, PM_{10}, and $PM_{2.5}$ and represent the maximum emissions from a Project that will not cause or contribute to an air quality exceedance of the most stringent applicable federal or state ambient air quality standard at the

nearest sensitive receptor. LSTs take into consideration ambient concentrations in each source receptor area, distance to the sensitive receptor, and Project size. LSTs have been developed for emissions generated in construction areas up to five acres in size. LSTs only apply to emissions in a fixed stationary location and are not applicable to mobile sources, such as cars on a roadway (SCAQMD 2009).

The Project site is located in Source Receptor Area 16: North Orange County. SCAQMD provides LST lookup tables for Project sites that measure one, two, or five acres. Project construction would disturb approximately 0.5 acres. Therefore, this analysis utilizes the one-acre LSTs. LSTs are provided for receptors at distances of 82, 164, 328, 656, and 1,640 feet from the Project disturbance boundary to sensitive receptors. As described above, the nearest sensitive receptors to the Project site are located approximately 0.37 miles, or 1,950 feet, to the south. This analysis conservatively utilizes the LSTs 1,640 feet as this represents the closest LST metric for distance to sensitive receptors. The LSTs for construction activities are shown in Table 4.3-2.

Table 4.3-2. SCAQMD LSTs for Construction

Criteria Air Pollutant	LST at 1,640 Feet (pounds per day)*
Gradual Conversion of NO_x to NO_2	252
CO	6,531
PM_{10}	137
$PM_{2.5}$	74

Notes: * Allowable Construction Emissions for a One-Acre Site in Source Receptor Area 16.

NO_x = nitrogen oxides; NO_2 = nitrogen dioxide; CO = carbon monoxide; PM_{10} = particulate matter with a diameter no more than 10 microns; $PM_{2.5}$ = particulate matter with a diameter no more than 2.5 microns.

Source: SCAQMD 2009.

4.3.2.2 Toxic Air Contaminants

The California Health and Safety Code defines a toxic air contaminant (TAC) as "an air pollutant which may cause or contribute to an increase in mortality or in serious illness, or which may pose a present or potential hazard to human health." The majority of the estimated health risks from TACs can be attributed to relatively few compounds, the most important being diesel particulate matter (DPM) from diesel-fueled engines. SCAQMD has developed significance thresholds for the emissions of TAC based on health risks associated with elevated exposure to such compounds. For carcinogenic compounds, cancer risk is assessed in terms of incremental excess cancer risk. A Project would

result in a potentially significant impact if it would generate an incremental excess cancer risk of 10 in one million (10 x 10-6) or a cancer burden of 0.5 excess cancer cases in areas exceeding a one-in-one-million risk. In addition, non-carcinogenic health risks are assessed in terms of a hazard index. A project would result in a potentially significant impact if it would result in a chronic and acute hazard index greater than 1.0 (SCAQMD 2023).

4.3.2.3 Fugitive Dust

The SCAQMD Rule 403 addresses fugitive dust from any operations and requires the application of a number of measures for all dust-producing activities. The measures include pre-watering and applying water during activities to prevent dust plumes.

Activities larger than five (5) acres or 5,000 yds^3 have additional requirements.

4.3.2.4 Methodology

Air pollutant emissions generated by permanent sealing were estimated using the California Emissions Estimator Model, version 2022.1. The California Emissions Estimator Model uses Project-specific information, including land use, square footage for different uses, and location, to model a Project's construction emissions.

Project activities would primarily generate temporary criteria pollutants from equipment operation, construction worker vehicle trips to and from the site, and off-site export of materials. The Project was analyzed based on the applicant-provided schedule, equipment use, and area of disturbance. The estimated area of temporary impact totals approximately 0.5 acres.

4.3.3 Impact Analysis

a) Conflict with or obstruct implementation of the applicable air quality plan?

Less than Significant Impact. The Project would be inconsistent with the 2022 AQMP if the Project would generate population, housing, or employment growth exceeding forecasts used in the development of the 2022 AQMP. The 2022 AQMP incorporates local general plans and Southern California Association of Governments' Connect SoCal socioeconomic forecast projections of regional population, housing, and employment growth (SCAQMD 2022).

As described in Section 4.14, *Population and Housing*, the Project would not cause direct growth as the Project does not include new residences, businesses,

or other land uses which would generate population growth. The Project would not result in indirect growth because the Project involves the permanent sealing of an oil well rather than the expansion of oil extraction activities to serve additional population growth. Given the small-scale and temporary nature of Project construction activities, it is likely construction workers would be drawn from the existing, regional workforce and would not indirectly result in the relocation of people to Orange County. Upon completion of construction, the Project would not require additional staff because Well #1 would be abandoned. Accordingly, the Project would not result in population growth and therefore would not have the potential to conflict with or obstruct implementation of the 2022 AQMP. No impact would occur.

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?

Less Than Significant. Project construction would generate temporary air pollutant emissions associated with fugitive dust (PM_{10} and $PM_{2.5}$) and exhaust emissions from heavy construction equipment and construction vehicles. Table 4.3-3 summarizes the estimated maximum daily criteria air pollutant emissions associated with permanent sealing activities. The activities include the application of pre-watering and disturbed area watering as required by Rule 403.

Table 4.3-3. Estimated Maximum Daily Emissions – pounds/day

Construction	VOC	NO_x	CO	SO_2	PM_{10}	$PM_{2.5}$
2024	5	40	43	<1	36	5
SCAQMD Regional Thresholds	**75**	**100**	**550**	**150**	**150**	**55**
Threshold Exceeded?	No	No	No	No	No	No

Notes: pounds/day = pounds per day; VOC = volatile organic compounds NO_x = nitrogen oxides; CO = carbon monoxide; SO_2 = sulfur dioxide; PM_{10} = particulate matter 10 microns in diameter or less; $PM_{2.5}$ = particulate matter 2.5 microns or less in diameter.

Source: Appendix B, Table 2.2 "Construction Emissions by Year, Unmitigated".

As shown therein, criteria air pollutant emissions generated by permanent sealing would not exceed SCAQMD thresholds and would not result in a cumulatively considerable net increase of any criteria pollutant for which the SCAB is designated non-attainment. Furthermore, the Project would not require new operations or maintenance activities upon completion of permanent sealing. Therefore, no Project emissions would be generated beyond the conclusion of permanent sealing activities. This impact would be less than significant.

Localized Significance Thresholds

The *Final LST Methodology* was developed to be used as a tool to analyze localized impacts associated with specific Projects. If the calculated emissions for the proposed construction or operational activities are below the LST emission levels found on the LST mass rate look-up tables (Appendix C of *Final LST Methodology;* SCAQMD 2009) and no potentially significant impacts are found to be associated with other environmental issues, then the proposed construction or operation activity is not considered to be a significant impact on air quality. As described in Section 4.3.2.1, this analysis conservatively utilizes the LSTs at 1,640 feet. Table 4.3-4 summarizes the Project's maximum localized daily emissions. As shown therein, localized construction emissions would not exceed the SCAQMD LSTs and impacts would be less than significant.

Table 4.3-4. Project LST Emissions – pounds/day

Emissions and Thresholds	NO_x	CO	PM_{10}	$PM_{2.5}$
Maximum Construction On-site Emissions	40	42	<2	<2
SCAQMD LST	**252**	**6,531**	**137**	**74**
Threshold Exceeded?	No	No	No	No

Notes: pounds/day = pounds per day; NO_x = nitrogen oxide; CO = carbon monoxide; PM_{10} = particulate matter with a diameter no more than 10 microns; $PM_{2.5}$ = particulate matter with a diameter no more than 2.5 microns.

Source: Appendix B, Tables 3.1 through 3.5.

c) Expose sensitive receptors to substantial pollutant concentrations?

Less Than Significant. The nearest sensitive receptors to the Project site are single-family residences located approximately 0.37 miles to the south. As discussed in Section 4.17.3, *Transportation*, under Threshold 4.17(b), the Project would not result in an increase of operational vehicle trips. Therefore, the Project would not emit the levels of CO necessary to result in a localized hot spot.

Therefore, CO hotspots are not discussed further in this document. The Project does not include any stationary sources of air pollutant emissions, and once permanent sealing activities are complete, the Project would not require additional operation and maintenance activities. Therefore, following the conclusion of permanent sealing, the Project would not expose sensitive receptors to substantial pollutant concentrations and is not discussed further. The discussions below analyze the potential for the Project to expose receptors to substantial TAC emissions during permanent sealing.

Toxic Air Contaminants

As described in Section 0, TAC emissions associated with the Project can be attributed to DPM from diesel-fueled engines. DPM is primarily composed of PM_{10} and $PM_{2.5}$ emissions (CARB 2024). Generation of DPM from construction projects typically occurs in a single area for a short period of time. permanent sealing would occur for approximately five days. The dose to which the receptors are exposed is the primary factor used to determine health risk. Dose is a function of the concentration of a substance or substances in the environment and the extent of exposure that person has with the substance. Dose is positively correlated with time, meaning a longer exposure period would result in a higher exposure level for the maximally exposed individual. The risks estimated for a Maximally Exposed Individual are higher if a fixed exposure occurs over a longer period of time.

CalGEM has conducted health risk assessments for drilling and construction activities utilizing point sources and the HARP2 model. This analysis indicates that emissions of DPM less than 100 pounds per year for a duration of less than one year would not produce cancer impacts exceeding 10 in a million at the closest receptor (Appendix B). As this Project would not generate more than 10 pounds in total and the duration would be less than one year, the health risk impacts are less than significant. Furthermore, construction activities would also be subject to and would comply with California regulations limiting the idling of heavy-duty construction equipment to no more than five minutes, which would further reduce nearby workers exposure to temporary and variable DPM emissions. Compliance with the standard construction measures required by the SCAQMD would also further reduce nearby sensitive receptors' exposure to temporary and variable DPM emissions. As such, the Project would not expose sensitive receptors to substantial TAC concentrations, and impacts would be less than significant.

d) Result in other emissions (such as those leading to odors) adversely affecting a substantial number of people?

Less Than Significant. Construction equipment could generate odors during permanent sealing activities. Such odors would be temporary in nature and limited to approximately five days in the vicinity of the Project site. The nearest sensitive receptors are single-family residences located approximately 0.37 miles to the south. At this distance, sensitive receptors would not be able to detect temporary Project odors. The Project would also be required to adhere to SCAQMD Rule 402 (Nuisance), which prohibits discharge of air contaminants or any other material from a source that would cause nuisance to any considerable number of persons or the public, including odor. Following permanent sealing activities, the Project would not generate odors. Therefore, the Project would not result in odors adversely affecting a substantial number of people. This impact would be less than significant.

4.3.4 Mitigation Measures

The Project would not result in significant air quality impacts; therefore, no mitigation is required.

4.4 BIOLOGICAL RESOURCES

BIOLOGICAL RESOURCES – Would the Project:	**Potentially Significant Impact**	**Less Than Significant with Mitigation**	**Less Than Significant Impact**	**No Impact**
a) Have a substantial adverse effect, either directly or through habitat modifications, on any species identified as a candidate, sensitive, or special status species in local or regional plans, policies, or regulations, or by the California Department of Fish and Wildlife or U.S. Fish and Wildlife Service?	☐	☒	☐	☐
b) Have a substantial adverse effect on any riparian habitat or other sensitive natural community identified in local or regional plans, policies, regulations or by the California Department of Fish and Wildlife or U.S. Fish and Wildlife Service?	☐	☐	☒	☐
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?	☐	☐	☒	☐
f) Conflict with the provisions of an adopted Habitat Conservation	☐	☐	☐	☒

BIOLOGICAL RESOURCES – Would the Project:	**Potentially Significant Impact**	**Less Than Significant with Mitigation**	**Less Than Significant Impact**	**No Impact**
Plan, Natural Community Conservation Plan, or other approved local, regional, or State habitat conservation plan?				

4.4.1 Environmental Setting

The Project site is located within the Brea-Olinda Oil Field, located on the eastern side of Orange County. The well site encompasses a total of 0.5 acres and consists of oil and gas development with patches of remnant native habitat. There are no riparian or wetland features present.

The Brea-Olinda Oil Field is approximately 0.10 miles north of Brea Boulevard, approximately 0.80 miles west of State Route 57, and approximately 0.20 miles south of the Los Angeles County line. The Project site is at an elevation of 475 feet above sea level. Brea Creek is approximately 500 feet to the south. Within the half acre site, the vegetation community consists of disturbed scrub and grassland with emergent trees. Clay and loam soils make up the substrate within this site. The area surrounding this site consists mostly of heavily disturbed oil fields and residential area.

A desktop analysis was conducted to identify any threatened ES or flora and fauna that may be present within or surrounding the well sites. A query of the Project site with a five-mile radius was conducted using the CDFW California Natural Diversity Data Base, California Native Plant Society (CNPS) Rare Plant Inventory List, USFWS Information for Planning and Conservation planning tool, and USFWS Critical Habitat Report. The database search yielded a total of 36 threatened, endangered, and/or special status species with the potential to occur (PTO) within or near the Project site (Appendix C).

4.4.1.1 Special Status Plant Species

Of the 13 plant species evaluated, none have a high PTO at the Project site. One plant was identified to have moderate PTO: intermediate mariposa-lily (*Calochortus weedii* var. *intermedius*, CRPR 1B.2). Moderately suitable habitat for this species is present in the coastal scrub and grassland within and adjacent to the Project site.

4.4.1.2 Special Status Wildlife Species

Of the 26 wildlife species evaluated, seven have a moderate PTO at the Project site: Crotch's bumble bee (*Bombus crotchii,* state candidate endangered), coastal-whiptail (*Aspidoscelis tigris stejnegeri*, CDFW Species of Special Concern [SSC]), red-diamond rattlesnake (*Crotalus ruber*, SSC), coast-horned lizard (*Phrynosoma blainvillii*, SSC), coast patch-nose snake (*Salvadora hexalepis virgultea, SSC*), grasshopper sparrow (*Ammodramus savannarum*, SSC), and coastal cactus wren (*Campylorhynchus brunneicapillus sandiegensis*, SSC). Only one species is considered to have high PTO: coastal California gnatcatcher (*Polioptila californica californica*, federally threatened).

4.4.2 Regulatory Setting

Federal, state, and local regulations, laws, and policies pertaining to biological resources relevant to the Project are included below.

Federal Endangered Species Act (FESA) (7 United States Code [USC] Section 136, 16 USC Section 1531 et seq.). The FESA, which is administered in California by the USFWS and National Marine Fisheries Service, provides protection to species listed as threatened or endangered, or proposed for listing as threatened or endangered. When applicants propose projects with a federal nexus that "may affect" a federally listed or proposed species, the federal agency must (1) consult with the USFWS or National Marine Fisheries Service, as appropriate, under Section 7, and (2) ensure that any actions authorized, funded, or carried out by the agency are not likely to jeopardize the continued existence of any endangered or threatened species or result in the destruction or adverse modification of areas determined to be critical habitat. The Bureau of Land Management Oil and Gas Programmatic Biological Opinion (2017) addresses the FESA.

Section 9 prohibits the "take" of any member of a listed species.

Take – To harass, harm, pursue, hunt, shoot, wound, kill, trap, capture, or collect, or to attempt to engage in any such conduct.

Harass – An intentional or negligent act or omission that creates the likelihood of injury to a listed species by annoying it to such an extent as to significantly disrupt normal behavior patterns that include, but are not limited to, breeding, feeding, or sheltering.

Harm – Significant habitat modification or degradation that results in death or injury to listed species by significantly impairing behavioral patterns such as breeding, feeding, or sheltering.

Migratory Bird Treaty Act (MBTA) (16 USC Section 703 et seq.). The MBTA makes it unlawful to take or possess any migratory nongame bird (or any part of such migratory nongame bird) as designated under the MBTA.

Federal Noxious Weed Act of 1974 (P.L. 93-629) (7 USC 2801 et seq.; 88 Stat. 2148). The Federal Noxious Weed Act establishes a federal program to control the spread of noxious weeds. Authority is given to the Secretary of Agriculture to designate plants as noxious weeds by regulation, and the movement of all such weeds in interstate or foreign commerce was prohibited except under permit.

Bald and Golden Eagle Protection Act (16 USC Section 668 et seq.). The Bald and Golden Eagle Protection Act declares it is illegal to take, possess, sell, purchase, barter, offer to sell or purchase or barter, transport, export or import a bald or golden eagle, alive or dead, or any part, nest or egg of these eagles unless authorized. Active nest sites are also protected from disturbance during the breeding season.

Clean Water Act (CWA) (33 USC Section 1251 et seq.). The CWA requires the permitting and monitoring of all discharges to surface water bodies. Section 404 requires a permit from the U.S. Army Corps of Engineers for a discharge from dredged or fill materials into Waters of the U.S., including wetlands. Section 401 requires a permit from a Regional Water Quality Control Board (RWQCB) for the discharge of pollutants. By federal law, every applicant for a federal permit or license for an activity that may result in a discharge into a California water body, including wetlands, must request state certification that the proposed activity would not violate state and federal water quality standards.

4.4.2.1 State

California Endangered Species Act (CESA) (Fish and Game Code, Section 2050 et seq.). The CESA provides for the protection of rare, threatened, and endangered plants and animals, as recognized by the CDFW, and prohibits the taking of such species without its authorization. Furthermore, the CESA provides protection for those species that are designated as candidates for threatened or endangered listings. Under the CESA, the CDFW has the responsibility for maintaining a list of threatened species and endangered species (Fish and Game Code, Section 2070). The CDFW also maintains a list of candidate species, which are species that the CDFW has formally noticed as under review for addition to the threatened or endangered species lists. The CDFW also maintains lists of Species of Special Concern that serve as watch lists. Pursuant to CESA requirements, an agency reviewing a Project within its jurisdiction must determine whether any state-listed endangered or threatened species may be present in

the Project area and determine whether the Project would have a significant impact on such species. The CDFW encourages informal consultation on any proposed project that may affect a candidate species. The CESA also requires a permit to take a state-listed species through incidental or otherwise lawful activities (Fish and Game Code, Section 2081, subd. (b)).

Porter-Cologne Water Quality Control Act (Water Code Section 13000 et seq.). The Porter-Cologne Water Quality Control Act requires that each of the nine RWQCBs prepare and periodically update basin plans for water quality control. Each basin plan sets forth water quality standards for surface water and groundwater and actions to control nonpoint and point sources of pollution to achieve and maintain these standards.

Protection of Birds and Nests (Fish and Game Code Section 3503 and 3503.5). These policies protect California's birds by making it unlawful to take, possess, or needlessly destroy the nest or eggs of any bird. Raptors (e.g., hawks and owls) are specifically protected.

Migratory Birds (Fish and Game Code Section 3513). This policy protects California's migratory birds by making it unlawful to take or possess any migratory nongame bird as designated in the MBTA or any part of such migratory nongame birds.

Fully Protected Species (Fish and Game Code Section 3511, 4700, 5050, and 5515). These policies identify several amphibian, reptile, fish, bird, and mammal species that are Fully Protected. CDFW cannot issue a take permit for these species, except for take related to scientific research.

CEQA Guidelines Section 15380. CEQA defines rare species more broadly than the definitions for species listed under the FESA and CESA. Under Section 15830, species not protected through state or federal listing but nonetheless demonstrable as "endangered" or "rare" under CEQA should also receive consideration in environmental analyses. Included in this category are many plants considered rare by the CNPS and some animals on the CDFW's Special Animals List.

Lake and Streambed Alteration Agreement (Fish and Game Code, Section 1600 et seq.). This policy regulates activities that may divert, obstruct, or change the natural flow or the bed, channel, or bank of any river, stream, or lake in California designated by CDFW in which there is at any time an existing fish or wildlife resource or from which these resources derive benefit. Impacts to

vegetation and wildlife resulting from disturbances to waterways are also reviewed and regulated during the permitting process.

4.4.2.2 Local

Tree Preservation Ordinance (County of Orange Zoning Code Section 7-9-69). This policy requires a Tree Preservation Permit be submitted to Orange County Development Services prior to removal of any "Protected Tree" in unincorporated Orange County. "Protected Trees" means any individual native tree with a minimum diameter at breast height as defined in Section 7-9-69.2. If removal of Protected Trees is necessary to complete a Project, a Tree Preservation Management Plan will be prepared by an Arborist, to recommend the type of on-site and off-site replacement based on existing conditions, the number of Protected Trees, and the biological effectiveness of the replacement of the Protected Tree(s).

4.4.3 Impact Analysis

a) Have a substantial adverse effect, either directly or through habitat modifications, on any species identified as a candidate, sensitive, or special-status species in local or regional plans, policies, or regulations, or by the California Department of Fish and Wildlife or U.S. Fish and Wildlife Service?

Less Than Significant With Mitigation. Special status reptile species that could be directly impacted include potentially occurring land-dwelling animals, such as the coastal whiptail, red-diamond rattlesnake, coast patch-nosed snake and coast horned lizard. Direct impacts could occur via direct strikes to individuals by construction equipment, or entrapment. In addition, indirect impacts could occur through vibrations and dust, which could alter behavioral patterns of land-dwelling special-status wildlife species and cause them to become exposed to predators. Therefore, the Project could cause potentially significant impacts to coastal whiptail, red-diamond rattlesnake, coast patch-nosed snake, and coast horned lizard, and, even though BMPs are discussed in the Project Description under Section 2.2, *Best Management Practices*, species-specific measures are added through mitigation. BMPs are implemented to avoid or reduce any significant impacts to special status species by conducting a pre-disturbance biological survey. If avoidance is not possible, adherence to **MM BIO-1**, **MM BIO-2**, and **MM BIO-3** would require a pre-disturbance site survey, a workers environmental awareness training, and procedures for reptile avoidance to reduce potential direct and indirect effects to these species to a less than significant level.

Ground disturbance could directly result in the damage or removal of Braunton's milkvetch or intermediate mariposa lily if they are present at the Project site. Indirect impacts could result from habitat modifications, such as by the introduction of invasive plants disseminated from construction equipment, contamination of soils, and habitat degradation due to accidental fuel spills during permanent sealing operations. Individuals of these species, if present, could be removed, damaged, or disturbed by Project activities, a potentially significant impact. Adherence to **MM BIO-1**, **MM BIO-2**, and **MM BIO-4** would reduce potential direct and indirect effects to these species to a less than significant level.

The coastal scrub vegetation communities provide suitable nesting habitat for coastal California gnatcatcher and numerous occurrences of the species have been documented within 0.5 miles of the Project site. If the species is present within the vicinity of the Project site, the Project has the potential to directly (by destroying a nest) or indirectly (removal of habitat, construction noise, dust, and other human disturbances that may cause a nest to fail) impact the species. If the Project would not require removal of vegetation, impacts to coastal California gnatcatcher would be avoided. If this species is observed during the pre-disturbance construction survey and cannot be avoided, implementation of **MM BIO-5** would mitigate potential impacts to the species and its occupied habitat. **MM BIO-5** would include nine non-breeding season (July 1 through March 14) surveys conducted in accordance with USFWS protocol to determine presence/absence of coastal California gnatcatchers within the Project vicinity. If vegetation is removed within the Project footprint that supports coastal California gnatcatcher, **MM BIO-5** would directly mitigate the loss of habitat. **MM BIO-5** would require the development and implementation of a Habitat Mitigation and Monitoring Program or funding of a conservation bank or similar entity to mitigate the loss of occupied habitat. Implementation of **MM BIO-5** would determine if the Project site is occupied and maintain avoidance of potential direct and indirect effects to coastal California gnatcatcher and would mitigate potential impacts to occupied habitat. With implementation of these MMs, impacts to the species would be reduced to less than significant.

As Crotch's bumble bee is a flying insect species, it would be capable of escaping harm while foraging during permanent sealing operations. Potentially suitable foraging and nesting habitat is present in undisturbed vegetated areas within the Project vicinity. If the Project were to involve ground disturbance in undisturbed areas, an occupied nest potentially present on site could be significantly impacted. If disturbance can be limited to previously

developed/disturbed areas, impacts to Crotch's bumble bee would be avoided. If avoidance is not feasible, the Project would cause potentially significant impacts to Crotch's bumble bee, and adherence to **MM BIO-6** would be required to reduce potential direct and indirect effects to these species to a less than significant level.

Project-related noise and light have the potential to negatively affect wildlife activity, including nesting bird/raptor activity, within or adjacent to the Project site. Adherence to **MM BIO-7** would mitigate potential impacts to nesting birds by requiring a pre disturbance survey to identify presence and halt of work, if present; accordingly, impacts to the nesting birds would be reduced to less than significant.

MM BIO-1: Pre-disturbance Biological Survey Report. Per CalGEM's BMPs, a pre-disturbance biological survey shall be conducted by a Qualified Biologist. The pre-disturbance biological survey shall consist of walking belt transects to accomplish 100% coverage of the Project site plus a 100-foot buffer. During the survey, all direct and indirect observations of special-status biological resources shall be noted if encountered and recorded using a handheld Global Positioning Satellite device and on field forms. Habitat shall be evaluated by the Qualified Biologist to determine the potential for biological resource monitoring and/or surveys for species that are seasonal or require focused surveys during specified periods (e.g., special-status plants). If no such follow-up surveys are required to determine current status of special-status biological resources on the Project site, that information shall be included in the biological survey report to be completed within 14 days of the pre-disturbance survey. If follow-up surveys are required, a follow-up survey report shall be completed by the Qualified Biologist and submitted to the Project proponent within 14 days of the follow-up survey. To meet seasonal requirements stipulated by Species Protocols, some surveys may be required more than 30 days prior to ground disturbance(s). In such cases, follow-up pre-disturbance surveys shall also be required within 30 days prior to initiation of the ground disturbance to confirm that no changes in species status or occupancy have occurred within the survey area.

The Project proponent shall maintain copies of all pre-disturbance biological survey reports completed by the Qualified Biologist. The pre-disturbance biological survey report shall include a map of the

proposed Project boundary, biological survey area, special-status species observations (when observed), areas of potential and/or occupied habitat (if any), areas identified for avoidance, and a list of all applicable MMs that shall be implemented for the respective Project activity site.

MM BIO-2: Worker Environmental Awareness Training. Per CalGEM's BMPs, the Qualified biologist shall develop and implement a Worker Environmental Awareness Program (WEAP) for all personnel that may access the Project site. WEAP trainings shall be conducted for each individual prior to their first access into the Project site. The Project proponent shall conduct a presentation with material given on site or off site by trained personnel (e.g., Qualified Biologist or assigned Company Environmental Specialists). WEAP trainings shall cover an overview of the laws and regulations governing the protection of biological resources; a description of protected (i.e., special status) species known to occur or with the PTO in the Project vicinity; their status and legal protections; what is considered habitat and disturbance; biological resource protection measures; and a list of designated Qualified Biologist contacts. The Project proponent shall provide general awareness to workers and supply materials to assist workers in recognizing protected species that may occur on the Project area, avoidance, and minimization measures to protect biological resources, and how to report biological resources if observed on site. In addition, the WEAP shall implement the following:

1. The WEAP shall emphasize the need to avoid contact with wildlife, to avoid entry into areas where biological resources have been identified for avoidance, to review Project specific pre-disturbance biological results reports and maps, and to implement all applicable avoidance and minimization measures included in the Project specific pre-disturbance biological survey results report.
2. All Project personnel present on the Project site must sign a statement verifying that they have completed the WEAP, and that they understand the biological requirements during Project activities. The Project proponent shall maintain a list of all persons who have completed the WEAP and shall provide the list to CalGEM upon request.

MM BIO-3: Sensitive Reptile Species Avoidance. If the pre-disturbance biological survey identifies the presence of red-diamond rattlesnake, coastal whiptail, coast horned lizard, coast patch-nose snake or any other special status reptile species within the Project site, the following measures shall be implemented.

1. If any red-diamond rattlesnake, coastal whiptail, coastal horned lizard, coast patch-nose snake or any other reptile species of special concern are observed during permanent sealing, the identified special-status reptile(s) shall be allowed to move out of the Project site on their own or shall be removed from the Project site and released in adjacent suitable habitat by the Qualified Biologist. The Qualified Biologist shall have all appropriate permits in place prior to handling any special-status reptiles or any other wildlife.
2. All construction equipment and construction personnel vehicles shall be checked prior to moving them, to ensure that no special-status reptile is under equipment/vehicles. If any individuals are detected beneath equipment or vehicles, the equipment or vehicles shall be left in place until the individual(s) moves out of harm's way on its own accord, as determined by a Qualified Biologist.

MM BIO-4: Sensitive Plant Species Avoidance. If the pre-disturbance survey determines that additional targeted plant surveys are required for the detection of sensitive plant species within the permanent sealing footprint or a 50-foot buffer, rare plant surveys shall be conducted during the appropriate season for their detection. If surveys for special-status plants occur in a year during which rainfall totals reach at least 80 percent of normal, survey results shall be considered valid for five years. For surveys conducted in years of less-than-ideal rainfall (less than 80 percent average rainfall), results shall be valid for only one year. A survey of appropriate reference populations shall be necessary to support survey findings for the Project site.

If the pre-disturbance survey identifies special-status plant populations, the following measures shall be implemented:

1. Any special-status plant populations detected shall be fully described, well documented, and mapped via a Global Positioning Satellite device, and appropriately georeferenced on

Project maps. For each population occurrence detected, a CNPS Field Survey Form or written equivalent shall be prepared.

2. If pre-construction surveys detect the presence of any State-listed plant species, the plant populations shall be protected from permanent sealing operations by implementing applicable impact avoidance measures consistent with CNPS's mitigation guidelines (1998 or more current) and with recommendations in the Recovery Plan for Upland Species of the San Joaquin Valley, California (USFWS 1998). If impact avoidance measures have not been established for the species, plant populations shall be buffered from new ground disturbance activities by a minimum of 50 feet, as determined by a Qualified Biologist. A smaller buffer may be established, provided there are adequate measures such as placement of a physical barrier (e.g., construction fencing) in place to avoid the destruction of individuals, with the approval of CalGEM. The buffer zone shall be established around these areas to eliminate potential disturbance to the plants from human activity and any other potential sources of disturbance including human trampling, erosion, and dust. A Qualified Biologist shall be on site, at minimum, during initial ground disturbing activities to ensure that sensitive plant species are not impacted.

3. If any non-State listed special-status plants are identified that may be impacted by new ground-disturbing activities, populations shall be avoided, when possible, by a minimum 50-foot buffer zone as determined by a Qualified Biologist. If non-State protected special-status plant species are unavoidable, up to 20% of a population or each discrete occurrence may be disturbed without further measures required. If greater than 20% of a population or each discrete occurrence shall be destroyed, a Rare Plant Salvage and Restoration Plan shall be submitted to CalGEM for approval. The plan shall include the following at a minimum:

    a. Relocation of individual plant(s) to an appropriate habitat area free from Project-related ground disturbance;

    b. Boundaries of non-State protected special-status plant species shall be geo referenced and mapped;

c. Topsoil removed during site clearing where non-State protected special-status plant species are located shall be spread onto existing disturbed areas within the same geographic area and in the same soil type;

d. Post-construction monitoring to confirm continued site occupancy by special-status plants affected by ground disturbance; and

e. Adaptive management or other contingency measures; and/or weed management.

MM BIO-5: Coastal California Gnatcatcher. If the pre-disturbance survey determines there is potential habitat present within the Project footprint (coastal sage scrub), protocol level surveys will be conducted prior to the start of work. The Project proponent shall conduct USFWS protocol surveys in suitable habitat within the Project site and all areas within 500 feet of access or construction-related disturbance areas. Suitable habitats, according to the protocol, include "coastal sage scrub, alluvial fan, chaparral, or intermixed or adjacent areas of grassland and riparian habitats." A permitted biologist shall perform these surveys according to the USFWS coastal California Gnatcatcher Presence/Absence Survey Guidelines (USFWS 1997). If the species is not detected during these surveys, no further action is required.

If a territory or nest is confirmed during protocol surveys, the USFWS shall be notified to determine whether authorization is necessary. No clearing of occupied habitat (as determined by the presence of a nest or territory) shall occur during the breeding season (February–August). Clearing of occupied habitat during the non-breeding season must be conducted at the discretion of a qualified monitoring biologist and authorized by the USFWS.

If coastal California gnatcatcher territory is confirmed within the Project disturbance footprint by USFWS protocol surveys, suitable habitat for the species impacted by the Project will be mitigated at a minimum 1:1 ratio. Mitigation for impacted California buckwheat scrub and purple sage scrub will be accomplished either through preparation and implementation of a Habitat Mitigation and Monitoring Plan or through

providing funding to a third-party organization, conservation bank or in-lieu fee program for in-kind habitat creation or restoration.

MM BIO-6: Crotch's Bumble Bee Surveys and Avoidance. If, at the commencement of permanent sealing operations, Crotch's bumble bee is still considered a CESA candidate species or has been listed as threatened or endangered under CESA, the Project will implement the following measures to avoid, minimize, and offset Project impacts to the species:

- A Qualified Biologist will conduct a pre-construction survey for Crotch's bumble bee and nests in Project areas with suitable nesting habitat prior to initial ground-disturbing activities, such as staging and vegetation clearing. There will be multiple surveys during the nesting season. The purpose of the surveys will be to identify active nest colonies inside of permanent and temporary impact areas.
- If active Crotch's bumble bee nests are observed within the Project site or within a 50-foot buffer surrounding the site, an appropriate no-disturbance buffer (as determined by a Qualified Biologist) will be established around the nest to reduce the risk of disturbance or accidental take. The buffer will provide at least 50 feet of clearance around active nest entrances. (Note: inaccessible areas outside of the Project site can be surveyed using binoculars from the Project edge or from access roads.)
- If establishment of a no-disturbance buffer is feasible, construction activities will not occur within the buffer until a Qualified Biologist determines that the colony is no longer active (i.e., no Crotch's bumble bees are seen flying in or out of the nest for three consecutive days, indicating the colony has completed its nesting season and the next season's queens have dispersed from the colony). Once the nest has been determined to be inactive, construction activities within the no-disturbance buffer(s) will be allowed to resume.
- If avoidance of a no-disturbance buffer is not feasible, the Qualified Biologist will consult with CDFW regarding potential encroachment into the no-disturbance buffer with other measures implemented. Work would not begin in the no-disturbance buffer without CDFW approval.

- If avoidance of the nest is not feasible, the Qualified Biologist will consult with the CDFW regarding the potential for Project activities to result in take of the Crotch's bumble bee and will comply with all avoidance, minimization, and compensatory mitigation requirements set forth in any incidental take permit issued for the Project by CDFW.

MM BIO-7: Nesting Bird Pre-construction Surveys. A pre-disturbance nesting bird survey for active bird nests shall be conducted by a Qualified Biologist no more than 10 days prior to the start of any ground disturbances that shall take place during the bird nesting season (February 1 through August 31). Surveys shall follow USFWS and CDFW guidance and/or protocols, as applicable. If ground-disturbing activities were initiated prior to, and continue into the bird nesting season without a break in activity of more than one week, no nesting bird survey is necessary. If no active nests or nesting birds are identified during the pre-disturbance survey, then ground-disturbing activities may proceed, and no further procedures shall be required for nesting birds.

If active nests are identified, the following shall be included as part of the pre-disturbance active bird nest survey results report.

Active bird nest(s) shall be avoided by establishing a minimum 250-foot non-disturbance buffer around it, a minimum 500-foot non-disturbance buffer around any active non-listed raptor nest(s), or a minimum 0.5-mile non-disturbance buffer around any federal or State-listed raptor nest(s) until the breeding season has ended. Non-disturbance buffers can be removed when a Qualified Biologist has determined that the birds have fledged, are no longer reliant on the nest or parental care for survival and adult birds are no longer occupying the nest, or the nest is no longer active (e.g., failed). Reduced non-disturbance buffers may be implemented if a Qualified Biologist concludes that work within the buffer area shall not be likely to cause nest avoidance or abandonment (e.g., when the disturbance area is concealed from a nest site by topography, when work activities shall have a limited duration within the buffer area, or when the species has been known to tolerate higher levels of disturbance). If reduced non-disturbance buffers are implemented, a Qualified Biologist shall monitor the active nest(s) before and during construction to establish a baseline for nest behavior and determine whether construction activities are adversely affecting the

nest. The pre-disturbance monitoring of the nest site shall occur on at least two occasions of at least one hour each during anticipated work hours prior to permanent sealing operations to establish a behavioral baseline. The monitoring during permanent sealing shall be within the buffer area to detect behavioral changes of the birds because of the Project (e.g., adults flushed off the nest) that could lead to nest abandonment. If behavioral changes are observed, the work causing that change shall cease within the buffer area until the nest has fledged or is determined by the Qualified Biologist to no longer be active. The Qualified Biologist shall have the authority to halt or redirect construction activities to protect nesting birds from permanent sealing operations. Any reduction of buffer areas for State or federal listed species during the nesting season must be authorized by CDFW and/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 California Department of Fish and Wildlife or U.S. Fish and Wildlife Service?

Less Than Significant. The Project site is located approximately 500 feet west of Brea Creek and approximately 0.35 miles northwest of the Humble Reservoir. There is no riparian habitat or other sensitive natural communities present at the Project site. Therefore, the Project would not have a substantial adverse effect on any riparian habitat or other sensitive natural community. This impact would be less than significant.

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?

No Impact. There are no potential jurisdictional wetland features present at the Project site (USFWS 2024). Therefore, the Project would not have a substantial adverse effect on state or federally protected wetlands. No impact would occur.

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?

Less Than Significant. The Project would not have an effect on localized wildlife movement as permanent sealing operations would be temporary, occurring for five days, and would only disturb up to 0.5 acres. The Project would

not have the potential to create habitat fragmentation in the region or substantially impact wildlife movement. Therefore, this impact would be less than significant.

e) Conflict with any local policies or ordinances protecting biological resources, such as a tree preservation policy or ordinance?

Less Than Significant. The Project is not anticipated to result in impacts to protected trees. No tree removals would occur. If protected trees are observed on site, implementation of the Project's BMPs outlined in Section 2.2 would ensure impacts remain less than significant.

f) Conflict with the provisions of an adopted Habitat Conservation Plan, Natural Community Conservation Plan, or other approved local, regional, or State habitat conservation plan?

No Impact. The Orange County Transportation Authority M2 Natural Community Conservation Plan/Habitat Conservation Plan Area overlaps with the Project site, however, the NCCP/HCP is not relevant to the Project because covered activities are limited to transportation projects. The covered area for the Southern Orange Subregion HCP is situated approximately 24 miles to the southeast. The covered area for the County of Orange Central and Coastal NCCP/HCP is situated approximately 11 miles to the southeast. The Project is temporary and removing existing oil and gas infrastructure. Since there is no Habitat Conservation Plan, Natural Community Conservation Plan, or other approved local, regional, or State habitat conservation plan with provisions applicable to the Project, no impact would occur.

4.4.4 Mitigation Measures

Implementation of the following MMs would reduce the potential for biological resource impacts to less than significant:

- BIO-1: Pre-disturbance Biological Survey Report
- BIO-2: Worker Environmental Awareness Training
- BIO-3: Sensitive Reptile Species Avoidance
- BIO-4: Sensitive Plant Species Avoidance
- BIO-5: Coastal California Gnatcatcher
- BIO-6: Crotch's Bumble Bee Surveys and Avoidance

- BIO-7: Nesting Bird Pre-construction Surveys

4.5 CULTURAL RESOURCES

CULTURAL RESOURCES – Would the Project:	**Potentially Significant Impact**	**Less Than Significant with Mitigation**	**Less Than Significant Impact**	**No Impact**
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 formal cemeteries?	☐	☒	☐	☐

4.5.1 Environmental Setting

Rincon Consultants, Inc. prepared a Cultural Resources Desktop Survey[4] in April 2024 which included archival records search and review of the National Register of Historic Places, the California Register of Historical Resources, the California Historical Landmarks list, and the Built Environment Resources Directory, as well as its predecessor the California State Historic Property Data File. Additionally, Rincon reviewed the Archaeological Determination of Eligibility list.

On March 26, 2024, Rincon completed a California Historical Resources Information System (CHRIS) records search at the South-Central Coastal Information Center, which is the official state repository for cultural resources records and reports for Los Angeles, Orange, and Ventura counties. The CHRIS records search did not identify any cultural resources within a 0.5-mile radius of the Project site. The CHRIS records search identified a cultural resource study encompassing the Project site; Well #1 was adequately surveyed in 1989.

4.5.2 Regulatory Setting

Federal, state, and local regulations, laws, and policies pertaining to cultural resources relevant to the Project are included below.

[4] This Survey is confidential and therefore not included for public distribution. Archaeological site locations are exempt from the California Public Records Act, as specified in Government Code 7927.005, and from the Freedom of Information Act (Exemption 3), under the legal authority of both the National Historic Preservation Act (PL 102-574, Section 304[a]) and the Archaeological Resources Protection Act (PL 96-95, Section 9[a]).

4.5.2.1 Federal

National Register of Historic Places. Properties which are listed in or have been formally determined eligible for listing in the National Register of Historic Places (NRHP) are automatically listed in the California Register of Historical Resources (CRHR). The following is presented to provide applicable regulatory context. The NRHP was authorized by Section 101 of the National Historic Preservation Act and is the nation's official list of cultural resources worthy of preservation. The NRHP recognizes the quality of significance in American, state, and local history, architecture, archaeology, engineering, and culture is present in districts, sites, buildings, structures, and objects.

4.5.2.2 State

California Register of Historical Resources. The CRHR is an authoritative listing and guide to be used by state and local agencies, private groups, and citizens in identifying the existing historical resources of the state and to indicate which resources deserve to be protected, to the extent prudent and feasible, from substantial adverse change (California Public Resources Code [PRC] 5024.1[a]).

California Health and Safety Code Section 7050.5. Section 7050.5 of the California Health and Safety Code states that in the event of discovery or recognition of any human remains in any location other than a dedicated cemetery, there shall be no further excavation or disturbance of the site or any nearby area reasonably suspected to overlie adjacent remains until the Coroner of the county in which the remains are discovered has determined if the remains are subject to the Coroner's authority. If the human remains are of Native American origin, the Coroner must notify the Native America Heritage Commission within 24 hours of this identification.

California Public Resources Code Section 5097.98. Section 5097.98 of the PRC states that the Native American Heritage Commission, upon notification of the discovery of Native American human remains, pursuant to Health and Safety Code Section 7050.5, shall immediately notify those persons (i.e., the Most Likely Descendant [MLD]) that it believes to be descended from the deceased. With permission of the landowner or a designated representative, the MLD may inspect the remains and any associated cultural materials and make recommendations for treatment or disposition of the remains and associated grave goods. The MLD shall provide recommendations or preferences for treatment of the remains and associated cultural materials within 48 hours of being granted access to the site.

4.5.2.3 Local

Orange County General Plan Resources Element. The following Resources Element objectives are designed to encourage the preservation of the county's cultural and historic heritage:

- **Objective 2.2:** Take all reasonable and proper steps to achieve the preservation of archaeological and paleontological remains, or their recovery and analysis to preserve cultural, scientific, and educational values.
- **Objective 2.3:** Take all reasonable and proper steps to achieve the preservation and use of significant historic resources including properties of historic, historic architectural, historic archaeological, and/or historic preservation value.

4.5.3 Impact Analysis

a) Cause a substantial adverse change in the significance of a historical resource pursuant to § 15064.5?

No Impact. The Project site is not listed on the NRHP, CRHR, or included as a local historic site (National Park Service 2024; California Office of Historic Preservation 2024; County of Orange 2024a). Therefore, permanent sealing would not change the significance of a historical resource. No impact would occur.

b) Cause a substantial adverse change in the significance of an archaeological resource pursuant to § 15064.5?

Less Than Significant with Mitigation. The Project involves the permanent sealing of Well #1. Minimal ground-disturbing activities associated with grading would be required for the Project. The maximum depth of ground disturbing activities would be approximately five to ten feet below ground surface in order to cut well casing. Based on previous ground disturbances at the Project site from previous installations of the well and vehicle travel on access roads, there is a low likelihood archaeological resources are present. Nonetheless, there is a possibility to encounter previously undiscovered archaeological resources during ground disturbing activities. **MM CUL-1** would provide standard procedures to follow in the event unanticipated archaeological resources are discovered. With implementation of **MM CUL-1**, the impact would be reduced to a less than significant level.

MM CUL-1: Unanticipated Discovery of Cultural Resources. In the event that archaeological resources are unexpectedly encountered during ground-disturbing activities, work within 50 feet of the find shall halt and an archaeologist meeting the Secretary of the Interior's Professional Qualifications Standards for Archaeology shall be contacted immediately to evaluate the resource. If the resource is determined by the qualified archaeologist to be prehistoric, then a Native American representative shall also be contacted to participate in the evaluation of the resource. If the qualified archaeologist and/or Native American representative determines it to be appropriate, archaeological testing for CRHR eligibility shall be completed. If the resource proves to be eligible for the CRHR, and significant impacts to the resource cannot be avoided via Project redesign, a qualified archaeologist shall prepare a data recovery plan tailored to the physical nature and characteristics of the resource, per the requirements of CCR Section 15126.4(b)(3)(C). The data recovery plan shall identify data recovery excavation methods, measurable objectives, and data thresholds to reduce any significant impacts to cultural resources related to the resource. Pursuant to the data recovery plan, the qualified archaeologist and Native American representative, as appropriate, shall recover and document the scientifically consequential information that justifies the resource's significance.

c) Disturb any human remains, including those interred outside of formal cemeteries?

Less Than Significant with Mitigation. No human remains are known to be present in proximity to the Project site. However, the discovery of human remains is always a possibility during ground-disturbing activities. If human remains are found, the State of California Health and Safety Code Section 7050.5 states that no further disturbance shall occur until the County Coroner has made a determination of origin and disposition pursuant to PRC Section 5097.98. To further ensure that appropriate procedures are followed in the event of unanticipated discovery of human remains, **MM CUL-2** has been developed. With implementation of **MM CUL-2**, impacts pertaining to the potential discovery of human remains would be less than significant because all work would be temporarily halted if and when such resources were discovered, and all federal, state, and local guidelines would be adhered to.

MM CUL-2: Unanticipated Discovery of Human Remains. The discovery of human remains is always a possibility during ground disturbing activities. If human remains are found, the State of California Health and Safety Code Section 7050.5 states that no further disturbance shall occur until the County Coroner has made a determination of origin and disposition pursuant to Public Resources Code Section 5097.98. In the event of an unanticipated discovery of human remains, the County Coroner must be notified immediately. If the human remains are determined to be prehistoric, the Coroner will notify the Native American Heritage Commission, which will determine and notify a most likely descendant (MLD), and as determined by the Native American Heritage Commission (NAHC) should those findings be determined as Native American in origin. The MLD shall complete the inspection of the site and provide recommendations for treatment to the landowner within 48 hours of being granted access.

4.5.4 Mitigation Measures

Implementation of the following MMs would reduce the potential for cultural resource impacts to less than significant:

- CUL-1: Unanticipated Discovery of Cultural Resources
- CUL-2: Unanticipated Discovery of Human Remains

4.6 ENERGY

ENERGY – Would the Project:	**Potentially Significant Impact**	**Less Than Significant with Mitigation**	**Less Than Significant Impact**	**No Impact**
a) Result in potentially significant environmental impact due to wasteful, inefficient, or unnecessary consumption of energy resources, during project construction or operation?	☐	☐	☒	☐
b) Conflict with or obstruct a state or local plan for renewable energy or energy efficiency?	☐	☐	☒	☐

4.6.1 Environmental Setting

According to the California Energy Commission, gas consumption in Orange County in 2022, the most recent year data is available, totaled 572 million therms (California Energy Commission 2024). In 2022, approximately 66 million gallons of diesel was used in Orange County (California Energy Commission 2023).

4.6.2 Regulatory Setting

There are no federal or local laws, regulations, or policies pertaining to energy that are relevant to the Project. State regulations, laws, and policies pertaining to energy relevant to the Project are included below.

4.6.2.1 State

California Code of Regulations, Title 13 Section 2449 and 2485. CCR, Title 13, Section 2449 sets idling restrictions for construction vehicles. Pursuant to Title 13, Section 2449, off-road diesel vehicles are not permitted to idle for more than five minutes. Pursuant to Title 13 Section 2485, diesel-fueled commercial motor vehicles are not permitted to idle for more than five minutes.

4.6.3 Impact Analysis

a) Result in potentially significant environmental impact due to wasteful, inefficient, or unnecessary consumption of energy resources, during project construction or operation?

Less than Significant. Energy use during construction would be temporary in nature, and construction equipment used would be typical of similar-sized construction projects in the region. Construction contractors would be required to comply with the provisions of California Code of Regulations Title 13 Sections 2449 and 2485, which prohibit diesel-fueled commercial motor vehicles and off-road diesel vehicles from idling for more than five minutes and would minimize unnecessary fuel consumption. Construction equipment would be subject to the USEPA Construction Equipment Fuel Efficiency Standard, which would also minimize inefficient, wasteful, or unnecessary fuel consumption. These practices would result in efficient use of energy necessary to perform the temporary five day construction period. In the interest of cost-efficiency, the Project proponent also would not utilize fuel in a manner that is wasteful or unnecessary. Since the Project would not require new operations and maintenance activities or electricity consumption, the Project would not consume additional energy resources. Therefore, the project would not involve the inefficient, wasteful, and unnecessary use of energy during construction. Impacts would be less than significant.

b) Conflict with or obstruct a state or local plan for renewable energy or energy efficiency?

Less than Significant. Energy would be consumed during permanent sealing activities in the form of petroleum-based fuels to power off-road construction vehicles and equipment on the Project site, and vehicles used to transport materials and construction personnel to and from the Project site. Energy use during permanent sealing would be temporary in nature, lasting approximately 10 days. The contractor would be required to comply with the CCR, Title 13, Section 2449 and 2485, which prohibit diesel-fueled commercial motor vehicles and off-road diesel vehicles from idling for more than five minutes and would minimize unnecessary fuel consumption. Construction equipment would be subject to CARB diesel rules which include the use of energy efficient construction equipment. The Project would comply with regulations intended to promote energy efficiency and would be consistent with state regulations and County goals related to energy efficiency. Therefore, the impact is less than significant.

4.6.4 Mitigation Measures

The Project would not result in significant impacts on energy; therefore, no mitigation is required.

4.7 GEOLOGY AND SOILS

GEOLOGY AND SOILS – Would the Project:	**Potentially Significant Impact**	**Less Than Significant with Mitigation**	**Less Than Significant Impact**	**No Impact**
a) Directly or indirectly cause potential substantial adverse effects, including the risk of loss, injury, or death involving:				
i) Rupture of a known earthquake fault, as delineated on the most recent Alquist-Priolo Earthquake Fault Zoning Map issued by the State Geologist for the area or based on other substantial evidence of a known fault? Refer to Division of Mines and Geology Special Publication 42.	☐	☐	☒	☐
ii) Strong seismic ground shaking?	☐	☐	☒	☐
iii) Seismic-related ground failure, including liquefaction?	☐	☐	☒	☐
iv) 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 life or property?	☐	☐	☒	☐
e) Have soils incapable of adequately supporting the use of septic tanks or alternative waste water disposal systems where	☐	☐	☐	☒

GEOLOGY AND SOILS – Would the Project:	**Potentially Significant Impact**	**Less Than Significant with Mitigation**	**Less Than Significant Impact**	**No Impact**
sewers are not available for the disposal of waste water?				
f) Directly or indirectly destroy a unique paleontological resource or site or unique geologic feature?	☐	☐	☒	☐

4.7.1 Environmental Setting

The Project site is situated in the Peninsular Ranges, one of the eleven major geomorphic provinces in California (California Geological Survey 2002). In general, the Peninsular Ranges consist of northwest-southeast trending mountain ranges and faults (Norris and Webb 1976). These mountains are generally comprised of Mesozoic to Cenozoic plutonic and extrusive igneous and Cretaceous marine sedimentary rocks. The Peninsular Ranges province also contains sedimentary basins such as the Los Angeles Basin which have accumulated thick sequences of Cenozoic marine and terrestrial sedimentary rocks. According to the Orange County General Plan Safety Element, two potentially active fault zones, the Newport-Inglewood Fault and the Whittier Fault, run along the coastal and inland edges of the county. The Yorba Linda Fault Zone traverses the county east-west. Additional faults, such as the San Jacinto Fault, San Andreas Fault, Cucamonga Fault, and Sierra Madre Fault are in proximity to Orange County. Due to existing foothills, portions of Orange County are subject to landslide (County of Orange 2012b).

The Project site is located approximately 0.30 miles south of the Yorba Linda Fault Zone but is within a landslide hazard zone and a liquefaction hazard zone (DOC 2022). Well #1 is underlain by the Fernando Formation (Morton and Miller 2006). The Fernando Formation consists of brown siltstone and well-cemented pebbly sandstone to conglomerate. The Fernando Formation has produced scientifically significant paleontological resources, including birds (*Mancalla*), ray-finned fish (Actinopterygii), sharks (Chondrichthyes), and invertebrates (Paleobiology Database 2024). Given this fossil-producing history, the Fernando Formation has high paleontological sensitivity.

4.7.2 Regulatory Setting

Federal, state, and local regulations, laws, and policies pertaining to geology and soils relevant to the Project are included below.

4.7.2.1 Federal

Uniform Building Code. The Uniform Building Code was first published in 1927 by the International Council of Building Officials, a non-governmental organization. It was intended to promote public safety and provided standardized requirements for safe construction. Updated editions of the code were published every three years until 1997, which was the final version of the code. Since that time, the Uniform Building Code, published by the International Code Council since 1997, has been adopted by many jurisdictions, including the State of California, in their building codes.

Clean Water Act. The CWA (33 USC Section 1251 et seq.), formerly the Federal Water Pollution Control Act of 1972, was enacted with the intent of restoring and maintaining the chemical, physical, and biological integrity of the waters of the United States. Several provisions of the CWA regulate activities that could affect soil erosion and chemical composition of water. The CWA requires states to set standards to protect, maintain, and restore water quality through the regulation of point source and certain non-point source discharges to surface water. Those discharges are regulated by the National Pollutant Discharge Elimination System (NPDES) permit process (CWA Section 402). Projects that disturb one or more acre of land are required to obtain NPDES coverage under the NPDES General Permit for Storm Water Discharges Associated with Construction and Land Disturbance Activities (General Permit). Construction General Permits are implemented and enforced by the California Water Resources Control Board under Order No. 2009-0009-DWQ. The General Permit requires the development and implementation of a Stormwater Pollution Prevention Plan (SWPPP), which includes BMPs to protect storm water runoff.

Requirements of the federal CWA and associated SWPPP requirements are described in further detail in Section 4.10, *Hydrology and Water Quality*.

Earthquake Hazards Reduction Act. The National Earthquake Hazards Reduction Program was established by the U.S. Congress when it passed the Earthquake Hazards Reduction Act of 1977, Public Law (P.L.) 95– 124. At the time of its creation, Congress' stated purpose for the National Earthquake Hazards Reduction Program was "to reduce the risks of life and property from future earthquakes in the United States through the establishment and maintenance of an effective earthquake hazards reduction program." Congress recognized that earthquake-related losses could be reduced through improved design and construction methods and practices, land use controls and redevelopment,

prediction techniques and early-warning systems, coordinated emergency preparedness plans, and public education and involvement programs.

Oil and Gas Pipelines. The Pipeline and Hazardous Material Safety Administration, under the United States Department of Transportation is responsible for regulating and ensuring the safe and secure movement of hazardous materials to industry and consumers by all modes of transportation, including pipelines. The Pipeline and Hazardous Material Safety Administration's Office of Pipeline Safety administers the United States Department of Transportation's national regulatory program to assure the safe transportation of natural gas, petroleum, and other hazardous materials by pipeline. The Office of Pipeline Safety develops regulations and other approaches to risk management to ensure safety in design, construction, testing, operation, maintenance, and spill response planning of pipeline facilities. Pipeline safety regulations are listed in the Code of Federal Regulations (CFR), Title 49 Parts 190 to 199.

4.7.2.2 State

Seismic Hazards Mapping Act of 1990. In accordance with PRC, Chapter 7.8, Division 2, the California Department of Conservation, Division of Mines and Geology (now California Geological Survey) is directed to delineate Seismic Hazard Zones through the Seismic Hazards Zonation Program. The purpose of the Act is to reduce the threat to public health and safety and to minimize the loss of life and property by identifying and mitigating seismic hazards, such as those associated with strong ground shaking, liquefaction, landslides, other ground failures, or other hazards caused by earthquakes. Cities, counties, and state agencies are directed to use seismic hazard zone maps developed by California Geological Survey in their land-use planning and permitting processes.

California Building Code (CBC). The State of California provides minimum standards for building design and construction relating to fire and life safety, structural safety, and access compliance through the CBC, CCR, Title 24. CBC provisions provide minimum standards to safeguard life or limb, health, property, and public welfare by regulating and controlling the design, construction, quality of materials, use and occupancy, location, and maintenance of all buildings and structures and certain equipment. The code incorporates by adoption the 2012 International Building Code of the International Code Council.

Among other provisions, the CBC requires that a grading permit be issued by applicable local land use authorities if more than 50 cubic yards of soil are moved during the implementation of a Project, and Chapter 16 (Structural Design) of the code describes seismic load calculation and design.

California Public Resources Code. Section 5097.5 of the PRC states:

> *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.*

Here "public lands" means those owned by, or under the jurisdiction of the State or any City, County, District, authority, or public corporation, or any agency thereof. Consequently, public agencies are required to comply with PRC Section 5097.5 for their own activities, including construction and maintenance and for permit actions (e.g., encroachment permits) undertaken by others.

Underground Injection Control Program. In California, wells that inject fluids associated with oil and natural gas production operations (Class II injection wells) also are regulated by CalGEM under its Underground Injection Control (UIC) Program. Injection operations regulated under the UIC Program include enhanced oil recovery through waterflood, steamflood, and cyclic steam wells, produced water disposal, and gas storage. CalGEM is authorized to regulate Class II injection wells under EPA oversight, pursuant to the 1982 primacy agreement between the EPA and CalGEM under the Safe Drinking Water Act (SDWA). The requirements of CalGEM's UIC Program are found in the PRC, SDWA, and state and federal regulations. The main features of the UIC Program include permitting, inspection, enforcement, mechanical integrity testing, permanent sealing oversight, data management, and public outreach. It is CalGEM's intent that the UIC Program will be administered consistently in each of CalGEM's six districts.

Existing Underground Injection Control Program PAL History and Compliance (if Applicable)

CalGEM Field Rules. Pursuant to CCR, Title 14, Division 2, Chapter 4, Section 1722 (k), the State Oil and Gas Supervisor may establish field rules for any oil and gas pool or zone in a field when sufficient geologic and engineering data are available from previous drilling operations. CalGEM has established field rules for those fields where geologic and engineering information is available to accurately describe subsurface conditions. These field rules identify downhole

conditions and well-construction information that oil and gas operators should consider when drilling and completing onshore oil and gas wells.

4.7.2.3 Local

Orange County General Plan (2012)

Chapter 1: Land Use Element

Goal: Enhancement of Environment; to guide development so that the quality of the physical environment is embraced (Orange County 2012d).

Objective: The purpose of the Enhancement of Environment Policy is to ensure that all land use activities seek to enhance the physical environment, including the air, water, sound levels, landscape, and plant and animal life.

Chapter 6: Resources Element

Goa 2l: To encourage through a resource management effort the preservation of the county's cultural and historic heritage.

Objective 2.2: Take all reasonable and proper steps to achieve the preservation of archaeological and paleontological remains, or their recovery and analysis to preserve cultural, scientific, and educational values.

- **Policy 1:** To identify paleontological resources through literature and records research and surface surveys.
- **Policy 2:** To monitor and salvage paleontological resources during the grading of a Project.
- **Policy 3:** To preserve paleontological resources by maintaining them in an undisturbed condition.

Chapter 9: Safety Element

Goal 1: Provide for a safe living and working environment consistent with available resources.

Objective 1.1: To identify natural hazards and determine the relative threat to people and property in Orange County.

Goal 2: Minimize the effects of natural safety hazards through implementation of appropriate regulations and standards which maximize protection of life and property.

Objective 2.1: To create and maintain plans and programs which mitigate the effects of natural hazards.

Objective 2.2: To support the development and utilization of technologies which minimize the effects of natural hazards.

Goal 2: Seismic Safety and Geologic Hazards

- **Policy 2:** To continue the development and implementation of earthquake mitigation, preparedness, response, and recovery through the Emergency Management Council and Orange County Operational Area.
- **Policy 3:** To promote public awareness and preparedness in the area of seismic safety in Orange County.
- **Policy 4:** To implement ordinances, regulations, and procedures which mandate the review, evaluation, and restriction of land use due to possible undue geologic threat.
- **Policy 5:** To encourage establishment of seismic design criteria and standards for County facilities (e.g., transmission lines, water and sewage systems, and highways), any structures housing necessary mobile units and support equipment, and other vital resources which would be needed following an earthquake (e.g., "back-up" power generation facilities and water storage).
- **Policy 7:** To monitor, evaluate, and analyze existing seismic and geological data as it pertains to Orange County to determine future regulations and programs.
- **Policy 8:** To establish development standards for land use, new construction, and proposed improvements to ensure proper design and location of structures.
- **Policy 9:** To provide coordination to all agencies within the county to assist in the mitigation of geologic and seismic hazards and to educate those agencies in preparedness, response and recovery from a major earthquake.
- **Policy 10:** To provide technical and policy information regarding geological and seismic hazards to developers, interested parties, and the general public through the Orange County Buyer Notification Program.
- **Policy 11:** To ensure coordination and consistency between the Orange County General Plan and the County Emergency Plan and Orange County Operational Area Plan.

4.7.3 Impact Analysis

a) Directly or indirectly cause potential substantial adverse effects, including the risk of loss, injury, or death involving:

i. Rupture of a known earthquake fault, as delineated on the most recent Alquist-Priolo Earthquake Fault Zoning Map issued by the State Geologist for the area or based on other substantial evidence of a known fault? Refer to Division of Mines and Geology Special Publication 42.

ii. Strong seismic ground shaking?

iii. Seismic-related ground failure, including liquefaction?

iv. Landslides?

Less Than Significant. The Project site is located approximately 0.30 miles south of the Yorba Linda Fault Zone but is within a landslide hazard zone and a liquefaction hazard zone (DOC 2022). Accordingly, the Project site is subject to seismic hazards including rupture of a known earthquake fault, strong seismic ground shaking, liquefaction, and landslides. However, the Project would not construct habitable development. Once complete, the Project would minimize the potential for soil and groundwater pollution due to inadvertent leaks from the orphan wells consistent with the California Phase-1 State Permanent Sealing of Orphan Wells expenditure plan. Following permanent sealing activities, anticipated to take five days, the Project would not require personnel to travel to the well. Accordingly, the Project would not result in the risk of loss, injury, or death involving fault rupture, seismic ground shaking, liquefaction, or landslides. Therefore, this impact would be less than significant.

b) Result in substantial soil erosion or the loss of topsoil?

Less than Significant. Project construction would include a total of approximately 0.5 acres of ground disturbance during construction activities over the course of five days. As discussed in Section 2.1.1, ground disturbance work (cement truck, bulk truck, and vacuum truck) to prepare the well for permanent sealing would take approximately five days to accomplish, which would reduce the potential for erosion of the disturbed soil. Topsoil removed during grading would be placed on top of areas disturbed by grading activities to stimulate vegetation growth in the areas surrounding the well pad which would help to stabilize the soil from erosion. Therefore, this impact would be less than significant.

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 risk to life or property?

Less than Significant. For both c) and d), the Project site is composed of myford sandy loam and Nacimiento clay loam complex soil types which are not known to be unstable or expansive (United States Department of Agriculture 2017). Since permanent sealing involves only minor surface grading and excavation activities, resulting soil work would not cause soil within the well pad to become unstable. As such, the Project would not expose workers to potential liquefaction, lateral spreading, expansive soils, or landslide hazards or exacerbate existing cond. Therefore, there would be a less than significant impact.

e) Have soils incapable of adequately supporting the use of septic tanks or alternative waste water disposal systems where sewers are not available for the disposal of waste water?

No Impact. The Project does not involve the use of septic tanks or alternative wastewater disposal systems; therefore, there would be no impact.

f) Directly or indirectly destroy a unique paleontological resource or site or unique geologic feature?

Less than Significant. Paleontological resources, or fossils, are the evidence of once-living organisms preserved in the rock record. They include both the fossilized remains of ancient plants and animals and the traces thereof (e.g., trackways, imprints, burrows). Paleontological resources are not found in "soil" but are contained within the geologic deposits or bedrock that underlies the soil layer. Typically, fossils are greater than 5,000 years old (i.e., older than middle Holocene in age) and are typically preserved in sedimentary rocks. Although rare, fossils can also be preserved in volcanic rocks and low-grade metamorphic rocks under certain conditions (Society of Vertebrate Paleontology 2010). Fossils occur in a non-continuous and often unpredictable distribution within some sedimentary units, and the potential for fossils to occur within sedimentary units depends on several factors. It is possible to evaluate the potential for geologic units to contain scientifically important paleontological resources, and therefore evaluate the potential for impacts to those resources and provide mitigation for

paleontological resources if they are discovered during construction of a development Project.

The Project site is underlain by the Fernando Formation (Morton and Miller 2006), which has high paleontological sensitivity. Removal of below-ground infrastructure would only impact previously disturbed sediments which are not paleontologically sensitive. Grading around the well sites may reach up to six inches below the surface. Given the previous development of the well pad, it is likely that the entire Project site is disturbed down to at least six inches. Therefore, impacts to paleontological resources would be less than significant.

4.7.4 Mitigation Measures

The Project would not result in significant geology and soils impacts; therefore, no mitigation is required.

4.8 GREENHOUSE GAS EMISSIONS

GREENHOUSE GAS EMISSIONS - Would the Project:	**Potentially Significant Impact**	**Less Than Significant with Mitigation**	**Less Than Significant Impact**	**No Impact**
a) Generate greenhouse gas emissions, either directly or indirectly, that may have a significant impact on the environment?	☐	☐	☒	☐
b) Conflict with an applicable plan, policy or regulation adopted for the purpose of reducing the emissions of greenhouse gases?	☐	☐	☒	☐

4.8.1 Environmental Setting

Climate change is the observed increase in the average temperature of the Earth's atmosphere and oceans along with other substantial changes in climate (such as wind patterns, precipitation, and storms) over an extended period of time. Climate change is the result of numerous, cumulative sources of greenhouse gas (GHG) emissions contributing to the "greenhouse effect," a natural occurrence which takes place in Earth's atmosphere and helps regulate the temperature of the planet. The majority of radiation from the sun hits Earth's surface and warms it. The surface, in turn, radiates heat back towards the atmosphere in the form of infrared radiation. Gases and clouds in the atmosphere trap and prevent some of this heat from escaping into space and re-radiate it in all directions.

GHG emissions occur both naturally and from human activities, such as fossil fuel burning, decomposition of landfill wastes, raising livestock, deforestation, and some agricultural practices. GHGs produced by human activities include carbon dioxide (CO_2), methane, nitrous oxide, hydrofluorocarbons, perfluorocarbons, and sulfur hexafluoride. Different types of GHGs have varying global warming potentials (GWP). The GWP of a GHG is the potential of a gas or aerosol to trap heat in the atmosphere over a specified timescale (generally, 100 years). Because GHGs absorb different amounts of heat, a common reference gas (CO_2) is used to relate the amount of heat absorbed to the amount of the gas emitted, referred to as "carbon dioxide equivalent" (CO_2e), which is the amount of a specific GHG emitted multiplied by its GWP. CO_2 has a 100-year GWP of one. By contrast, methane has a GWP of 30, meaning its global warming effect

is 30 times greater than CO_2 on a molecule per molecule basis (Intergovernmental Panel on Climate Change [IPCC] 2021).

The United Nations IPCC expressed that the rise and continued growth of atmospheric CO_2 concentrations is unequivocally due to human activities in the IPCC's Sixth Assessment Report (2021). Human influence has warmed the atmosphere, ocean, and land, which has led the climate to warm at an unprecedented rate in the last 2,000 years. It is estimated that between the period of 1850 through 2019, that a total of 2,390 gigatons of anthropogenic CO_2 was emitted. It is likely that anthropogenic activities have increased the global surface temperature by approximately 1.07 degrees Celsius between the years 2010 through 2019 (IPCC 2021). Emissions resulting from human activities are thereby contributing to an average increase in Earth's temperature. Potential climate change impacts in California may include loss of snowpack, sea level rise, more extreme heat days per year, more high O_3 days, more large forest fires, and more drought years (California Natural Resource Agency 2019).

4.8.1.1 Significance Thresholds

The majority of individual projects do not generate sufficient GHG emissions to directly influence climate change. However, physical changes caused by a Project can contribute incrementally to cumulative effects that are significant, even if individual changes resulting from a Project are limited. The issue of climate change typically involves an analysis of whether a Project's contribution towards an impact would be cumulatively considerable. "Cumulatively considerable" means that the incremental effects of an individual Project are significant when viewed in connection with the effects of past projects, other current projects, and probable future projects (*CEQA Guidelines* Section 15064[h][1]).

According to the *CEQA Guidelines*, projects can tier from a qualified GHG reduction plan, which allows for Project-level evaluation of GHG emissions through the comparison of the Project's consistency with the GHG reduction policies included in a qualified GHG reduction plan. This approach is considered by the Association of Environmental Professionals in its white paper, *Beyond Newhall and 2020*, to be the most defensible approach presently available under CEQA to determine the significance of a Project's GHG emissions.

The County of Orange has not adopted numerical significance thresholds for assessing impacts related to GHG emissions, or a Climate Action Plan. Furthermore, the goals, objectives, and policies of the Orange County General Plan related to energy conservation and, by extension, GHG emissions reduction,

primarily address renewable energy, transportation, and energy conservation and therefore are not applicable to the Project.

The SCAQMD has adopted a numerical significance threshold for assessing GHG emissions that is applicable to industrial project, of 10,000 MTCO2e (with construction amortized over 30 years). In addition, the significance of the Project's GHG emissions is evaluated consistent with CEQA Guidelines Section 15064.4(b) by considering whether the Project complies with applicable plans, policies, regulations, and requirements adopted to implement a statewide, regional, or local plan for the reduction or mitigation of GHG emissions.

Therefore, the significance of the Project's potential impacts regarding GHG emissions and climate change is evaluated based on the 10,000 MTCO2e threshold and consistency with plans and polices adopted for the purposes of reducing GHG emissions and mitigating the effects of climate change. The most directly applicable adopted regulatory plan to reduce GHG emissions is CARB's 2022 Scoping Plan. GHG emissions from construction are provided for informational purposes.

4.8.2 Regulatory Setting

Federal and state regulations, laws, and policies pertaining to GHG emissions relevant to the Project are included below. Local regulations related to GHG emissions are not relevant to the Project.

4.8.2.1 Federal

United States Environmental Protection Agency. The United States Supreme Court determined in Massachusetts et al. v. Environmental Protection Agency et al. ([2007] 549 U.S. 05-1120) that the United States EPA has the authority to regulate motor vehicle GHG emissions under the federal Clean Air Act. The United States EPA issued a Final Rule for mandatory reporting of GHG emissions in October 2009. This Final Rule applies to fossil fuel suppliers, industrial gas suppliers, direct GHG emitters, and manufacturers of heavy-duty, off-road vehicles and vehicle engines and requires annual reporting of emissions.

4.8.2.2 State

Assembly Bill 1279 (The California Climate Crisis Act). Assembly Bill (AB) 1279, "The California Climate Crisis Act," was passed on September 16, 2022, and declares the policy of the State is to achieve net zero GHG emissions as soon as possible, but no later than 2045, and to achieve and maintain net negative GHG emissions thereafter. In addition, the bill states the State's policy is to reduce GHG emissions by 85 percent below 1990 levels no later than 2045, which means that

California would emit no more than 64.65 million metric tons of CO_2e per year by 2045 and would continue to reduce emissions thereafter. In response to AB 1279, CARB adopted the 2022 Scoping Plan, which lays out a path to achieve the AB 1279 targets. The actions and outcomes in the 2022 Scoping Plan would achieve significant reductions in fossil fuel combustion by deploying clean technologies and fuels, further reductions in short-lived climate pollutants, support for sustainable development, increased action on natural and working lands to reduce emissions and sequester carbon, and the capture and storage of carbon.

4.8.3 Impact Analysis

a) Generate greenhouse gas emissions, either directly or indirectly, that may have a significant impact on the environment?

Less Than Significant. As described in Section 4.8.1.1, the SCAQMD has adopted numerical significance thresholds for assessing a Project's potential GHG emissions impacts. The significance of the Project's GHG emissions is also evaluated consistent with CEQA Guidelines Section 15064.4(b) by considering whether the Project complies with applicable plans, policies, regulations, and requirements adopted to implement a statewide, regional, or local plan for the reduction or mitigation of GHG emissions. Since the Project would not include new operational activity, this analysis does not consider GHG emissions beyond permanent sealing. permanent sealing would temporarily generate GHG emissions primarily from the use of construction equipment and transportation to and from the Project site. As shown in Table 4.8-1, permanent sealing activities would generate 25 metric tons of CO_2e.[5] Amortized over a 30-year period pursuant to SCAQMD guidance, construction associated with the Project would generate approximately 0.8 metric ton of CO_2e per year.

[5] CO_2e is a measure used to compare the emission from various greenhouse gases based on their global warming potential. It converts amounts of other gases to the equivalent amount of CO_2 with the same global warming potential.

Table 4.8-1. GHG Emissions Generated During Permanent Sealing

Timeframe	Emissions (MT of CO_2e)
2026	25
Total	**25**
Amortized over 30 Years	**0.8**
Significance Threshold	**10,000**
Significance	**No**

Notes: MT = metric tons; CO_2e = carbon dioxide equivalent.

Source: Appendix B.

b) Conflict with an applicable plan, policy or regulation adopted for the purpose of reducing the emissions of greenhouse gases?

Less Than Significant. Plans and policies have been adopted to reduce GHG emissions in the Southern California region, including CARB's 2022 Scoping Plan. The following 2022 Scoping Plan goal applies to the Project (CARB 2022a):

> **2022 Scoping Plan Goal:** Support climate adaptation and biodiversity that includes protection of the state's water supply, water quality, and infrastructure to achieve carbon neutrality as soon as possible.

Beyond the goal described above, the 2022 Scoping Plan's goals and policies are concentrated on building decarbonization, transportation electrification, and vehicle miles traveled (VMT) reduction, and therefore are not applicable to the Project (CARB 2022b). The Project would involve permanent sealing of an existing orphan well, thereby reducing the potential for residual hazardous materials to contaminate groundwater. Therefore, the Project would improve the protection of the state's water supply and water quality, consistent with the above 2022 Scoping Plan goal. Although the Project would temporarily generate GHG emissions during permanent sealing, the Project would ultimately be consistent with the applicable goal of the 2022 Scoping Plan. The Project would not conflict with any applicable plans, policies, or regulations to reduce GHG emissions. Therefore, impacts related to GHG emissions would be less than significant.

4.8.4 Mitigation Measures

The Project would not result in significant greenhouse gas emission impacts; therefore, no mitigation is required.

4.9 HAZARDS AND HAZARDOUS MATERIALS

HAZARDS AND HAZARDOUS MATERIALS – Would the Project:	**Potentially Significant Impact**	**Less Than Significant with Mitigation**	**Less Than Significant Impact**	**No Impact**
a) Create a significant hazard to the public or the environment through the routine transport, use, or disposal of hazardous materials?	☐	☐	☒	☐
b) Create a significant hazard to the public or the environment through reasonably foreseeable upset and accident conditions involving the release of hazardous materials into the environment?	☐	☐	☒	☐
c) Emit hazardous emissions or handle hazardous or acutely hazardous materials, substances, or waste within one-quarter mile of an existing or proposed school?	☐	☐	☒	☐
d) Be located on a site which is included on a list of hazardous materials sites compiled pursuant to Government Code section 65962.5 and, as a result, would it create a significant hazard to the public or the environment?	☐	☐	☐	☒
e) For a project located within an airport land use plan or, where such a plan has not been adopted, within two miles of a public airport or public use airport, would the project result in a safety hazard or excessive noise for people residing or working in the project area?	☐	☐	☐	☒

HAZARDS AND HAZARDOUS MATERIALS – Would the Project:	**Potentially Significant Impact**	**Less Than Significant with Mitigation**	**Less Than Significant Impact**	**No Impact**
f) Impair implementation of or physically interfere with an adopted emergency response plan or emergency evacuation plan?	☐	☐	☒	☐
g) Expose people or structures, either directly or indirectly, to a significant risk of loss, injury or death involving wildland fires?	☐	☐	☒	☐

4.9.1 Environmental Setting

The Project site is located within an active oil field in Orange County surrounded by unpaved roads, existing oil infrastructure, and scattered vegetation. Access to the Project site is provided via unpaved roads.

The Fullerton Municipal Airport is located approximately eight miles to the south of the Project site and the Corona Municipal Airport is located approximately 19 miles to the east.

The nearest residential receptor(s) to the Project site are single-family residences located approximately 0.37 miles to the south,1 adjacent to Brea Boulevard. The nearest school is Mariposa Elementary School, located at 1111 Mariposa Drive within the City of Brea, approximately 0.70 miles to the south.

The State Water Resources Control Board (SWRCB) GeoTracker database does not include any hazardous cleanup sites listed at the Project site. The nearest documented listing is a Cal Resources Oil Leases site, located approximately 2,000 feet to the south (SLT8R0573941) (SWRCB 2024a). The Cal Resources Oil Leases site involved potential soil contamination from petroleum/fuels/oils and has a current status of Completed - Case Closed as of July 2010 (SWRCB 2024b).

4.9.2 Regulatory Setting

Federal, state, and local regulations, laws, and policies pertaining to hazards and hazardous materials relevant to the Project are included below.

4.9.2.1 Federal

National Oil and Hazardous Substances Pollution Contingency Plan (40 CFR Section 300). The National Oil and Hazardous Substances Pollution Contingency

Plan (NCP) was first developed in 1968. The NCP is administered by the EPA. Its purpose is to provide the organizational structure and procedures for preparing for and responding to discharges of oil and releases of hazardous substances, pollutants, and contaminants.

It applies to oil discharges into or on navigable waters of the United States as well as hazardous substance releases into the environment that may present an imminent or substantial danger to public health or welfare of the United States. It specifies responsibilities among the federal, state, and local governments and requires the establishment of federal, regional, and area contingency plans. It summarizes state and local emergency planning requirements under the Superfund Amendments and Reauthorization Act. It also provides the procedures for undertaking removal actions pursuant to Section 311 of the CWA and response actions pursuant to Comprehensive Environmental Response, Compensation, and Liability Act (CERCLA), which is discussed below.

Resource Conservation and Recovery Act (40 CFR Section 240-299). The federal Toxic Substances Control Act (1976) and the Resource Conservation and Recovery Act (RCRA) of 1976 established a program administered by the EPA for the regulation of the generation, transportation, treatment, storage, and disposal of hazardous waste. RCRA was amended in 1984 by the Federal Hazardous and Solid Waste Amendments, which affirmed and extended the "cradle to grave" system of regulating hazardous wastes. Hazardous waste is regulated under the RCRA subtitle C. The RCRA established the system for controlling hazardous waste from its point of origin to its final disposal, specifically the handling, storage, and disposal requirements. An RCRA hazardous waste is a waste that appears on one of the four hazardous wastes lists (F-list, K-list, P-list, or U-list), or exhibits at least one of four characteristics— ignitability, corrosivity, reactivity, or toxicity. The Hazardous Waste Manifest System includes a set of forms, reports, and procedures designed to seamlessly track hazardous waste from the time it leaves the generator facility where it was produced, until it reaches the off-site waste management facility that will store, treat, or dispose of the hazardous waste. Operating records, for example, must be kept on site for the duration of the facility's operation. Recordkeeping and reporting requirements are found at 40 CFR Part 264 Subpart E and 40 CFR Part 265 Subpart E.

Comprehensive Environmental Response, Compensation, and Liability Act/Superfund Amendments and Reauthorization Act. CERCLA, commonly known as Superfund, was enacted by Congress on December 11, 1980. This law (USC Title 42, Chapter 103) provides broad federal authority to respond directly to releases

or threatened releases of hazardous substances that may endanger public health or the environment. CERCLA establishes requirements concerning closed and abandoned hazardous waste sites; provides for liability of persons responsible for releases of hazardous waste at these sites and establishes a trust fund to provide for cleanup when no responsible party can be identified. CERCLA also enables the revision of the NCP. The NCP (40 CFR, Part 300) provides the guidelines and procedures needed to respond to releases and threatened releases of hazardous substances, pollutants, and/or contaminants. The NCP also established the National Priorities List. CERCLA was amended by the Superfund Amendments and Reauthorization Act on October 17, 1986.

Emergency Planning and Community Right-to-Know Act. Under the Emergency Planning and Community Right-to-Know Act, or Title III of the Superfund Amendments and Reauthorization Act, the EPA requires local agencies to regulate the storage and handling of hazardous materials and requires development of a plan to mitigate the release of hazardous materials. Businesses that handle any of the specified hazardous materials must submit to government agencies (i.e., fire departments or public health departments) an inventory of the hazardous materials, emergency response plan, and employee training program. The business plans must provide a description of the types of hazardous materials/waste on site and the location of these materials. The information in the business plan can then be used in the event of an emergency to determine the appropriate response action, the need for public notification, and the need for evacuation.

In 1990, Congress passed the Pollution Prevention Act which requires facilities to report additional data on waste management and source reduction activities to the EPA under the Toxics Release Inventory Program. The goal of the Toxics Release Inventory is to provide communities with information about toxic chemical releases and waste management activities and to support informed decision making at all levels by industry, government, non-governmental organizations, and the public.

The Safe Drinking Water Act of 1974 (42 USC Section 300f et seq.). The SDWA regulates the amount of toxic substances in drinking water sources. The SDWA requires the EPA to develop minimum federal requirements for UIC programs and other safeguards to protect public health by preventing injection wells from contaminating underground sources of drinking water (USDW). The EPA developed the UIC Program requirements, but states, territories, and Tribes can obtain primary enforcement responsibility, or primacy. State regulations must be

as stringent as federal requirements but may be more stringent. As discussed in detail in Section 4.10, *Hydrology and Water Quality*, the EPA has delegated responsibility to CalGEM for implementing UIC Program requirements for Class II wells in California.

The subsurface aquifer located within the Project area is located within an exempted portion of the Tulare formation aquifer, which is not a protected groundwater source recognized by the EPA under the SDWA because it does not serve as a source of drinking water. This aquifer exemption allows this underground water source to be used by energy companies for oil extraction purposes in compliance with EPA's UIC requirements under the SDWA.

Clean Air Act Amendments of 1990: Section 112(r) (40 CFR 68). The EPA requires facilities that handle listed regulated substances to develop Risk Management Plans (RMP) to prevent accidental releases of these substances. RMP materials are submitted to both local agencies (generally the fire department) and the EPA. Stationary sources with more than a threshold quantity of a regulated substance shall be evaluated to determine the potential for, and impacts of, accidental releases of that substance. Under certain conditions, the owner or operator of a stationary source may be required to develop and submit an RMP. RMPs consist of three main elements: a hazard assessment that includes an off-site consequence analysis and a five-year accident history; a prevention program; and an emergency response program.

Hazardous Liquid Pipeline Safety Act. The Hazardous Liquid Pipeline Safety Act of 1979 and amendments authorize the United States Department of Transportation to regulate pipeline transportation of hazardous liquids (including crude oil, petroleum products, anhydrous ammonia, and CO). The Act provides advanced safety and environmental protection in pipeline transportation, increases the transparency of pipeline safety evaluation, and provides funding for future pipeline safety studies.

Exploration and Production Exemption from RCRA. While RCRA was enacted to regulate hazardous waste from industrial, commercial, mining, agricultural, and community activities, certain hazardous wastes which are exempted from the Subtitle C regulations are regulated under RCRA Subtitle D. Congress exempted "drilling fluids, produced waters, and other wastes associated with the exploration, development, or production of crude oil or natural gas or geothermal energy" from regulation under RCRA Subtitle C as hazardous wastes.

The exempted oil and gas wastes are unique because they are generated in large quantities but are relatively low in toxicity. Produced waters make up about 98% of all oil and gas waste. The exemption only applies to wastes generated from the exploration, development, and production of oil and gas associated with primary field operations. Primary field operations include primary, secondary, and tertiary production of oil or gas.

The Oil Pollution Act of 1990 (33 USC 2701 et seq.). Under the authority of Section 311 of the CWA, the Oil Pollution Act of 1990 prescribes a prevention, response, liability, and compensation program for oil pollution from vessels, offshore facilities, pipelines, and onshore facilities. The Oil Pollution Act requires contingency plans be developed and includes reporting requirements to ensure the earliest possible notice of discharges of oil and hazardous substances and imminent threats of such discharges to the appropriate state and federal agencies. The Bureau of Safety and Environmental Enforcement (formerly part of Mineral Management Service), U.S. Coast Guard, and EPA are involved in the implementation of the Oil Pollution Act. In June of 1996, the EPA issued a Spill Prevention and Reporting Compliance Guidance Plan Document which integrated all the various related rules and regulations into one compliance program.

Hazard Communication, 29 CFR 1910.1200. The purpose of this section is to ensure that the hazards of all chemicals produced or imported are classified and that information concerning the classified hazards is transmitted to employers and employees. The requirements of this section are intended to be consistent with the provisions of the United Nations Globally Harmonized System of Classification and Labeling of Chemicals, Revision 3. The transmittal of information is to be accomplished by means of comprehensive hazard communication programs, which are to include container labeling and other forms of warning, safety data sheets and employee training.

4.9.2.2 State

Emergency Services Act of 2009. Under the Emergency Services Act, the state developed an emergency response plan to coordinate emergency services provided by federal, state, and local agencies. Rapid response to incidents involving hazardous materials or hazardous waste is an important segment of the plan administered by the California Governor's Office of Emergency Services, formerly the California Emergency Management Agency. The California Governor's Office of Emergency Services is responsible for the coordination of overall state agency response to major disasters in support of local government.

The office is responsible for assuring the state's readiness to respond to and recover from all hazards – natural, manmade, war-caused emergencies and disasters – and for assisting local governments in their emergency preparedness, response, recovery, and hazard mitigation efforts.

Hazardous Waste Control Act of 1972 (California Health and Safety Code Division 20, Chapter 6.5). The Hazardous Waste Control Act established the state hazardous waste management program, which is similar to, but more stringent than RCRA program requirements. The Hazardous Waste Control Law regulates the management of hazardous waste under Health and Safety Code, Division 20 Chapter 6.5. This law defines hazardous wastes and the procedures for the handling, transportation, and disposal of hazardous waste. The implementing regulations prescribe management practices for hazardous wastes; establish permit requirements for hazardous waste treatment, storage, disposal, and transportation; and identify hazardous wastes that cannot be disposed of in landfills. Hazardous waste is tracked from the point of generation to the point of disposal or treatment using hazardous waste manifests. The manifests list a description of the waste, its intended destination, and regulatory information about the waste. The hazardous waste control program is administered by the California Department of Toxic Substances Control and by local Certified Unified Program Agencies.

The Porter-Cologne Water Quality Control Act, California Water Code Section 13300-13999 and Title 23 of the California Administrative Code. This Act is analogous to the federal CWA and regulates discharges that may affect the quality of the state's waters. Unlike the federal CWA, which defines "waters of the United States" to exclude groundwater, "waters of the State" as defined under the Porter-Cologne Act include groundwater. The SWRCB and the nine RWQCBs are responsible for planning, permitting, and enforcement. The SWRCB formulates policies for water-quality control and implements the required permit system.

The Porter-Cologne Act gives the Santa Ana Regional Water Quality Control Board (SARWQCB) the authority to regulate discharges of waste to land in Orange County. The SARWQCB has established waste classifications, site classifications, and WDRs. The SARWQCB implements the regulations through issuance of WDRs and general orders for the waste management unit. As discussed in Section 4.10, *Hydrology and Water Quality*, drilling muds and boring wastes associated with oil and gas development are currently regulated under SWRCB General Order 2003-0003-DWQ which addresses low-threat discharges to land.

AB 1960 Public Resources: Oil Production Facilities and Oil Spills. Under this bill, CalGEM is required to regulate the minimum facility maintenance standards for production facilities. The regulations that accompany this bill (14 CCR, Sections 1722–1777.3) require operators to develop and implement spill contingency plans where condensate storage volume exceeds 50 barrels or at facilities that produce at least one barrel per day. The implementing regulations provide specific requirements for the spill contingency plan that include emergency contacts, available safety equipment, checklist for spill response, maps of the facility, a list of chemicals at the facility, containment features, corrosion prevention techniques, and the sensor and alarm systems.

California Pipeline Safety Act of 1981 (California Government Code Section 51010). This California Pipeline Safety Act gives regulatory jurisdiction to the State Fire Marshal for the safety of all intrastate hazardous liquid pipelines and oil interstate pipelines used for the transportation of hazardous or highly volatile liquid substances. The law establishes the federal Hazardous Liquid Pipeline Safety Act (49 USC Section 2001 et seq.) and federal pipeline safety regulations as the governing rules for intrastate pipelines. This statute also authorizes the State Fire Marshal by agreement with the United States Secretary of Transportation, to implement the federal Hazardous Liquid Pipeline Safety Act and federal pipeline safety regulations as to those portions of interstate pipelines located within the state. It also establishes civil penalties for violations of the act or its regulations.

4.9.2.3 Local

Orange County General Plan (2022)

Chapter 1: Land Use Element

12. Hazardous Waste Management Facilities

- **Policy:** To protect the health and welfare of the public and quality of the environment, while preserving the economic vitality of Orange County through a comprehensive countywide program and to ensure the safe and efficient management of hazardous wastes.

Chapter 6: Safety Element:

Goal 1: Provide a safe living environment, ensuring adequate fire protection facilities and resources to prevent and minimize the loss of life and property fire.

- **Policy 6:** To provide technical and policy information regarding structural and wildland fire hazards to developers, interested parties and the general public through all available media.

County of Orange and Orange County Fire Authority Local Hazard Mitigation Plan. The 2020 County of Orange and Orange County Fire Authority (OCFA) Local Hazard Mitigation Plan (LHMP) was developed collaboratively with emergency management staff, County and external partners, and Orange County residents. The document is an update to the 2015 LHMP and is a critical step in continuing Orange County's commitment to hazard mitigation as one component of its comprehensive emergency management program. The mission of the LHMP is to promote sound public policy designed to protect residents, critical facilities, infrastructure, key resources, private property, and the environment from natural hazards in unincorporated areas, fire hazards in the OCFA service area, and County and OCFA-owned facilities. This contribution to Orange County's hazard mitigation efforts will increase public awareness, document resources for risk reduction and loss prevention, and identify activities to guide the County toward building a safer, more sustainable, and more resilient community.

Environmental Health Division Orange County Hazardous Waste Inspection Program. The purpose of this program is to ensure that all hazardous wastes generated by Orange County businesses are properly handled, recycled, treated, stored, and disposed of.

4.9.3 Impact Analysis

a) Create a significant hazard to the public or the environment through the routine transport, use, or disposal of hazardous materials?

Less than Significant. Construction activities for the Project would involve routine storage, transport, use, and disposal of small quantities of hazardous materials, primarily related to fuel and maintenance of construction equipment. These small quantities materials may include gasoline, diesel, hydraulic fluids, concrete, and solvents, all of which are regulated by federal, state, and local laws and regulations. Improper transport, use, or disposal of these materials could be considered a potentially significant impact to the public or the environment. However, construction would be short term, and the handling of these materials would be subject to applicable federal and state health and safety requirements. Construction contractors would be required to adhere to the Project specific contingency and spill plans during construction activities; describe spill prevention

measures, equipment inspections, and equipment and fuel storage; protocols for responding immediately to spills; and describe BMPs for controlling site runoff. As such, Project construction would not create a significant hazard to the public through the routine transport, use, or disposal of hazardous materials during construction. Therefore, Project impacts would be less than significant.

b) Create a significant hazard to the public or the environment through reasonably foreseeable upset and accident conditions involving the release of hazardous materials into the environment?

Less than Significant. permanent sealing activities would involve limited use of hazardous materials such as fuels, oils, and other chemicals. Potentially hazardous materials removed from the Project site include fuels and oils. Once complete the Project would minimize the potential for soil and groundwater pollution due to inadvertent leaks from the orphan wells consistent with the California Phase-1 State Permanent Sealing of Orphan Wells expenditure plan. The transportation, use, and storage of small quantities of hazardous materials would be carried out in accordance with federal and state regulations and requirements. These requirements would ensure proper handling of hazardous materials and limit the chance of hazardous materials being released into the environment. Therefore, impacts would be less than significant.

c) Emit hazardous emissions or handle hazardous or acutely hazardous materials, substances, or waste within one-quarter mile of an existing or proposed school?

Less than Significant. There are no existing or proposed schools within 0.25 miles of the Project site. The Project would not result in hazardous emissions or the handling of acutely hazardous materials, substances, or wastes. Construction activities associated with the Project would involve the limited use of small quantities of hazardous materials such as fuels, oils, drilling mud materials, and other chemicals. Minor release of toxic air contaminants would be emitted from use of diesel fuel. This impact would be less than significant.

d) Be located on a site which is included on a list of hazardous materials sites compiled pursuant to Government Code section 65962.5 and, as a result, would it create a significant hazard to the public or the environment?

No Impact. The Project site is located within an active oil fields. According to the GeoTracker database, the well locations are not included on the Cortese (Government Code Section 65962.5) list of hazardous materials storage sites,

hazardous waste, or hazardous waste cleanup sites. The nearest documented listing is a Cal Resources Oil Leases site, located approximately 2,000 feet to the south (SLT8R0573941). The Cal Resources Oil Leases site involved potential soil contamination from petroleum/fuels/oils and has a current status of Completed - Case Closed as of July 2010 (SWRCB 2024a; 2024b). Based on the distance and closed case summary, this site would not impact the Project. No hazardous materials sites have been identified within the Project site. Furthermore, the Project does not include new well drilling or other activities that could expose potential contamination, as the Project would only include permanent sealing. Furthermore, once complete the Project would minimize the potential for soil and groundwater pollution due to inadvertent leaks from the orphan wells consistent with the California Phase-1 State Permanent Sealing of Orphan Wells expenditure plan. Therefore, there would be no impact.

e) For a project located within an airport land use plan or, where such a plan has not been adopted, within two miles of a public airport or public use airport, would the project result in a safety hazard or excessive noise for people residing or working in the project area?

No Impact. The Fullerton Municipal Airport is located approximately eight miles to the south of the Project site and the Corona Municipal Airport is located approximately 19 miles to the east The Project site is located outside the noise contours included within the Airport Land Use Compatibility Plan (Orange County Airport Land Use Commission 2019). Therefore, no impact would occur.

f) Impair implementation of or physically interfere with an adopted emergency response plan or emergency evacuation plan?

Less than Significant. The Project site is located north of Brea Boulevard; a roadway that provides west south service to Canyon Country Road and West Central Avenue. No lane or road closures are proposed as a part of the Project. Further, the Project would not conflict with any of the measures within the County of Orange and OCFA LHMP (County of Orange 2021). Therefore, there would be a less than significant impact.

g) Expose people or structures, either directly or indirectly, to a significant risk of loss, injury or death involving wildland fires?

Less than Significant. According to the California Department of Forestry and Fire Protection's (CAL FIRE) Fire Hazard Severity Zones (FHSZ) Map, the Project

site is located within Very High FHSZs of State Responsibility Areas (CAL FIRE 2023). Immediately adjacent areas are within a State Responsibility Area with a small portion being within a Local Responsibility Area.

Construction activities would involve the use of fuels for construction equipment and water would be available during hot work to reduce potential for fires and other hot-work related issues. All cutting and welding would comply with California Fire Code 3305.6 and National Fire Protection Association 51B and a Fire Watch procedure would conform to California Fire Code 3305.5. The Project proponent would be responsible for maintaining fire extinguishers in accordance with California Fire Code 3315 and 906 as well as providing monitoring and training to prevent vehicle traffic off roadways to ensure activities do not impact dry brush and lead to fire. permanent sealing activities would occur in compliance with applicable PRC and local regulations to minimize fire risk.

The Project does not include the construction of habitable structures and would not expose people or structures to a significant risk of loss, injury, or death involving wildland fires. This impact would be less than significant.

4.9.4 Mitigation Measures

The Project would not result in significant impacts from hazards or hazardous materials; therefore, no mitigation is required.

4.10 HYDROLOGY AND WATER QUALITY

HYDROLOGY AND WATER QUALITY – Would the Project:	**Potentially Significant Impact**	**Less Than Significant with Mitigation**	**Less Than Significant Impact**	**No Impact**
a) Violate any water quality standards or waste discharge requirements or otherwise substantially degrade surface or groundwater 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:				
i) Result in a substantial erosion or siltation of on- or off-site;	☐	☐	☒	☐
ii) Substantially increase the rate or amount of surface runoff in a manner which would result in flooding on- or off-site;	☐	☐	☒	☐
iii) Create or contribute runoff water which would exceed the capacity of existing or planned stormwater drainage systems or provide substantial additional sources or polluted runoff; or	☐	☐	☒	☐
iv) Impede or redirect flood flows?	☐	☐	☒	☐

HYDROLOGY AND WATER QUALITY – Would the Project:	**Potentially Significant Impact**	**Less Than Significant with Mitigation**	**Less Than Significant Impact**	**No Impact**
d) In flood hazard, tsunami, or seiche zones, risk release of pollutants due to project inundation?	☐	☐	☐	☒
e) Conflict with or obstruct implementation of a water quality control plan or sustainable groundwater management plan?	☐	☐	☒	☐

4.10.1 Environmental Setting

The Project site is within the Brea-Olinda Oil Field, north of Brea, California. Surrounding land includes parcels zoned for General Agriculture (A1(O)).

According to the Federal Emergency Management Agency Flood Map, the Project site is located in an area of minimal flood hazard (Zone X) (Federal Emergency Management Agency 2024). The Project site is located approximately 500 feet west of Brea Creek and approximately 0.35 miles northwest of the Humble Reservoir. No work is planned within any waterways.

Water would be utilized during permanent sealing to water unpaved roads to suppress dust and also during hot work to reduce potential for fires and other hot-work related issues.

4.10.1.1 Hydrogeology and Hydrology

The Brea-Olinda Oil Field is located within the Coastal Plain of Orange County Groundwater Basin, which underlies a coastal alluvial plain in the northwestern portion of Orange County. The basin is bounded by consolidated rocks exposed on the north in the Puente and Chino Hills, on the east in the Santa Ana Mountains and on the south in the San Joaquin Hills. The basin is bounded by the Pacific Ocean on the southwest and by a low topographic divide approximated by the Orange County - Los Angeles County line on the northwest. The basin underlies the lower Santa Ana River watershed (California Department of Water Resources [CDWR] 2004).

The Orange County Basin is dominated by a deep structural depression containing a thick accumulation of fresh water-bearing interbedded marine and

continental sand, silt, and clay deposits. The proportion of fine material generally increases toward the coast, dividing the basin into forebay and pressure areas. Consequently, most surface waters recharge through the coarser, more interconnected and permeable forebay deposits. Strata in this basin are faulted and folded and may show rapid changes in grain size. The Newport-Inglewood Fault Zone parallels the coastline and generally forms a barrier to groundwater flow. Erosional channels filled with permeable alluvium break this barrier at the Alamitos and Talbert Gaps, providing an opportunity for saline water to flow inland (CDWR 2004).

The sediments containing easily recoverable fresh water extend to about 2,000 feet in depth. Although water-bearing aquifers exist below that level, water quality and pumping lift make these materials economically unviable at present. Upper, middle, and lower aquifer systems are recognized in the basin. Well yields range from 500 to 4,500 gallons per minute but are generally 2,000 to 3,000 gallons per minute (CDWR 2004).

The total capacity of the Orange County Basin is 38,000,000 acre-feet. Main sources of water in the Orange County Basin include the Santa Ana River, stormwater, natural recharge, imported water from Northern California and the Colorado River, and recycled water from the Groundwater Replenishment System. Orange County Water District (OCWD) manages this groundwater basin using a detailed model of the basin to determine potential effects of changes in pumping and recharge. The OCWD currently has more than 160 billion gallons of water stored in the Basin and maintains advanced aquifer recharge systems to replace the water that is pumped from wells belonging to local water agencies, cities, and groundwater users (OCWD 2024).

4.10.2 Regulatory Setting

Federal, state, and local regulations, laws, and policies pertaining to hydrology and water quality relevant to the Project are included below.

4.10.2.1 Federal

The Safe Drinking Water Act of 1974 (42 USC Section 300f et seq.). The SDWA was originally passed by Congress in 1974 to protect public health by regulating the nation's public drinking water supply. The law was amended in 1986 and 1996 and requires many actions to protect drinking water and its sources: rivers, lakes, reservoirs, springs, and ground water wells. The SDWA authorizes the EPA to set national health-based standards for drinking water to protect against both

naturally occurring and man-made contaminants that may be found in drinking water.

The regulations allow for disposal into aquifers that would otherwise meet the criteria for a USDW if the aquifers are determined to be exempt by the EPA in accordance with an exemption application and review process (40 CFR 146.4). For oil and gas production and Class II well operations, an aquifer may be designated as "exempted" if it does not currently serve as a source of drinking water and cannot currently or in the future serve as a source of drinking water because it is: (1) mineral, hydrocarbon, or geothermal energy producing, or can be demonstrated to contain commercially producible minerals or hydrocarbons; (2) situated at a depth or location which makes recovery of water for drinking water purposes economically or technologically impractical; or (3) so contaminated that it would be economically or technologically impractical to render the water fit for human consumption.

In 1983, California was granted primacy to regulate Class II wells under the SDWA and must meet federal requirements for the UIC Program, including construction, operating, monitoring and testing, reporting, and closure requirements for well owners or operators. All UIC injection activity in the state must be permitted by CalGEM. Class II well operators must meet well construction and conversion standards and perform regular testing and inspection to ensure well integrity. In general, the UIC regulations (40 CFR 146 et seq.) require that owners and operators of new Class II injection wells: (1) site wells in locations free of faults and other adverse geological features; (2) drill to a depth that allows the injection into formations that do not contain USDWs, or that contain only exempt aquifers, and that are confined from any other formation that may contain potential drinking water sources; (3) inject fluids through an internal pipe (tubing) that is located inside another pipe (casing), with cement placed between the outside pipe and the well borehole; (4) test well integrity at the time of completion and at least every five years thereafter; and (5) continuously monitor well integrity. CalGEM administers the UIC Program for Class II wells in California.

4.10.2.2 State

Porter-Cologne Water Quality Control Act. The Porter–Cologne Water Quality Control Act (Porter-Cologne Act) authorizes regulation of California water rights and water quality by the SWRCB. The Porter–Cologne Act also established nine RWQCBs to ensure that water quality on local/regional levels is maintained. The Project area is under the jurisdiction of the SARWQCB.

California Toxics Rule. In 2000, the EPA promulgated federal water quality standards for California after previously adopted water quality objectives for toxic pollutants were overturned in a court proceeding. These federal water quality standards are known as the California Toxics Rule (CTR) and have since been incorporated into regional basin plans, where applicable. The SWRCB has adopted a policy implementing the CTR (Resolution 2000-015, as amended by Resolution 2000-30). The CTR specifies water quality criteria for 128 priority pollutants based on toxicity to aquatic species, which are used as a basis for the establishment of effluent limitations in NPDES permits. The CTR is applicable to surfaced waters only.

Senate Bill 1281, Disclosure of Oil and Gas Water Use and Disposal. Senate Bill (SB) 1281, effective January 2015, amended Section 3226.3 and 3227 of the PRC to require that well operators provide CalGEM with quarterly information regarding the source and disposition of water produced by or used in oil and gas production in addition to existing obligations to report gas and oil production and produced water information on a monthly basis.

Sustainable Groundwater Management Act. In 2014, California enacted the Sustainable Groundwater Management Act (SGMA) (Water Code Section 10720 et seq.). The Act, and related amendments to California law, require that all groundwater basins designated as high or medium priority in the CDWR California Statewide Groundwater Elevation Monitoring program, and that are subject to critical overdraft conditions, must be managed under a new Groundwater Sustainability Plan (GSP), or a coordinated set of GSPs. High- and medium-priority basins that are not subject to critical overdraft conditions must also be managed under a GSP. Where GSPs are required, one or more local groundwater sustainability agencies (GSAs) must be formed to cover the basin and prepare and implement applicable GSPs.

A GSA has the authority to require registration of groundwater wells, measure and manage extractions, require reports and assess fees, and to request revisions of basin boundaries, including establishing new subbasins. The SGMA defines groundwater as "water beneath the surface of the earth within the zone below the water table in which the soil is completely saturated with water but does not include water that flows in known and definite channels. The OCWD, the City of La Habra GSA, and the Irvine Ranch Water District serve as the GSA for the Coastal Plain of Orange County Groundwater Basin pursuant to the SGMA. The agencies collaborated to prepare and submit an Alternative to a GSP on December 22, 2016, updated in 2022, which demonstrated that the Orange

County Groundwater Basin had operated within its sustainable yield over a period of at least 10 years. The Alternative to a GSP does not identify oil and gas operations as a significant factor impacting any of the objectives of the Act in the subbasin (OCWD et al. 2022).

CalGEM and Underground Injection Control. In California, wells that inject fluids associated with oil and natural gas production operations (Class II injection wells) also are regulated by CalGEM under its UIC Program. See Section 4.7, *Geology and Soils*.

4.10.2.3 Local

Orange County General Plan (2015)

Chapter III: Land Use Element

- **Policy 14:** To guide physical development within the county while protecting water quality through required compliance with urban and stormwater runoff regulations.

Chapter VI: Resources Element

Goal 1: Ensure an adequate dependable supply of water of acceptable quality for all reasonable uses.

Objective 1.1: To maintain the adequacy and dependability of imported water supplies.

Objective 1.2: To achieve a reduction in per capita water consumption by the year 2020.

Objective 1.3: To reduce dependence on imported water supplies through both conservation and local water resource development.

- **Policy 1: Water Supply.** To ensure the adequacy of water supply necessary to serve existing and future development as defined by the General Plan.
- **Policy 2: Conservation.** To reduce per capita and total water consumption through conservation and reclamation programs and the support of new technologies.
- **Policy 3: Groundwater Resources.** To support groundwater management efforts that are conducted by County water agencies.
- **Policy 4: Shortage Planning.** To ensure that Orange County will not be severely impaired by any potential future water shortages.

- **Policy 5: Water Quality.** Protect and improve water quality through continued management, enforcement, and reporting requirements. Encourage an integrated water resources approach for stormwater management that considers water supply, water quality, flood control, open space, and native habitats. Promote coordination between the County, cities, and other stakeholders in the identification and implementation of watershed protection and Low Impact Development principles. Consider implementation of Low Impact Development principles to conserve natural features (trees, wetlands, streams, etc.), hydrology, drainage patterns, topography, and soils. Encourage the creation, restoration, and preservation of riparian corridors, wetlands, and buffer zones. Continue to educate the public about protecting water resources.
- **Policy 6: Intergovernmental Coordination.** To encourage and support a cooperative effort among all agencies towards the resolution of problems and the utilization of opportunities in the planning management and protection of water resources, including water quality.

4.10.3 Impact Analysis

a) Violate any water quality standards or waste discharge requirements or otherwise substantially degrade surface or groundwater quality?

Less than Significant. During permanent sealing operations, Well #1 would be cleaned out and plugged with cement and inert mud to surface, and the site would be backfilled with soil up to ground level. Staging areas would primarily occur on existing dirt roads.

Although Brea Creek is located approximately 500 feet to the east, the Project would only disturb 0.5 acres immediately surrounding the well. No waterways are located adjacent, as Well #1 is surrounded by dirt roads and terrain. Additionally, all pollutants and hazardous materials, including fuels, oils, and lubricants, would be managed in accordance with federal and state regulations which would be fulfilled through implementation of a Project specific contingency and spill plans during all construction activities. These plans would specify the stormwater monitoring and construction BMPs required to reduce pollutants in stormwater runoff. Construction BMPs would include, but not be limited to, Erosion Control BMPs and Sediment Control BMPs designed to minimize erosion and retain sediment on site and Good Housekeeping BMPs to prevent

spills, leaks, and off-site discharge of construction debris and waste. The Project would not violate any water quality standards or waste discharge requirements or otherwise substantially degrade surface or groundwater quality. Impacts would be less than significant.

b) Substantially decrease groundwater supplies or interfere substantially with groundwater recharge such that the project may impede sustainable groundwater management of the basin?

Less than Significant. The Project would not require a substantial amount of water during the permanent sealing, with only a minimal amount required for cement mixing and soil work and washing roads with water trucks to suppress dust. Approximately 750 gallons per day would be required. The Project would not increase impervious surfaces because the Project would not involve paving or other activities which would introduce impervious surfaces. The 2022 Alternative to a GSP prepared by OCWD, Irvine Ranch Water District, and the City of La Habra GSA does not identify oil and gas operations as a significant factor affecting the achievement of any of the SGMA objectives in the Basin. Therefore, the Project would not substantially decrease groundwater supplies or interfere substantially with groundwater recharge such that the Project may impede sustainable groundwater management of the basin. This impact would be less than significant.

c) Substantially alter the existing drainage pattern of the site or area, including through the alteration of the course of a stream or river or through the addition of impervious surfaces, in a manner which would:

i. Result in a substantial erosion or siltation of on- or off-site?

ii. Substantially increase the rate or amount of surface runoff in a manner which would result in flooding on- or off-site?

iii. Create or contribute runoff water which would exceed the capacity of existing or planned stormwater drainage systems or provide substantial additional sources or polluted runoff?

iv. Impede or redirect flood flows?

Less Than Significant. The Brea Creek is located approximately 500 feet east of the Project site. In addition, no work is planned within any waterway and no alterations to any natural drainages or streams would occur. The Project site would be limited to the location of the well and staging area and no facilities or

roads would be constructed as part of the Project that would substantially increase the rate or amount of surface runoff.

The Project site is within an existing oil field and permanent sealing would include only minor ground disturbance. Vegetation removal would be required in order to mitigate fire hazards and facilitate adequate space for potential equipment additions and maneuverability during permanent sealing operations. However, the well would be backfilled with soil up to the ground level once the well is cleaned out and plugged with cement and inert mud, which would stabilize the site from soil erosion. Furthermore, no additional roads are proposed and the existing access roads within the Project area would remain unpaved. Therefore, the Project would not impede infiltration of stormwater through the addition of impervious surfaces, and impacts related to the drainage pattern of the site would be less than significant.

d) In flood hazard, tsunami, or seiche zones, risk release of pollutants due to project inundation?

No Impact. The Project site is inland and not within a flood hazard, tsunami, or seiche zone; therefore, there would be no impact.

e) Conflict with or obstruct implementation of a water quality control plan or sustainable groundwater management plan?

Less than Significant. The Project site is within the Coastal Plain of Orange County Groundwater Basin, which is included in the OCWD, Irvine Ranch Water District, and City of La Habra GSA's Alternative to the GSP. The Project would utilize approximately 750 gallons of water per day during construction activities (primarily for fugitive dust control). No potable water would be required during Project operation since the Project would include the permanent sealing of an existing well. The Project would not interfere with the Alternative to the GSP due to its limited water usage. In addition, the 2022 Alternative to the GSP does not identify oil and gas operations as a significant factor affecting the achievement of any of the SGMA objectives in the Basin. Therefore, this impact would be less than significant.

4.10.4 Mitigation Measures

The Project would not result in significant hydrology and water quality impacts; therefore, no mitigation is required.

4.11 LAND USE AND PLANNING

LAND USE AND PLANNING – Would the Project:	**Potentially Significant Impact**	**Less Than Significant with Mitigation**	**Less Than Significant Impact**	**No Impact**
a) Physically divide an established community?	☐	☐	☐	☒
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?	☐	☐	☒	☐

4.11.1 Environmental Setting

The Project site is within the existing Brea-Olinda Oil Field, north of Brea, in unincorporated Orange County.

4.11.2 Regulatory Setting

There are no relevant federal laws or regulations pertaining to land use and planning applicable to the Project. State and local laws, regulations, and policies applicable to land use and planning relevant to the Project are included below.

4.11.2.1 State

The Project site is located in a State designated oil field. The following presents Statewide legislation related to oil and gas projects.

Senate Bill 1137. The provisions of SB 1137 (Gonzalez, Chapter 385, Statutes of 2022) are currently stayed by operation of law pending a vote on a referendum against that legislation. SB 1137 prohibits the development of new oil and gas wells or infrastructure in health protection zones, as defined, except for purposes of public health and safety. The bill requires operators of existing oil and gas wells or infrastructure within health protection zones to undertake specified monitoring, public notice, and nuisance requirements. The bill requires CARB to consult and concur with CalGEM on leak detection and repair plans for these facilities, adopt regulations as necessary to implement emission detection system standards, and collaborate with CalGEM on public access to emissions detection data.

4.11.2.2 Local

The Orange County Zoning Ordinance contains 23 zoning districts that function as base districts and are used to identify land uses in the unincorporated

areas of the county. The Project site is located within the A1 General Agriculture and Open Space zones under which oil and gas production are an allowable use.

Orange County Municipal Code (Section 7.8.1 - Oil Drilling and Production Regulations) defines Permanent Sealing as the restoration of the drill site as required by the regulations within the Orange County Oil Code and contains the procedures and standards for any activities related to drilling or redrilling, or to erect, construct, enlarge, alter, repair, move, improve, remove, convert, or demolish any structure.

Per the Orange County Oil code, it shall be up to the County Environmental Director to determine whether the drill site and pertinent facilities have been restored to their original condition as nearly as practicable and in conformance with the Orange County Code and under state laws under the approval of the Division of Oil and Gas, Department of Natural Resources.

4.11.3 Impact Analysis

a) Physically divide an established community?

No Impact. The Project site is located within an existing oil field lease, outside of an established community. Proposed activities would not physically divide an established community and there would be no impact.

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?

Less than Significant. The Project involves the permanent sealing of an existing well. The Project would be consistent with plans, policies, and regulations associated with permanent sealing of idle wells in the State of California, the minor construction impacts (ex. release of criteria pollutants, noise, construction worker traffic) have been evaluated in this IS/MND. As described throughout this IS/MND, the Project would have no impact, a less than significant impact, or a less than significant impact with mitigation incorporated on all environmental issue areas. Furthermore, once complete the Project would minimize the potential for soil and groundwater pollution due to inadvertent leaks from an orphan well consistent with the California Phase-1 State Permanent Sealing of Orphan Wells expenditure plan. Therefore, the Project would not 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. Impacts would be less than significant.

4.11.4 Mitigation Measures

The Project would not result in significant land use and planning impacts; therefore, no mitigation is required.

4.12 MINERAL RESOURCES

MINERAL RESOURCES – Would the Project:	**Potentially Significant Impact**	**Less Than Significant with Mitigation**	**Less Than Significant Impact**	**No Impact**
a) Result in the loss of availability of a known mineral resource that would be of value to the region and the residents of the State?	☐	☐	☐	☒
b) Result in the loss of availability of a locally important mineral resource recovery site delineated on a local general plan, specific plan or other land use plan?	☐	☐	☐	☒

4.12.1 Environmental Setting

Orange County has economically important areas of mineral resources, including construction aggregate minerals. In 1995, CalGEM published an updated report identifying significant sand and gravel resources for the Orange County region (CalGEM 1995). These resource areas are located in portions of the Santa Ana River, Santiago Creek, San Juan Creek, Arroyo Trabuco, and other areas. The Orange County General Plan Resources Element also identifies petroleum resource areas in the western and northeastern portions of the county (County of Orange 2012a).

4.12.2 Regulatory Setting

There are no relevant state laws or regulations relevant to mineral resources applicable to the Project. Federal and local regulations, laws, and policies pertaining to mineral resources relevant to the Project are included below.

4.12.2.1 Federal

Surface Mining and Reclamation Act of 1975. The Surface Mining and Reclamation Act of 1975 was mandated in order to identify and protect mineral resources of statewide or regional significance and ensure that those resources are available when needed. The Surface Mining and Reclamation Act requires the state Geologist to classify land into Mineral Resource Zones according to its known or inferred mineral potential. The primary goal of mineral land classification is to ensure that the mineral potential of land is recognized by local government decision makers and considered before land use decisions are made that could preclude mining.

4.12.2.2 Local

Orange County Codes of Ordinance

Division 8, Article 1 of the Orange County Codes of Ordinance outlines the oil drilling and production regulations, and Division 10 details the Sand, Gravel and Mineral Extraction Code of the County of Orange.

Orange County General Plan

Orange County General Plan Resource Element includes the following goal to promote the wise management mineral resources in order to protect these resources for existing and future needs:

Goals

Goal 2: Promote the wise management of agricultural and mineral resources in order to protect these resources for existing and future needs.

Policies

3. MINERAL RESOURCES To ensure the efficient use of all mineral lands consistent with sound resource management practices.

4. MINERAL EXTRACTION To ensure opportunities for the extraction of minerals in the county and to protect the environment during and after these minerals are being extracted.

4.12.3 Impact Analysis

a) Result in the loss of availability of a known mineral resource that would be of value to the region and the residents of the State?

No Impact. Well #1 is an out of commission orphan well which is not currently in extracting oil resources. Accordingly, the permanent sealing of the well would not result in the loss of availability of oil in the state. There would not be any impact on undisturbed areas due to site activities, and the Project would not involve mining or the extraction of mineral resources. Therefore, the Project would have no impact to mineral resources.

b) Result in the loss of availability of a locally important mineral resource recovery site delineated on a local general plan, specific plan or other land use plan?

No Impact. The Orange County General Plan Resource Element identifies three mineral resource areas: one near the Santa Ana River, one near Trabuco

Canyon, and one near the San Juan Creek. The Project site does not overlap with any of these areas depicted in the General Plan Mineral Resource Area Figure. The Orange County General Plan Resource Element also identifies petroleum resource areas in the northeastern portion of Orange County near the Project site. The permanent sealing of an out of commission orphan well would not result in the loss of availability of oil resources to Orange County because Well #1 is not currently in extracting oil resources. Therefore, no impact would occur.

4.12.4 Mitigation Measures

The Project would not result in significant mineral resource impacts; therefore, no mitigation is required.

4.13 NOISE

NOISE – Would the Project:	**Potentially Significant Impact**	**Less Than Significant with Mitigation**	**Less Than Significant Impact**	**No Impact**
a) Generation of a substantial temporary or permanent increase in ambient noise levels in the vicinity of the project in excess of standards established in the local general plan or noise ordinance, or applicable standards of other agencies?	☐	☐	☒	☐
b) Generation of excessive groundborne vibration or groundborne noise levels?	☐	☐	☒	☐
c) For a project located within the vicinity of a private airstrip or an airport land use plan or, where such a plan has not been adopted, within two miles of a public airport or public use airport, would the project expose people residing or working in the project area to excessive noise levels?	☐	☐	☐	☒

4.13.1 Environmental Setting

Overview of Noise

The unit of measurement used to describe a noise level is the decibel (dB). However, the human ear is not equally sensitive to all frequencies within the sound spectrum. Therefore, a method called "A weighting" is used to filter noise frequencies which are not audible to the human ear. A weighting approximates the frequency response of the average young ear when listening to most ordinary everyday sounds. A person's relative judgment of the loudness or annoyance of a sound correlates well with the "A-weighted" levels of those sounds. Therefore, the A-weighted noise scale is used for measurements and standards involving the human perception of noise. In this analysis, all noise levels are A-weighted, and "dBA" is understood to identify the A-weighted dB. Decibels are measured on a logarithmic scale which quantifies sound intensity in a manner similar to the

Richter scale used for earthquake magnitudes. A 10 dB increase represents a 10-fold increase in sound intensity, a 20 dB change is a 100-fold difference, 30 dB is a 1,000-fold increase, etc. Thus, a doubling of the energy of a noise source, such as doubling of traffic volume, would increase the noise level by 3 dB; a halving of the energy would result in a 3 dB decrease.

Human perception of noise has no simple correlation with acoustical energy. The perception of noise is not linear in terms of dBA or in terms of acoustical energy. Two equivalent noise sources combined do not sound twice as loud as one source. It is widely accepted that the average healthy ear can barely perceive changes of 3 dBA; a change of 5 dBA is readily perceptible; and an increase of 10 dBA sounds twice as loud.

Noise Descriptors

The impact of noise is not a function of loudness alone. The time of day when noise occurs, and the duration of the noise are also important. In addition, most noise that lasts for more than a few seconds is variable in its intensity. Consequently, a variety of noise descriptors has been developed. The noise descriptors used for this analysis are the one-hour equivalent noise level (Leq). The Leq is defined as the single steady A-weighted level that is equivalent to the same amount of energy as that contained in the actual fluctuating levels over a period. Typically, Leq is equivalent to a one-hour period, even when measured for shorter durations as the noise level of a 10- to 30-minute period would be the same as the hour if the noise source is relatively steady. The maximum sound level is the highest Root Mean Squared sound pressure level within the sampling period, and minimum sound level is the lowest Root Mean Squared sound pressure level within the measuring period.

Propagation

Sound from a small, localized source (approximating a "point" source) radiates uniformly outward as it travels away from the source in a spherical pattern, known as geometric spreading. The sound level decreases or drops off at a rate of 6 dBA for each doubling of the distance. Traffic noise is not a single, stationary point source of sound. Over some time interval, the movement of vehicles makes the source of the sound appear to emanate from a line (line source) rather than a point. The drop-off rate for a line source is 3 dBA for each doubling of distance.

The propagation of noise is also affected by the intervening ground, known as ground absorption. A hard site (such as parking lots or smooth bodies of water)

receives no additional ground attenuation, and the changes in noise levels with distance (drop-off rate) are simply the geometric spreading of the source. A soft site (such as soft dirt, grass, or scattered bushes and trees) receives an additional ground attenuation value of 1.5 dBA per doubling of distance.

Noise levels may also be reduced by intervening structures; the amount of attenuation provided by this "shielding" depends on the size of the object and the frequencies of the noise levels. Natural terrain features such as hills and dense woods, and man-made features such as buildings and walls, can significantly alter noise levels. Generally, any large structure blocking the line of sight will provide at least a 5-dBA reduction in source noise levels at the receiver (Federal Highway Administration 2011).

Overview of Vibration

Vibration levels are usually expressed as a single-number measure of vibration magnitude in terms of velocity or acceleration, which describes the severity of the vibration without the frequency variable. The peak particle velocity (PPV) is defined as the maximum instantaneous positive or negative peak of the vibration signal, usually measured in inches per second. Since it is related to the stresses experienced by buildings, PPV is often used in monitoring and controlling construction vibration.

Sensitive Receptors

Noise exposure goals for various types of land uses reflect the varying noise sensitivities associated with those uses. Noise-sensitive land uses are those in which persons occupying the uses are particularly sensitive to the effects of noise, including housing, schools, medical facilities, libraries, social care facilities, and similar facilities. Vibration-sensitive receptors, which are similar to noise-sensitive receptors, include residences and institutional uses, such as schools, churches, and hospitals. However, vibration-sensitive receptors also include buildings where vibrations may interfere with vibration-sensitive equipment that is affected by vibration levels (e.g., recording studios or medical facilities with sensitive equipment). The nearest sensitive receptor(s) to the Project site are single-family residences located approximately 0.37 miles south of Well #1 adjacent to Brea Boulevard.

Existing Noise Setting

The primary noise sources in the vicinity of the Project site are surrounding oil extract operations and vehicular traffic on the access roads of the Brea-Olinda Oil Field and Brea Boulevard.

4.13.2 Regulatory Setting

Orange County Municipal Code (Section 4.6.7) indicates that "*Noise sources associated with construction, repair, remodeling, or grading of any real property, provided said activities do not take place between the hours of 8:00 p.m. and 7:00 a.m. on weekdays, including Saturday, or at any time on Sunday or a Federal holiday*."

The following information on noise and vibration regulations and thresholds of significance is relevant to the Project.

Significance Thresholds

Although the Project site is located in unincorporated Orange County, the nearest sensitive receptors are located in Brea. Therefore, the Brea Municipal Code is utilized for construction noise thresholds. The Brea Municipal Code Section 8.20.070 exempts construction activities from noise control provisions, provided construction activities take place between 7:00 a.m. and 7:00 p.m.

The Brea Municipal Code does not provide a quantitative construction noise threshold. Therefore, based on the Federal Transit Administration (FTA) Transit Noise and Vibration Impact Assessment (2018) criteria, construction noise would be significant if noise levels exceed 80 dBA Leq for an 8-hour period at residential uses or construction is conducted outside the allowable hours for construction as stated in the Brea Municipal Code, as described above.

The Brea Municipal Code also does not provide quantitative vibration thresholds. Therefore, vibration limits used in this analysis to determine potential impacts to local land uses are based on guidelines for vibration damage potential contained in Caltrans' (2020) *Transportation and Construction Vibration Guidance Manual*, shown in Table 4.13-1. The nearest vibration sensitive receptors are residential buildings, which, for the purposes of this analysis, are categorized as older residential structures. As shown therein, construction vibration impact would be significant if vibration levels exceed 0.3 PPV in/sec at these residences for continuous and frequent intermittent sources.

Table 4.13-1. Vibration Damage Potential Criteria

Building Category	Transient Sources (in/sec PPV)	Continuous/Frequent Intermittent Sources (in/sec PPV)
Extremely fragile historic buildings, ruins, and ancient monuments	0.12	0.08
Fragile buildings	0.2	0.1
Historic sites and some old buildings	0.5	0.25
Older residential structures	0.5	0.3
New residential structures	1.0	0.5
Modern industrial/commercial buildings	2.0	0.5

Note: PPV = peak particle velocity; in/sec = inches per second.

Source: Caltrans 2020.

4.13.3 Impact Analysis

a) Generation of a substantial temporary or permanent increase in ambient noise levels in the vicinity of the project in excess of standards established in the local general plan or noise ordinance, or applicable standards of other agencies?

Less Than Significant. Temporary noise levels caused by construction activity would be a function of the noise generated by construction equipment, the location and sensitivity of nearby land uses, and the timing and duration of noise-generating activities. Noise levels were modeled from the center of the equipment activity area consistent with FTA guidance (FTA 2018).

Construction noise was estimated using the Federal Highway Administration Roadway Construction Noise Model. Typical construction projects have long-term noise averages that are lower than louder short-term noise events due to equipment moving from one point to another on the site, work breaks, and idle time. Each phase of typical construction activities have a specific equipment mix depending on the work to be carried out during that phase. Accordingly, each phase also has its own noise characteristics; some have higher continuous noise levels than others, and some may have discontinuous high-impact noise levels. The maximum hourly Leq of each phase is determined by combining the Leq contributions from each piece of equipment used in that phase (FTA 2018). Heavy equipment use would be required during permanent sealing operations. It is assumed that diesel engines would power all construction equipment. For

assessment purposes, permanent sealing was modeled under the conservative assumption that an auger drill rig, crane, tractor, concrete mixer truck, and generator would be operating simultaneously.

Construction (permanent sealing) activities would occur from 7:00 a.m. to 7:00 p.m. on weekdays and therefore would not conflict with the Brea Municipal Code. Exposure to the nearest sensitive receptors would be temporary, over the course of approximately five days. Table 4.13-2 shows the results of the noise modeling from the Roadway Construction Noise Model.

Table 4.13-2. Construction Noise Levels at Sensitive Receptors

Sensitive Receptor	Distance (miles)	Noise Level (dBA Leq)
Residences south of Well #1	0.37	54

Source: Construction Noise Model.

As shown in Table 4.13-2, Project noise levels would be up to 54 dBA Leq, which would not exceed the FTA threshold of 80 dBA Leq at the nearest sensitive receptors to Well #1 during permanent sealing operations. Therefore, the Project would not substantially increase ambient noise levels in the vicinity of the wells, and this impact would be less than significant.

b) Generation of excessive groundborne vibration or groundborne noise levels?

Less Than Significant. Construction activities known to generate excessive groundborne vibration, such as pile driving, would not be conducted as part of the Project. The greatest known source of vibration during permanent sealing operations would be a large bulldozer. At 0.37 miles, the large bulldozer and similar equipment would not exceed 0.3 PPV in/sec at the nearest sensitive receptors to the Project site. This impact would be less than significant.

c) For a project located within the vicinity of a private airstrip or an airport land use plan or, where such a plan has not been adopted, within two miles of a public airport or public use airport, would the project expose people residing or working in the project area to excessive noise levels?

No Impact. The nearest airport to the Project site is the Fullerton Municipal Airport, located approximately eight miles to the southwest. The Project site is not located within the influence area or established noise contours of the Fullerton Municipal Airport (Orange County Airport Land Use Commission 2019). Therefore,

Project personnel would not be exposed to substantial airport noise. No impact would occur.

4.13.4 Mitigation Measures

The Project would not result in significant noise impacts; therefore, no mitigation is required.

4.14 POPULATION AND HOUSING

POPULATION AND HOUSING – Would the Project:	**Potentially Significant Impact**	**Less Than Significant with Mitigation**	**Less Than Significant Impact**	**No Impact**
a) Induce substantial population growth in an area, either directly (for example, by proposing new homes and businesses) or indirectly (for example, through extension of roads or other infrastructure)?	☐	☐	☐	☒
b) Displace substantial numbers of people or housing, necessitating the construction of replacement housing elsewhere?	☐	☐	☐	☒

4.14.1 Environmental Setting

The Project site is located outside city limits of the City of Yorba Linda, within an existing oil field lease. According to the California Department of Finance, the population of Brea is 48,184 (California Department of Finance 2024). There would be no operational components after completion and restoration of the Project.

No new access roads would be constructed as part of the Project. The Project would utilize existing oil field work crews and existing oil field subcontractors (rig crew).

4.14.2 Regulatory Setting

There are no federal, state, or local laws, regulations, or policies pertaining to population and housing that are relevant to the Project.

4.14.3 Impact Analysis

a) Induce substantial population growth in an area, either directly (for example, by proposing new homes and businesses) or indirectly (for example, through extension of roads or other infrastructure)?

No Impact. The Project would occur over approximately five days. The Project is located outside of the City of Brea, and after completion of the Project, no new workers would be required as there are no operational activities related to the Project. Therefore, the Project would not induce population growth directly or indirectly. There would be no impact.

b) Displace substantial numbers of people or housing, necessitating the construction of replacement housing elsewhere?

No Impact. The Project includes permanent sealing of an oil well located within an existing oil field. The Project would not displace people or housing. Therefore, there would be no impact.

4.14.4 Mitigation Measures

The Project would not result in significant population and housing impacts; therefore, no mitigation is required.

4.15 PUBLIC SERVICES

PUBLIC SERVICES	Potentially Significant Impact	Less Than Significant with Mitigation	Less Than Significant Impact	No Impact
a) Would the Project result in substantial adverse physical impacts associated with the provision of new or physically altered governmental facilities, need for new or physically altered governmental facilities, the construction of which could cause significant environmental impacts, in order to maintain acceptable service ratios, response times or other performance objectives for any of the public services:				
i) Fire protection?	☐	☐	☒	☐
ii) Police Protection?	☐	☐	☐	☒
iii) Schools?	☐	☐	☐	☒
iv) Parks?	☐	☐	☐	☒
v) Other public facilities?	☐	☐	☐	☒

4.15.1 Environmental Setting

Fire Protection

The Project site is located in an unincorporated area of Orange County, outside the City of Brea, and is provided fire protection services by the OCFA, Division 4, Battalion 2. The nearest OCFA Station is Fire Station #10, approximately eight miles away to the southeast. Additionally, the Brea Fire Department Station No. 1 located at 555 N, Berry Street in Brea, is approximately 1.80 miles southwest of the Project site. The OCFA has 134 engines, seven divisions, and 11 battalions that services 587 square miles of Orange County, providing fire protection and emergency medical services for unincorporated areas and 24 cities within the county and is available 24 hours per day (OCFA 2024). Division 4 is located in the northern area of Orange County and covers the unincorporated areas of the county (OCFA 2024).

Police Protection

Police services are provided to the Project site by the Orange County Sheriff's Office. The nearest Orange County Sheriff's Office is located at 20994 Yorba Linda Boulevard in Yorba Linda, which is approximately 10 miles southeast of the Project site.

Schools

The Project site is within the Brea-Olinda Unified School District. The nearest schools to the Project site are Mariposa Elementary School, approximately 0.70 mile southwest and Brea Olinda High School approximately one mile to the southeast.

Parks

Information regarding nearby parks is discussed in Section 4.16, *Recreation*.

4.15.2 Regulatory Setting

There are no federal or state laws, regulations, or local policies pertaining to public services that are relevant to the Project. Local regulations, laws, and policies pertaining to public services relevant to the Project are included below.

4.15.2.1 Local

Orange County General Plan Public Services and Facilities Element

- **Orange County Fire Authority Goal 1:** Provide a safe living environment ensuring adequate fire protection facilities and resources to prevent and minimize the loss of life and property from structural and wildland fire damages.
- **Orange County Sheriff-Coroner Goal 1:** Assure that adequate Sheriff patrol service is provided to ensure a safe living and working environment.

4.15.3 Impact Analysis

a) Would the Project result in substantial adverse physical impacts associated with the provision of new or physically altered governmental facilities, need for new or physically altered governmental facilities, the construction of which could cause significant environmental impacts, in order to maintain acceptable service ratios, response times or other performance objectives for any of the public services?

i) Fire Protection?

Less than Significant. The Project includes the permanent sealing of an orphan well within Orange County. The number of vehicles would temporarily increase during cementing and restoration of the sites and would return to baseline post Project completion. Vegetation would be cleared surrounding the existing well pad and all construction equipment used for vegetation clearing would be equipped with spark arrestors. The permanent sealing of the well would not require new or expanded fire protection or other safety efforts after the Project site is restored. Further, the nearest fire station to the Project site is located approximately 1.80 miles away.

All cutting and welding would comply with California Fire Code 3305.6 and National Fire Protection Association 51B and a Fire Watch procedure would conform to California Fire Code 3305.5. The Project proponent would be responsible for maintaining fire extinguishers in accordance with California Fire Code 3315 and 906 as well as providing monitoring and training to prevent vehicle traffic off roadways to ensure activities do not impact dry brush and lead to fire. Therefore, the impact to fire protection would be less than significant.

ii) Police Protection?

No Impact. The Project includes the permanent sealing of a well in an existing oil field. There would be no added infrastructure as a result of the Project that could be subject to vandalism, and the Project would not increase demand for police protection. Therefore, there would be no impact to police protection services.

iii) Schools?

No Impact. As discussed within Section 4.14, *Population and Housing*, the Project would not result in a direct or indirect population increase since it would rely on existing company and contractor resources. As a result, enrollment within the school system would not be affected. Therefore, there would be no impact.

iv) Parks?

No Impact. As discussed within Section 4.14, *Population and Housing*, the Project would not result in a direct or indirect population increase. Therefore, the Project would not increase the use of parks, contribute to the deterioration of existing parks, or require new or expanded parks. Therefore, there would be no impact.

v) Other public facilities?

No Impact. The Project would not contribute to population growth in the area. As a result, there would be no increase in demand pertaining to public facilities such as postal service or libraries. Therefore, there would be no impact.

4.15.4 Mitigation Measures

The Project would not result in significant impacts to public services; therefore, no mitigation is required.

4.16 RECREATION

RECREATION	Potentially Significant Impact	Less Than Significant with Mitigation	Less Than Significant Impact	No Impact
a) Would the project increase the use of existing neighborhood and regional parks or other recreational facilities such that substantial physical deterioration of the facility would occur or be accelerated?	☐	☐	☐	☒
b) Does the project include recreational facilities or require the construction or expansion of recreational facilities which might have an adverse physical effect on the environment?	☐	☐	☐	☒

4.16.1 Environmental Setting

The Project site is located within the existing Brea-Olinda Oil Field, surrounded by other active oil and gas wells. The nearest recreational facility is Pathfinder Community Regional Park, approximately two miles north from the Project site.

4.16.2 Regulatory Setting

There are no federal, state, or local laws, regulations, or policies pertaining to recreation that are relevant to the Project because the Project would not involve any changes to baseline conditions that relate to recreational opportunities or the use of recreational facilities within Orange County.

4.16.3 Impact Analysis

a) Would the project increase the use of existing neighborhood and regional parks or other recreational facilities such that substantial physical deterioration of the facility would occur or be accelerated?

No Impact. The deterioration of neighborhood and regional parks or other facilities within an area is expedited by increased use, prompted by population growth. As discussed within Section 4.14, *Population and Housing*, the Project

would not directly or indirectly result in population increases within the area. Therefore, there would be no impact.

b) Does the project include recreational facilities or require the construction or expansion of recreational facilities which might have an adverse physical effect on the environment?

No Impact. The Project does not include or require the construction or expansion of recreational facilities. As discussed within Section 4.14, *Population and Housing*, the Project would not directly or indirectly result in population increases within the area. Therefore, there would be no impact.

4.16.4 Mitigation Measures

The Project would not result in significant impacts to recreational facilities; therefore, no mitigation is required.

4.17 TRANSPORTATION

TRANSPORTATION – Would the Project:	**Potentially Significant Impact**	**Less Than Significant with Mitigation**	**Less Than Significant Impact**	**No Impact**
a) Conflict with a Project, plan, ordinance or policy addressing the circulation system, including transit, roadway, bicycle and pedestrian facilities?	☐	☐	☒	☐
b) Conflict or be inconsistent with CEQA Guidelines § 15064.3, subdivision (b)?	☐	☐	☒	☐
c) Substantially increase hazards due to a geometric design feature (e.g., sharp curves or dangerous intersections) or incompatible uses (e.g., farm equipment)?	☐	☐	☐	☒
d) Result in inadequate emergency access?	☐	☐	☒	☐

4.17.1 Environmental Setting

The Project site is located approximately 0.80 miles west of SR-57 and two miles north of SR-90, which provide regional access to Brea. Circulation within the Project vicinity/oil field consists of a network of unpaved private roads which provide access to the well(s).

4.17.2 Regulatory Setting

There are no federal laws, regulations, or policies potentially applicable to this Project relevant to transportation. State and local laws, regulations, and policies pertaining to transportation relevant to the Project are included below.

4.17.2.1 State

California Department of Transportation Regulations. Caltrans has jurisdiction over state highways and sets maximum load limits for trucks and safety requirements for oversized vehicles that operate on California highways. Orange County is under the jurisdiction of Caltrans District 12. The following Caltrans regulations apply to the potential transportation impacts of the Project:

- California Vehicle Code, Division 15, Chapters 1 through 5 (Size, Weight, and Load). Includes regulations pertaining to licensing, size, weight, and load of vehicles operated on highways; and
- California Street and Highway Code, Sections 660-711, 670-695. Requires permits from Caltrans for any roadway encroachment during truck transportation and delivery, includes regulations for the care and protection of State and County highways and provisions for the issuance of written permits, and requires permits for any load that exceeds Caltrans weight, length, or width standards for public roadways.

These state regulations would relate to the haul of heavy equipment and materials to the Project area during construction. Trucking companies and the Project must comply with these regulations.

4.17.2.2 Local

CEQA Guidelines Section 15064.3(b) indicates that VMT is the most appropriate measure for transportation impacts. Orange County has adopted the following VMT thresholds for proposed development projects within the county (County of Orange 2020):

- Residential: 15 percent below existing regional average VMT per capita (17.9 X 0.85 = 15.2 miles).
- Office: 15 percent below existing regional average VMT per employee (24.1 X 0.85 = 20.5 miles).
- Retail: no net change in total VMT using OCTAM.
- Mixed Use: consider each component of the Project separately based on the threshold for residential, office, retail, etc. and take credit for internal capture.
- Other Land Uses: no net increase in VMT per employee if consistent with the General Plan or 15 percent below regional average if seeking a General Plan Amendment.

Orange County General Plan (2015)

Chapter IV: Transportation Element Circulation Plan

Goal 3: Provide a circulation plan that facilitates the safe, convenient and efficient movement of people and goods throughout unincorporated areas of the county.

4.17.3 Impact Analysis

a) Conflict with a program, plan, ordinance or policy addressing the circulation system, including transit, roadway, bicycle and pedestrian facilities?

Less than Significant. The Transportation Element of the Orange County General Plan includes goals, objectives, and policies that address the local circulation system and guide development of planned multimodal transportation systems within Orange County.

Construction-related vehicle trips would include construction workers traveling to and from the Project site and trucks associated with equipment and material deliveries. Closures of area roadways would not be required during Project construction, and construction equipment and worker vehicles would be staged on site or adjacent to the Project areas on flat terrain. Given that construction would be a short-term and temporary activity, trips would account for a relatively small portion of existing traffic on area roadways, and construction-related traffic impacts would not be substantial. Therefore, Project construction would not conflict with a program, plan, ordinance, or policy addressing the circulation system impacts, and impacts would be less than significant.

The Project would not include an operational phase since the Project would result in permanent sealing of an existing well. Therefore, other than temporary construction activities, the Project would not result in an increase in traffic to and from the Project site and would not include any new or modified land uses that would generate long-term vehicle trips or other features that would affect the local or regional circulation system. Thus, the Project would not conflict with a program, plan, ordinance, or policy addressing the circulation system. This impact would be less than significant.

b) Conflict or be inconsistent with CEQA Guidelines Section 15064.3, subdivision (b)?

Less than Significant. CEQA Guidelines Section 15064.3(b) indicates that VMT is the most appropriate measure for transportation impacts. In December 2018, the California Governor's Office of Planning and Research provided an updated Technical Advisory to help evaluate transportation impacts under CEQA. In particular, the Technical Advisory provides that a project generating or attracting fewer than 110 one-way trips per day generally may be assumed to cause a less than significant transportation impact (California Governor's Office of Planning and Research 2018). During Project construction, approximately 25

one-way trips would occur per day (Appendix B). The Project would include permanent sealing of an existing well and would not result in an increase in population or jobs which could increase regional VMT. Therefore, there would be no increases in vehicle trips during Project operation, and VMT impacts would be less than significant.

c) Substantially increase hazards due to a geometric design feature (e.g., sharp curves or dangerous intersections) or incompatible uses (e.g., farm equipment)?

No Impact. The Project would not involve any roadway modifications or incompatible uses that would increase traffic hazards. Therefore, there would be no impact.

d) Result in inadequate emergency access?

Less than Significant. The Project would not require road closures and would not interfere with access to area roadways. The Project site is located in a private oil field, accessible by private entry, away from public roadways. During construction, heavy equipment and vehicles would be staged on site on flat terrain and would not generate a substantial amount of construction vehicle trips. The Project would include permanent sealing of an existing well and would not result in increases in vehicle trips that would lead to inadequate emergency access. Therefore, this impact would be less than significant.

4.17.4 Mitigation Measures

The Project would not result in significant transportation impacts; therefore, no mitigation is required.

4.18 TRIBAL CULTURAL RESOURCES

TRIBAL CULTURAL RESOURCES	Potentially Significant Impact	Less Than Significant with Mitigation	Less Than Significant Impact	No Impact
a) Would the project cause a substantial adverse change in the significance of a tribal cultural resource, defined in Public Resources Code § 21074 as either a site, feature, place, cultural landscape that is geographically defined in terms of the size and scope of the landscape, sacred place, or object with cultural value to a California Native American tribe, and that is:				
i) Listed or eligible for listing in the California Register of historical resources, or in a local register of historical resources as defined in Public Resources Code section 5020.1(k), or	☐	☒	☐	☐
ii) A resource determined by the lead agency, in its discretion and supported by substantial evidence, to be significant pursuant to criteria set forth in subdivision (c) of Public Resources Code § 5024.1. In applying the criteria set forth in subdivision (c) of Public Resource Code § 5024.1, the lead agency shall consider the significance of the resource to a California Native American tribe.	☐	☒	☐	☐

4.18.1 Environmental Setting

A cultural resources desktop study completed in support of CalGEM Phase I State Permanent Sealing of Orphan Wells Project was conducted in April 2024. The analysis documented the results of the cultural resources records searches, an assessment for the cultural resources sensitivity of well locations, and management recommendations. The following sources were utilized to develop an understanding of the project site and its context:

- Historical aerial photographs accessed via NETR Online.
- Historical topography maps accessed via topoView.

In addition, a California Historical Resources Information System (CHRIS) records search at the South-Central Coastal Information Center (SCCIC) was also conducted. The SCCIC is the official state repository for cultural resources records and reports for the county in which the Project falls. The purpose of the records search was to identify previously recorded cultural resources, as well as previously conducted cultural resources studies within the Project site and a surrounding 0.5-mile radius. The National Register of Historic Places, the California Register of Historical Resources, the California Historical Landmarks list, and the Built Environment Resources Directory, as well as its predecessor the California State Historic Property Data File, were also reviewed. Additionally, the Archaeological Determination of Eligibility list was also reviewed.

The CHRIS records search did not identify any cultural resources within a 0.5-mile radius of the Project site.

In summary, no cultural resources were identified within the Project site as a result of the CHRIS record search. Historic aerials and topography maps indicate that the Project site is currently located in undeveloped open space. The Project site has not been modified by construction or agricultural activities. Based on the findings of the current analysis, the likelihood of encountering or disturbing cultural resources during permanent sealing operations is low.

A review of the potential for known tribal cultural resources listed or eligible for California Register of Historical Resources or local register listing in the Project area was also conducted. This review identified no known tribal resources.

4.18.2 Regulatory Setting

Under AB 52, lead CEQA agencies must avoid damaging effects on tribal cultural resources, when feasible, whether consultation occurred or is required.

4.18.3 Impact Analysis

a) Would the project cause a substantial adverse change in the significance of a tribal cultural resource, defined in Public Resources Code section 21074 as either a site, feature, place, cultural landscape that is geographically defined in terms of the size and scope of the landscape, sacred place, or object with cultural value to a California Native American tribe, and that is:

I. Listed or eligible for listing in the California Register of historical resources, or in a local register of historical resources as defined in Public Resources Code section 5020.1(k), or

II. A resource determined by the lead agency, in its discretion and supported by substantial evidence, to be significant pursuant to criteria set forth in subdivision (c) of Public Resources Code § 5024.1. In applying the criteria set forth in subdivision (c) of Public Resource Code § 5024.1, the lead agency shall consider the significance of the resource to a California Native American tribe.

Less Than Significant with Mitigation. As part of the Project, CalGEM, in accordance with Assembly Bill 52, on October 10–14, 2023, notification was sent to tribes. CalGEM did not receive any responses for requests for consultation from the Tribes. Therefore, the Project will move forward without Tribal consultation and oversight, but with awareness training and cultural monitoring during ground disturbance as discussed below.

As discussed above, the potential for adverse impacts to tribal cultural resources is considered low. However, to address the potential event of an inadvertent discovery during ground disturbing activities, the Project proponent would implement the procedures identified in **MM TRI-1, MM CUL-1, and MM CUL-2**. Adherence to **MM TRI-1** would ensure a sensitivity training program is conducted and followed, informing workers of procedures to follow in case of unanticipated discovery. **MM CUL-1** would provide standard procedures to follow in the event unanticipated archaeological resources are discovered and **MM CUL-2** would ensure work is temporarily halted if and when human remains were discovered, and all federal, state, and local guidelines would be adhered to. Therefore, impacts would be less than significant with mitigation.

MM TRI-1: Tribal Cultural Sensitivity Training Program: All project employees conducting work in the Project area identified in the Project Description, including the road access areas, shall complete a Cultural Sensitivity

Training Program including training dedicated to tribal resources protection, if applicable.

MM CUL-1: Unanticipated Discovery of Cultural Resources. In the event that archaeological resources are unexpectedly encountered during ground-disturbing activities, work within 50 feet of the find shall halt and an archaeologist meeting the Secretary of the Interior's Professional Qualifications Standards for Archaeology shall be contacted immediately to evaluate the resource. If the resource is determined by the qualified archaeologist to be prehistoric, then a Native American representative shall also be contacted to participate in the evaluation of the resource. If the qualified archaeologist and/or Native American representative determines it to be appropriate, archaeological testing for CRHR eligibility shall be completed. If the resource proves to be eligible for the CRHR, and significant impacts to the resource cannot be avoided via Project redesign, a qualified archaeologist shall prepare a data recovery plan tailored to the physical nature and characteristics of the resource, per the requirements of CCR Section 15126.4(b)(3)(C). The data recovery plan shall identify data recovery excavation methods, measurable objectives, and data thresholds to reduce any significant impacts to cultural resources related to the resource. Pursuant to the data recovery plan, the qualified archaeologist and Native American representative, as appropriate, shall recover and document the scientifically consequential information that justifies the resource's significance.

MM CUL-2: Unanticipated Discovery of Human Remains. The discovery of human remains is always a possibility during ground disturbing activities. If human remains are found, the State of California Health and Safety Code Section 7050.5 states that no further disturbance shall occur until the County Coroner has made a determination of origin and disposition pursuant to Public Resources Code Section 5097.98. In the event of an unanticipated discovery of human remains, the County Coroner must be notified immediately. If the human remains are determined to be prehistoric, the Coroner will notify the Native American Heritage Commission, which will determine and notify a most likely descendant (MLD), and as determined by the Native American Heritage Commission (NAHC) should those findings be determined as Native American in origin. The MLD shall complete the inspection of the site and provide

recommendations for treatment to the landowner within 48 hours of being granted access.

4.18.4 Mitigation Measures

Implementation of the following MMs would reduce potential tribal cultural resource impacts to less than significant:

- TRI-1: Tribal Cultural Sensitivity Training Program
- CUL-1: Unanticipated Discovery of Cultural Resources
- CUL-2: Unanticipated Discovery of Human Remains

4.19 UTILITIES AND SERVICE SYSTEMS

UTILITIES AND SERVICE SYSTEMS – Would the Project:	**Potentially Significant Impact**	**Less Than Significant with Mitigation**	**Less Than Significant Impact**	**No Impact**
a) Require or result in the relocation or construction of new or expanded water, wastewater treatment or storm water drainage, electric power, natural gas, or telecommunications facilities, the construction or relocation of which could cause significant environmental effects?	☐	☐	☒	☐
b) Have sufficient water supplies available to serve the project and reasonably foreseeable future development during normal, dry and multiple dry years?	☐	☐	☒	☐
c) Result in a determination by the wastewater treatment provider, which serves or may serve the project that it has adequate capacity to serve the project's projected demand in addition to the provider's existing commitments?	☐	☐	☒	☐
d) Generate solid waste in excess of state or local standards, or in excess of the capacity of local infrastructure, or otherwise impair the attainment of solid waste reduction goals?	☐	☐	☒	☐
e) Comply with federal, state, and local statutes and regulations related to solid waste?	☐	☐	☒	☐

4.19.1 Environmental Setting

The Project includes permanent sealing of an orphan well located within an existing oil field in the northern side of unincorporated Orange County.

Oil and gas activities within Orange County utilize a combination of sources to satisfy the water demand for such activities. The two main sources are from sub-surface oil-bearing formations and municipal and industrial water, purveyed by the OCWD and the Municipal Water District of Orange County.

Construction activities for the Project would require approximately 750 gallons of water per day for well permanent sealing operations, primarily for fugitive dust control. The water would be sourced from an on-site OCWD metered municipal water supply. No potable water or sewer service is proposed as part of the Project.

Waste materials would be properly disposed of as non-hazardous waste or hazardous waste, as appropriate. All cuttings and cement returns would be collected and trucked for proper disposal to Frank R. Bowerman Landfill.

4.19.2 Regulatory Setting

There are no federal laws, policies, or regulations applicable to the Project relevant to utilities and service systems. State and local regulations, laws, and policies pertaining to utilities and service systems relevant to the Project are included below.

4.19.2.1 State

Sustainable Groundwater Management Act. In 2014, California enacted the SGMA (Water Code Section 10720 et seq.). The Act, and related amendments to California law, require that all groundwater basins designated as high- or medium-priority in the CDWR California Statewide Groundwater Elevation Monitoring program and that are subject to critical overdraft conditions must be managed under a new GSP, or a coordinated set of GSPs, by January 31, 2020. High- and medium-priority basins that are not subject to critical overdraft conditions must be managed under a GSP. Where GSPs are required, one or more local GSAs must be formed to cover the basin and prepare and implement applicable GSPs. The Act does not apply to basins that are managed under a court-approved adjudication, or to low-or very–low-priority basins.

The Act defines groundwater as "water beneath the surface of the earth within the zone below the water table in which the soil is completely saturated with water but does not include water that flows in known and definite channels." A groundwater extraction facility is defined as "a device or method for extracting groundwater from within a basin" Water Code Section 10721(g-h).

California Integrated Waste Management Act (AB 939). California adopted its first statewide, general recycling program in 1989. The Integrated Waste

Management Act of 1989 (PRC 40050 et seq. or AB 939, codified in PRC 40000), administered by the California Department of Resources, Recycling, and Recovery requires all local and County governments to adopt a Source Reduction and Recycling Element to identify means of reducing the amount of solid waste sent to landfills.

4.19.2.2 Local

Orange County General Plan (2022)

Chapter 5: Public Services & Facilities Element:

Goal: Protect water, air and habitat in the management of the Orange County disposal system.

- **Policy 1 Land Use Compatibility:** To plan solid waste facilities in a manner compatible with surrounding land uses and to review planned land uses adjacent to landfills for their compatibility with landfill operations.
- **Policy 3 Solid Waste Recycling and Reuse:** To promote the utilization of waste recycling and reuse measures which extend the operating life of existing solid waste facilities.

Chapter 6: Resources Element

Goal 1: Ensure an adequate dependable supply of eater acceptable quality for all reasonable uses.

Objective 1.1: To maintain the adequacy and dependability of imported water supplies.

- **Policy 1 Water Supply:** To ensure the adequacy of water supply necessary to serve existing and future development as defined by the General Plan.
- **Policy 2 Groundwater Resources:** To support groundwater management efforts that are conducted by County water agencies.

4.19.3 Impact Analysis

a) Require or result in the relocation or construction of new or expanded water, wastewater treatment or storm water drainage, electric power, natural gas, or telecommunications facilities, the construction or relocation of which could cause significant environmental effects?

Less than Significant. OCWD purveys municipal water within the service area that encompasses the Project site. The OCWD is responsible for the

management of the Orange County Groundwater Basin by capturing from natural river flows, storm run-off, reclamation of treated wastewater, and purchasing imported water (County of Orange 2012c). Most of the water received from the State Water Project is used to replenish the groundwater basin in the vicinity of its well fields where it is later recovered and delivered to the District's customers with minimal treatment. OCWD maintains a positive banked water balance which allows it to meet water demands even in dry years.

The Project would require minimal water during permanent sealing operations, which would be obtained from on-site metered OCWD sources. No overhead electrical lines would be constructed and no connections to the existing power grid are proposed as part of the Project. The Project would not require the expansion of water, wastewater treatment, stormwater drainage, electric power, natural gas, or telecommunications facilities. Therefore, impacts would be less than significant.

b) Have sufficient water supplies available to serve the project and reasonably foreseeable future development during normal, dry and multiple dry years?

Less than Significant. As indicated above, the Groundwater Replenishment System for water conservation has allowed it to maintain a positive banked water supply even during dry years in the presence of ongoing and gas activities within the county (OCWD et al. 2022). Water use would be minimal (approximately 750 gallons of water per day, primarily for fugitive dust control) and would only occur during permanent sealing operations. Due to the limited volumes of water used during these activities in comparison to the maximum 145,600 acre-feet of water the District receives annually, sufficient supplies would be available to serve the Project. This impact would be less than significant.

c) Result in a determination by the wastewater treatment provider, which serves or may serve the project that it has adequate capacity to serve the project's projected demand in addition to the provider's existing commitments?

Less than Significant. The Project would not require services from the local wastewater treatment provider. During permanent sealing operations, portable sanitary facilities would be brought to the Project site, as necessary. Sanitary wastes generated within the Project site would be transported off site to a local wastewater treatment facility for proper treatment. Therefore, this impact would be less than significant.

d) Generate solid waste in excess of state or local standards, or in excess of the capacity of local infrastructure, or otherwise impair the attainment of solid waste reduction goals?

Less than Significant. The Project would result in limited volumes of solid waste requiring disposal at a licensed disposal facility. In accordance with state and federal regulations, only drilling fluids and additives classified as non-hazardous would be used and disposed of.

Any and all materials designated as waste during permanent sealing operations would be collected and trucked to Frank R. Bowerman Landfill located in Limestone Canyon, approximately 17 miles southeast of the Project site, for proper disposal. Drilling would result in approximately four truck trips and empty, dry drilling mud material sacks would be transported to the Frank R. Bowerman Landfill for disposal. The Frank R. Bowerman Landfill has enough capacity to meet demand through 2053 (California Department of Resources, Recycling, and Recovery 2024); therefore, this landfill has adequate remaining capacity to accept Project generated waste. In addition, the Project would comply with all regulatory measures in Orange County because all waste associated with the Project would be properly disposed of and recycled to the extent feasible. Therefore, impacts would be less than significant.

e) Comply with federal, state, and local statutes and regulations related to solid waste?

Less than Significant. A small amount of solid waste would be generated as a result of permanent sealing operations. Solid waste debris resulting from the Project, outside of what is recyclable, would be disposed of at an approved landfill in accordance with local, state, and federal laws and regulations as required by the Project plans and specifications. Project operation would not result in the generation of solid waste; therefore, any increase in solid municipal waste is considered to be limited and temporary. This impact would be less than significant.

4.19.4 Mitigation Measures

The Project would not result in significant utilities and service system impacts; therefore, no mitigation is required.

4.20 WILDFIRE

WILDFIRE – If located in or near State responsibility areas or lands classified as very high fire hazard severity zones, would the project:	**Potentially Significant Impact**	**Less Than Significant with Mitigation**	**Less Than Significant Impact**	**No Impact**
a) Substantially impair an adopted emergency response plan or emergency evacuation plan?	☐	☐	☐	☒
b) Due to slope, prevailing winds, and other factors, exacerbate wildfire risks, and thereby expose project occupants to, pollutant concentrations from a wildfire or the uncontrolled spread of a wildfire?	☐	☐	☒	☐
c) Require the installation or maintenance of associated infrastructure (such as roads, fuel breaks, emergency water sources, power lines or other utilities) that may exacerbate fire risk or that may result in temporary or ongoing impacts to the environment?	☐	☐	☐	☒
d) Expose people or structures to significant risks, including downslope or downstream flooding or landslides, as a result of runoff, post-fire slope instability, or drainage changes?	☐	☐	☒	☐

4.20.1 Environmental Setting

According to CAL FIRE, the Project site is located in a Very High FHSZ within a State Responsibility Area (CAL FIRE 2023). The Project site is located within a vegetated area which could serve as fuel in the event of a wildfire. The Project site is located within foothills in proximity to residential development.

4.20.2 Regulatory Setting

There are no federal laws, regulations, or policies pertaining to wildfire that are relevant to the Project. State and local regulations, laws, and policies pertaining to wildfire relevant to the Project are included below.

4.20.2.1 State

California Public Resources Code includes fire safety regulations that restrict the use of equipment that may produce a spark, flame, or fire, require the use of spark arrestors on construction equipment that use an internal combustion engine, specify requirements for the safe use of gasoline-powered tools in fire hazard areas, and specify fire suppression equipment that must be provided on site for various types of work in fire-prone areas. These regulations include the following:

- Earthmoving and portable equipment with internal combustion engines would be equipped with a spark arrestor to reduce the potential for igniting a wildland fire (PRC Section 4442)
- Appropriate fire suppression equipment would be maintained during the highest fire danger period—from April 1 to December 1 (PRC Section 4428.

4.20.2.2 Local

Local Hazard Mitigation Plan. The County of Orange and OCFA LHMP (2021) promotes policy designed to protect residents, facilities, infrastructure, resources, private property, and the environment from natural hazards, including wildland and urban fire. The LHMP identifies goals and action items to improve hazard resiliency in Orange County. These include replacement of existing fire pumps, implementation of remote sensing and fire monitoring platforms, and reduction of combustible fuels within identified communities at risk of damage from wildfire.

Orange County Code (Section 7-8-50) requires a minimum of two fire extinguishers at oil well locations where drilling, servicing, or repair work is being conducted. Section 7-8-50 prohibits smoking within 50 feet of an oil or gas well. Section 7-8-50 also requires the use of exhaust mufflers to prevent the escape of flames, sparks, ignited carbon, and soot and requires land within 25 feet of an oil well to be kept clear of dry weeds, grass, and other combustible debris.

4.20.3 Impact Analysis

a) Substantially impair an adopted emergency response plan or emergency evacuation plan?

No Impact. As described in Section 4.9, *Hazards and Hazardous Materials*, no lane and road closures are proposed as part of permanent sealing operations. The short-term and minimal use of construction equipment would not result in substantial increases in traffic and therefore would not impact existing

evacuation routes. The Project would not conflict with or impede the implementation of the goals or action items included within the County of Orange and OCFA LHMP (County of Orange 2021). Therefore, the Project would not substantially impair an adopted emergency response plan or emergency evacuation plan, and no impact would occur.

b) Due to slope, prevailing winds, and other factors, exacerbate wildfire risks, and thereby expose project occupants to, pollutant concentrations from a wildfire or the uncontrolled spread of a wildfire?

Less Than Significant. The Project site is located within foothills subject to Santa Ana winds, which are strong, dry offshore winds that that affect Southern California in autumn and winter (AccuWeather 2024). Santa Ana winds could push potential wildfire and wildfire smoke to areas with residential development, thereby exposing nearby residences to pollutant concentrations associated with wildfire.

Water would be available during hot work to reduce potential for fires and other hot-work related issues. All cutting and welding would comply with California Fire Code 3305.6 and National Fire Protection Association 51B and a Fire Watch procedure would conform to California Fire Code 3305.5. The Project proponent would be responsible for maintaining fire extinguishers in accordance with California Fire Code 3315 and 906 as well as providing monitoring and training to prevent vehicle traffic off roadways to ensure activities do not impact dry brush and lead to fire. Construction personnel would be required to comply with applicable PRC and local regulations to minimize fire risk and remove combustible debris prior to permanent sealing operations. Compliance with these regulations would reduce the potential for a fire to occur during permanent sealing and therefore reduce the potential for the Project to expose residences to pollutant concentrations from wildfire. Therefore, the Project would not exacerbate wildfire risk due to slope or prevailing winds which could expose occupants to substantial pollutant concentrations or the uncontrolled spread of a wildfire. This impact would be less than significant.

c) Require the installation or maintenance of associated infrastructure (such as roads, fuel breaks, emergency water sources, power lines or other utilities) that may exacerbate fire risk or that may result in temporary or ongoing impacts to the environment?

No Impact. The Project would not require the installation or maintenance of roads, fuel breaks, emergency water sources, power lines, or other utilities and

therefore would not exacerbate the fire risk associated with this infrastructure. No impact would occur.

d) Expose people or structures to significant risks, including downslope or downstream flooding or landslides, as a result of runoff, post-fire slope instability, or drainage changes?

Less Than Significant. As described in Section 4.10, *Hydrology and Water Quality*, the Project site is within an area of minimal flood hazard and therefore are not subject to flooding. As described in Section 4.7, *Geology and Soils,* the Project site is not susceptible to landslides. The Project would require minimal ground disturbing activities over approximately 0.5 acres, and prior to permanent sealing, the graded soil would be compacted to stabilize the soil surface, thereby reducing the potential for soil instability. As described in Threshold 20(b) above, permanent sealing operations would occur in compliance with applicable PRC and local regulations to minimize fire risk. Compliance with these regulations would reduce the potential for a fire to occur during permanent sealing and therefore reduce the potential to expose nearby residences to significant landslide risk as a result of post-fire slope instability. With adherence to applicable regulations, the Project would not expose people or structures to significant risks including downslope or downstream flooding or landslides as a result of runoff, post-fire slope instability, or drainage changes. This impact would be less than significant.

4.20.4 Mitigation Measures

The Project would not result in significant wildfire impacts; therefore, no mitigation is required.

4.21 MANDATORY FINDINGS OF SIGNIFICANCE

MANDATORY FINDINGS OF SIGNIFICANCE –	Potentially Significant Impact	Less Than Significant with Mitigation	Less Than Significant Impact	No Impact
a) Does the project 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) Does the project 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 past, present and probable future projects.)	☐	☒	☐	☐
c) Does the project have environmental effects which will cause substantial adverse effects on human beings, either directly or indirectly?	☐	☐	☒	☐

a) Does the project 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?

Less Than Significant. The Project is limited to activities that would occur at the Project site. Therefore, the Project would not impact the total mapped habitat of a species. The Project does not include large-scale activities which threaten to eliminate species or the entirety of their habitats. Due to the Project sites' local scale and distance from riparian habitat (approximately 500 feet west of Brea Creek), the Project would not 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, or substantially reduce the number or restrict the range of a rare or endangered plant or animal. This impact would be less than significant.

As discussed in Section 4.5, *Cultural Resources*, there are no historical resources located at the Project site and the Project would not cause a substantial change in the significance of a historic resource. There is a low potential to encounter archaeological resources at the Project site, as the well has been previously disturbed and minimal grading is required. With the implementation of **MM CUL-1** and **MM CUL-2**, the Project would implement standard procedures for evaluation, consultation, avoidance, and data recovery of unanticipated archaeological resources. Because no important examples of the major periods of California history or prehistory are known to be present at the Project site, the Project would not eliminate important examples of the major periods of California history or prehistory. This impact would be less than significant.

b) Does the project 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 past, present and probable future projects.)

Less Than Significant With Mitigation. As described in Sections 4.1 through 4.20, with respect to all environmental issues, the Project would either have no impact, a less than significant impact, or impacts would be reduced to a less than significant level with implementation of required mitigation. Cumulatively considerable impacts could occur if the construction or operation of other projects coincides with the Project in the same vicinity of the Project site, such that similar impacts of multiple projects combine to expose a resource to greater levels of impacts than what would occur in accordance with the Project. Where it was determined the Project would have no impact (i.e., agriculture and forestry resources, energy, land use and planning, mineral resources, population and

housing, public services, recreation), no cumulative operational impacts would be exacerbated as a result of the Project. In addition, certain resource areas (e.g., cultural resources, geology and soils, hazards and hazardous materials, and tribal cultural resources) are by their nature specific to a Project location such that impacts at one location do not add to impacts at other locations and therefore would not result in cumulative impacts.

No cumulative projects are in proximity to the Project site (County of Orange 2024b). The Project involves short-term construction and therefore would not contribute to long-term cumulative impacts to increases in waste use, wastewater generation, solid waste generation, or VMT. The significance of project-specific air quality and GHG emissions impacts are dependent on a project's potential to contribute considerably to cumulative air quality and GHG emissions. As evaluated in Sections 4.3 and 4.8, the Project would not generate cumulatively considerable criteria air pollutant emissions in excess of SCAQMD thresholds or GHG emissions that would conflict with applicable plans, policies, or regulations to reduce GHG emissions. Therefore, the Project's contribution to cumulative air quality and GHG emissions impacts would not be cumulatively considerable. Because no cumulative projects are in proximity to the Project site, cumulative noise and vibration impacts would not occur.

Cumulative impacts to hydrology and water quality could occur if cumulative development would introduce pollutants within the same watershed and receiving waters as the Project. Cumulative projects undertaken by CalGEM would be required to implement construction BMPs, which would reduce the generation of cumulative stormwater pollutants. Cumulative permanent sealing operations in the State would continue to be required to adhere to the Construction General Permit, National Pollutant Discharge Elimination System, and MS4 Permitting regulations. With adherence to Project incorporated measures and existing regulations to protect water quality, it is anticipated cumulative water quality impacts would be less than significant. Therefore, the Project would not contribute considerably to cumulative water quality impacts.

Similar to the Project, cumulative development could also result in impacts to biological resources and would be subject to similar regulatory requirements as the Project, including the FESA, CESA, and MBTA. These regulations are designed to protect individual species and their habitats. Cumulative projects would be required to abide by the provisions of these regulations and could potentially be subject to review from agencies including, but not limited to, CDFW and USFWS, to ensure potential impacts to species or habitat are minimized. However, existing

regulatory requirements alone cannot guarantee species loss, habitat loss, or other impact to biological resources due to cumulative development. The Project would incorporate **MM BIO-1** through **MM BIO-7** to reduce potential impacts to biological resources to a less than significant level. As a result, the Project would not have a cumulatively considerable contribution to cumulative impacts on biological resources.

For the reasons discussed above, the Project would not have a cumulatively considerable contribution to cumulative impacts.

c) Does the project have environmental effects which will cause substantial adverse effects on human beings, either directly or indirectly?

Less Than Significant. Adverse effects on human beings are typically associated with air quality, hazards and hazardous materials, noise, and wildfire impacts. These impacts are addressed in Section 4.3, *Air Quality*, Section 4.9, *Hazards and Hazardous Materials*, Section 4.13, *Noise,* and Section 4.20, *Wildfire*. As discussed in detail in these sections, the Project would result in less than significant impacts related to air quality, hazards, noise, and wildfire. Therefore, the Project would have a less than significant impact on human beings.

5.0 MITIGATION MONITORING AND REPORTING PROGRAM

Mitigation Measure # Mitigation Title	Mitigation Description	Timing and Method of Verification	Reporting	Responsible Agency
MM BIO-1: Pre-disturbance Biological Survey Report	Per CalGEM's BMPs, a pre-disturbance biological survey shall be conducted by a Qualified Biologist. The pre-disturbance biological survey shall consist of walking belt transects to accomplish 100% coverage of the Project site plus a 100-foot buffer. During the survey, all direct and indirect observations of special-status biological resources shall be noted if encountered and recorded using a handheld Global Positioning Satellite device and on field forms. Habitat shall be evaluated by the Qualified Biologist to determine the potential for biological resource monitoring and/or surveys for species that are seasonal or require focused surveys during specified periods (e.g., special-status plants). If no such follow-up surveys are required to determine current status of special-status biological resources on the Project site, that information shall be included in the biological survey report to be completed within 14 days of the pre-disturbance survey. If follow-up surveys are required, a follow-up survey report shall be completed by the Qualified Biologist and submitted to the Project proponent within 14 days of the	Prior to construction. Provide surveys conducted in accordance with mitigation requirements to CalGEM. The survey report will contain avoidance and minimization measures as applicable.	Results from the surveys must be submitted to the USFWS, CDFW and with the CalGEM submittal.	USFWS; CDFW; CalGEM

Mitigation Measure # Mitigation Title	Mitigation Description	Timing and Method of Verification	Reporting	Responsible Agency
	follow-up survey. To meet seasonal requirements stipulated by Species Protocols, some surveys may be required more than 30 days prior to ground disturbance(s). In such cases, follow-up pre-disturbance surveys shall also be required within 30 days prior to initiation of the ground disturbance to confirm that no changes in species status or occupancy have occurred within the survey area. The Project proponent shall maintain copies of all pre-disturbance biological survey reports completed by the Qualified Biologist. The pre-disturbance biological survey report shall include a map of the proposed Project boundary, biological survey area, special-status species observations (when observed), areas of potential and/or occupied habitat (if any), areas identified for avoidance, and a list of all applicable MMs that shall be implemented for the respective Project activity site.			
MM BIO-2: Worker Environmental Awareness Training	Per CalGEM's BMPs, the Qualified biologist shall develop and implement a Worker Environmental Awareness Program (WEAP) for all personnel that may access the Project site. WEAP trainings shall be conducted for each individual prior to their first access into	Prior to construction. Training records.	Submittal of WEAP program. Submittal of training records.	Orange County; CalGEM

Mitigation Measure # Mitigation Title	Mitigation Description	Timing and Method of Verification	Reporting	Responsible Agency
	the Project site. The Project proponent shall conduct a presentation with material given on site or off site by trained personnel (e.g., Qualified Biologist or assigned Company Environmental Specialists). WEAP trainings shall cover an overview of the laws and regulations governing the protection of biological resources; a description of protected (i.e., special status) species known to occur or with the PTO in the Project vicinity; their status and legal protections; what is considered habitat and disturbance; biological resource protection measures; and a list of designated Qualified Biologist contacts. The Project proponent shall provide general awareness to workers and supply materials to assist workers in recognizing protected species that may occur on the Project area, avoidance, and minimization measures to protect biological resources, and how to report biological resources if observed on site. In addition, the WEAP shall implement the following: 1. The WEAP shall emphasize the need to avoid contact with wildlife, to avoid entry into areas where biological resources have been identified for avoidance, to review Project specific pre-disturbance biological results reports and maps, and			

Mitigation Measure # Mitigation Title	Mitigation Description	Timing and Method of Verification	Reporting	Responsible Agency
	to implement all applicable avoidance and minimization measures included in the Project specific pre-disturbance biological survey results report. 2. All Project personnel present on the Project site must sign a statement verifying that they have completed the WEAP, and that they understand the biological requirements during Project activities. The Project proponent shall maintain a list of all persons who have completed the WEAP and shall provide the list to CalGEM upon request.			
MM BIO-3: Sensitive Reptile Species Avoidance	If the pre-disturbance biological survey identifies the presence of red-diamond rattlesnake, coastal whiptail, coast horned lizard, coast patch-nose snake or any other special status reptile species within the Project site, the following measures shall be implemented. 1. If any red-diamond rattlesnake, coastal whiptail, coastal horned lizard, coast patch-nose snake or any other reptile species of special concern are observed during permanent sealing, the identified special-status reptile(s) shall be allowed to move out of the Project site on their own or shall be removed from the Project site and released in adjacent	Prior to construction. Provide surveys conducted in accordance with mitigation requirements to CalGEM. The survey report will contain avoidance and minimization measures as applicable.	Results from the surveys must be submitted to the USFWS, CDFW and with the CalGEM submittal.	USFWS; CDFW; CalGEM

Mitigation Measure # Mitigation Title	Mitigation Description	Timing and Method of Verification	Reporting	Responsible Agency
	suitable habitat by the Qualified Biologist. The Qualified Biologist shall have all appropriate permits in place prior to handling any special-status reptiles or any other wildlife. 2. All construction equipment and construction personnel vehicles shall be checked prior to moving them, to ensure that no special-status reptile is under equipment/vehicles. If any individuals are detected beneath equipment or vehicles, the equipment or vehicles shall be left in place until the individual(s) moves out of harm's way on its own accord, as determined by a Qualified Biologist.			
MM BIO-4: Sensitive Plant Species Avoidance	If the pre-disturbance survey determines that additional targeted plant surveys are required for the detection of sensitive plant species within the permanent sealing footprint or a 50-foot buffer, rare plant surveys shall be conducted during the appropriate season for their detection. If surveys for special-status plants occur in a year during which rainfall totals reach at least 80 percent of normal, survey results shall be considered valid for five years. For surveys conducted in years of less-than-ideal rainfall (less than 80 percent average	Prior to construction. Provide surveys conducted in accordance with mitigation requirements to CalGEM. The survey report will contain avoidance and	Results from the surveys must be submitted to the USFWS, CDFW and with the CalGEM submittal.	USFWS; CDFW; CalGEM

Mitigation Measure # Mitigation Title	Mitigation Description	Timing and Method of Verification	Reporting	Responsible Agency
	rainfall), results shall be valid for only one year. A survey of appropriate reference populations shall be necessary to support survey findings for the Project site. If the pre-disturbance survey identifies special-status plant populations, the following measures shall be implemented: 1. Any special-status plant populations detected shall be fully described, well documented, and mapped via a Global Positioning Satellite device, and appropriately georeferenced on Project maps. For each population occurrence detected, a CNPS Field Survey Form or written equivalent shall be prepared. 2. If pre-construction surveys detect the presence of any State-listed plant species, the plant populations shall be protected from permanent sealing operations by implementing applicable impact avoidance measures consistent with CNPS's mitigation guidelines (1998 or more current) and with recommendations in the Recovery Plan for Upland Species of the San Joaquin Valley, California (USFWS 1998). If impact avoidance measures have not been established for the species, plant populations shall be buffered from new	minimization measures as applicable.		

Mitigation Measure # Mitigation Title	Mitigation Description	Timing and Method of Verification	Reporting	Responsible Agency
	ground disturbance activities by a minimum of 50 feet, as determined by a Qualified Biologist. A smaller buffer may be established, provided there are adequate measures such as placement of a physical barrier (e.g., construction fencing) in place to avoid the destruction of individuals, with the approval of CalGEM. The buffer zone shall be established around these areas to eliminate potential disturbance to the plants from human activity and any other potential sources of disturbance including human trampling, erosion, and dust. A Qualified Biologist shall be on site, at minimum, during initial ground disturbing activities to ensure that sensitive plant species are not impacted. 3. If any non-State listed special-status plants are identified that may be impacted by new ground-disturbing activities, populations shall be avoided, when possible, by a minimum 50-foot buffer zone as determined by a Qualified Biologist. If non-State protected special-status plant species are unavoidable, up to 20% of a population or each discrete occurrence may be disturbed without further			

Mitigation Measure # Mitigation Title	Mitigation Description	Timing and Method of Verification	Reporting	Responsible Agency
	measures required. If greater than 20% of a population or each discrete occurrence shall be destroyed, a Rare Plant Salvage and Restoration Plan shall be submitted to CalGEM for approval. The plan shall include the following at a minimum: a. Relocation of individual plant(s) to an appropriate habitat area free from Project-related ground disturbance; b. Boundaries of non-State protected special-status plant species shall be geo referenced and mapped; c. Topsoil removed during site clearing where non-State protected special-status plant species are located shall be spread onto existing disturbed areas within the same geographic area and in the same soil type; d. Post-construction monitoring to confirm continued site occupancy by special-status plants affected by ground disturbance; and e. Adaptive management or other contingency measures; and/or weed management.			

Mitigation Measure # Mitigation Title	Mitigation Description	Timing and Method of Verification	Reporting	Responsible Agency
MM BIO-5: Coastal California Gnatcatcher	If the pre-disturbance survey determines there is potential habitat present within the Project footprint (coastal sage scrub), protocol level surveys will be conducted prior to the start of work. The Project proponent shall conduct USFWS protocol surveys in suitable habitat within the Project site and all areas within 500 feet of access or construction-related disturbance areas. Suitable habitats, according to the protocol, include "coastal sage scrub, alluvial fan, chaparral, or intermixed or adjacent areas of grassland and riparian habitats." A permitted biologist shall perform these surveys according to the USFWS coastal California Gnatcatcher Presence/Absence Survey Guidelines (USFWS 1997). If the species is not detected during these surveys, no further action is required. If a territory or nest is confirmed during protocol surveys, the USFWS shall be notified to determine whether authorization is necessary. No clearing of occupied habitat (as determined by the presence of a nest or territory) shall occur during the breeding season (February–August). Clearing of occupied habitat during the non-breeding season must be conducted at the discretion	Prior to construction. Provide surveys conducted in accordance with mitigation requirements to CalGEM. The survey report will contain avoidance and minimization measures as applicable.	Results from the surveys must be submitted to the USFWS, CDFW and with the CalGEM submittal.	USFWS; CDFW; CalGEM

Mitigation Measure # Mitigation Title	Mitigation Description	Timing and Method of Verification	Reporting	Responsible Agency
	of a qualified monitoring biologist and authorized by the USFWS. If coastal California gnatcatcher territory is confirmed within the Project disturbance footprint by USFWS protocol surveys, suitable habitat for the species impacted by the Project will be mitigated at a minimum 1:1 ratio. Mitigation for impacted California buckwheat scrub and purple sage scrub will be accomplished either through preparation and implementation of a Habitat Mitigation and Monitoring Plan or through providing funding to a third-party organization, conservation bank or in-lieu fee program for in-kind habitat creation or restoration.			
MM BIO-6: Crotch's Bumble Bee Surveys and Avoidance	If, at the commencement of permanent sealing operations, Crotch's bumble bee is still considered a CESA candidate species or has been listed as threatened or endangered under CESA, the Project will implement the following measures to avoid, minimize, and offset Project impacts to the species: • A Qualified Biologist will conduct a pre-construction survey for Crotch's bumble bee and nests in Project areas with suitable nesting habitat prior to initial ground-disturbing activities, such as	Prior to construction. Provide surveys conducted in accordance with mitigation requirements to CalGEM. The survey report will contain avoidance and minimization	Results from the surveys must be submitted to the USFWS, CDFW and with the CalGEM submittal.	USFWS; CDFW; CalGEM

Mitigation Measure # Mitigation Title	Mitigation Description	Timing and Method of Verification	Reporting	Responsible Agency
	staging and vegetation clearing. There will be multiple surveys during the nesting season. The purpose of the surveys will be to identify active nest colonies inside of permanent and temporary impact areas. • If active Crotch's bumble bee nests are observed within the Project site or within a 50-foot buffer surrounding the site, an appropriate no-disturbance buffer (as determined by a Qualified Biologist) will be established around the nest to reduce the risk of disturbance or accidental take. The buffer will provide at least 50 feet of clearance around active nest entrances. (Note: inaccessible areas outside of the Project site can be surveyed using binoculars from the Project edge or from access roads.) • If establishment of a no-disturbance buffer is feasible, construction activities will not occur within the buffer until a Qualified Biologist determines that the colony is no longer active (i.e., no Crotch's bumble bees are seen flying in or out of the nest for three consecutive days, indicating the colony has completed its nesting season and the next season's queens have dispersed	measures as applicable.		

Mitigation Measure # Mitigation Title	Mitigation Description	Timing and Method of Verification	Reporting	Responsible Agency
	from the colony). Once the nest has been determined to be inactive, construction activities within the no-disturbance buffer(s) will be allowed to resume. • If avoidance of a no-disturbance buffer is not feasible, the Qualified Biologist will consult with CDFW regarding potential encroachment into the no-disturbance buffer with other measures implemented. Work would not begin in the no-disturbance buffer without CDFW approval. • If avoidance of the nest is not feasible, the Qualified Biologist will consult with the CDFW regarding the potential for Project activities to result in take of the Crotch's bumble bee and will comply with all avoidance, minimization, and compensatory mitigation requirements set forth in any incidental take permit issued for the Project by CDFW.			
MM BIO-7: Nesting Bird Pre-construction Surveys	A pre-disturbance nesting bird survey for active bird nests shall be conducted by a Qualified Biologist no more than 10 days prior to the start of any ground disturbances that shall take place during the bird nesting season (February 1 through August 31). Surveys shall follow USFWS and CDFW	Prior to construction. Provide surveys conducted in accordance with mitigation	Results from the surveys must be submitted to the USFWS, CDFW and with the CalGEM submittal.	USFWS; CDFW; CalGEM

Mitigation Measure # Mitigation Title	Mitigation Description	Timing and Method of Verification	Reporting	Responsible Agency
	guidance and/or protocols, as applicable. If ground-disturbing activities were initiated prior to, and continue into the bird nesting season without a break in activity of more than one week, no nesting bird survey is necessary. If no active nests or nesting birds are identified during the pre-disturbance survey, then ground-disturbing activities may proceed, and no further procedures shall be required for nesting birds. If active nests are identified, the following shall be included as part of the pre-disturbance active bird nest survey results report. Active bird nest(s) shall be avoided by establishing a minimum 250-foot non-disturbance buffer around it, a minimum 500-foot non-disturbance buffer around any active non-listed raptor nest(s), or a minimum 0.5-mile non-disturbance buffer around any federal or State-listed raptor nest(s) until the breeding season has ended. Non-disturbance buffers can be removed when a Qualified Biologist has determined that the birds have fledged, are no longer reliant on the nest or parental care for survival and adult birds are no longer occupying the nest, or the nest is no longer active (e.g., failed). Reduced non-	requirements to CalGEM. The survey report will contain avoidance and minimization measures as applicable.		

Mitigation Measure # Mitigation Title	Mitigation Description	Timing and Method of Verification	Reporting	Responsible Agency
	disturbance buffers may be implemented if a Qualified Biologist concludes that work within the buffer area shall not be likely to cause nest avoidance or abandonment (e.g., when the disturbance area is concealed from a nest site by topography, when work activities shall have a limited duration within the buffer area, or when the species has been known to tolerate higher levels of disturbance). If reduced non-disturbance buffers are implemented, a Qualified Biologist shall monitor the active nest(s) before and during construction to establish a baseline for nest behavior and determine whether construction activities are adversely affecting the nest. The pre-disturbance monitoring of the nest site shall occur on at least two occasions of at least one hour each during anticipated work hours prior to permanent sealing operations to establish a behavioral baseline. The monitoring during permanent sealing shall be within the buffer area to detect behavioral changes of the birds because of the Project (e.g., adults flushed off the nest) that could lead to nest abandonment. If behavioral changes are observed, the work causing that change shall cease within the buffer area until the nest has fledged or is determined by the Qualified Biologist to no			

Mitigation Measure # Mitigation Title	Mitigation Description	Timing and Method of Verification	Reporting	Responsible Agency
	longer be active. The Qualified Biologist shall have the authority to halt or redirect construction activities to protect nesting birds from permanent sealing operations. Any reduction of buffer areas for State or federal listed species during the nesting season must be authorized by CDFW and/or USFWS.			
MM TRI-1: Tribal Cultural Sensitivity Training Program	All project employees conducting work in the Project area identified in the Project Description, including the road access areas, shall complete a Cultural Sensitivity Training Program including training dedicated to tribal resources protection.	Prior to all construction activities.	All specific provisions of the mitigation and State law shall be implemented.	CalGEM; Native American Heritage Commission
MM CUL-1: Unanticipated Discovery of Cultural Resources	In the event that archaeological resources are unexpectedly encountered during ground-disturbing activities, work within 50 feet of the find shall halt and an archaeologist meeting the Secretary of the Interior's Professional Qualifications Standards for Archaeology shall be contacted immediately to evaluate the resource. If the resource is determined by the qualified archaeologist to be prehistoric, then a Native American representative shall also be contacted to participate in the evaluation of the resource. If the qualified archaeologist and/or Native American representative determines it to be appropriate, archaeological testing for	During all construction Activities. On-site monitoring.	A. All work shall cease within 100 feet of the find. B. An unanticipated discovery plan shall be prepared and submitted. C. A qualified archaeologist shall evaluate any unanticipated site for significance and recommend appropriate	CalGEM; Native American Heritage Commission

Mitigation Measure # Mitigation Title	Mitigation Description	Timing and Method of Verification	Reporting	Responsible Agency
	CRHR eligibility shall be completed. If the resource proves to be eligible for the CRHR, and significant impacts to the resource cannot be avoided via Project redesign, a qualified archaeologist shall prepare a data recovery plan tailored to the physical nature and characteristics of the resource, per the requirements of CCR Section 15126.4(b)(3)(C). The data recovery plan shall identify data recovery excavation methods, measurable objectives, and data thresholds to reduce any significant impacts to cultural resources related to the resource. Pursuant to the data recovery plan, the qualified archaeologist and Native American representative, as appropriate, shall recover and document the scientifically consequential information that justifies the resource's significance.		treatment measures. D. The qualified archaeologist shall outline the recommendations for data recovery and curation in a report for submittal and review for the file. E. CalGEM shall determine if or when ground disturbing activities within 50 feet of the find can or cannot resume.	
MM CUL-2: Unanticipated Discovery of Human Remains	The discovery of human remains is always a possibility during ground disturbing activities. If human remains are found, the State of California Health and Safety Code Section 7050.5 states that no further disturbance shall occur until the County Coroner has made a determination of origin and disposition pursuant to Public Resources Code Section 5097.98. In the event of an unanticipated discovery of human remains, the County Coroner must be notified immediately. If the	During all construction activities. On-site monitoring.	All specific provisions of the mitigation and State law shall be implemented.	CalGEM; County Coroner; Native American Heritage Commission; Most Likely Descendant

Mitigation Measure # Mitigation Title	Mitigation Description	Timing and Method of Verification	Reporting	Responsible Agency
	human remains are determined to be prehistoric, the Coroner will notify the Native American Heritage Commission, which will determine and notify a most likely descendant (MLD). The MLD shall complete the inspection of the site and provide recommendations for treatment to the landowner within 48 hours of being granted access.			

6.0 REFERENCES

6.1 BIBLIOGRAPHY

AccuWeather. 2024. What are Santa Ana Winds? Accessible at: https://www.accuweather.com/en/weather-news/what-are-santa-ana-winds-2/343027 (accessed March 2024).

Brea, City of. 2024. Find Property By General Plan. Accessible at: https://storymaps.arcgis.com/stories/d62cbacbd0674116bd426cee5017cb9c (accessed March 2024).

California Air Resources Board (CARB). 2024. Overview: Diesel Exhaust and Health. Accessible at: https://ww2.arb.ca.gov/resources/overview-diesel-exhaust-and-health (accessed February 2024).

_____. 2022a. 2022 Scoping Plan for Achieving Carbon Neutrality. Accessible at: https://ww2.arb.ca.gov/sites/default/files/2022-12/2022-sp_1.pdf (accessed February 2024).

_____. 2022b. 2022 Scoping Plan Appendix D Local Actions. Accessible at: https://ww2.arb.ca.gov/sites/default/files/2022-11/2022-sp-appendix-d-local-actions.pdf (accessed February 2024).

California Department of Conservation (DOC). 2023a. California Important Farmland Finder. Accessible at: https://maps.conservation.ca.gov/DLRP/CIFF/ (accessed March 2024).

_____. 2023b. California Williamson Act Enrollment Finder. Accessible at: https://maps.conservation.ca.gov/dlrp/WilliamsonAct/App/index.html (accessed March 2024).

_____. 2022. EQZ App. Accessible at: https://maps.conservation.ca.gov/cgs/EQZApp/app/ (accessed March 2024).

California Department of Conservation, Geologic Energy Management Division (CalGEM). 1995. Update of Mineral Land Classification of Portland Cement Concrete Aggregate in Ventura, Los Angeles, and Orange Counties, California, Part III – Orange County.

California Department of Finance. 2024. E-5 Population and Housing Estimates for Cities, Counties, and the State, 2020-2023. Accessible at: https://dof.ca.gov/Forecasting/Demographics/Estimates/e-5-population-and-housing-estimates-for-cities-counties-and-the-state-2020-2023/ (accessed March 2024).

California Department of Forestry and Fire Protection (CAL FIRE). 2023. FHSZ Viewer. Accessible at: https://egis.fire.ca.gov/FHSZ/ (accessed March 2024).

California Department of Resources, Recycling, and Recovery. 2024. SWIS Facility/Site Activity Details: Frank R. Bowerman Landfill. Accessible at: https://www2.calrecycle.ca.gov/SolidWaste/SiteActivity/Details/2767?siteID=2103 (accessed March 2024).

California Department of Transportation (Caltrans). 2024. California State Scenic Highway System Map. Accessible at: https://caltrans.maps.arcgis.com/apps/webappviewer/index.html?id=465dfd3d807c46cc8e8057116f1aacaa (accessed March 2024).

_____. 2020. Transportation and Construction Vibration Guidance Manual. Accessible at: https://dot.ca.gov/-/media/dot-media/programs/environmental-analysis/documents/env/tcvgm-apr2020-a11y.pdf (accessed February 2024).

California Department of Water Resources [CDWR]. 2004. Coastal Plain of Orange County Groundwater Basin. Accessible at: https://water.ca.gov/-/media/DWR-Website/Web-Pages/Programs/Groundwater-Management/Bulletin-118/Files/2003-Basin-Descriptions/8_001_CoastalPlainofOrangeCounty.pdf (accessed March 2024).

California Geological Survey. 2002. Note 36 – California Geomorphic Provinces. Accessible at: https://www.conservation.ca.gov/cgs/Documents/CGS-Note-36.pdf (accessed March 2024).

California Governor's Office of Planning and Research. 2018. Technical Advisory on Evaluating Transportation Impacts in CEQA. Accessible at: https://opr.ca.gov/docs/20180416-743_Technical_Advisory_4.16.18.pdf (accessed March 2024).

California Energy Commission. 2024. Gas Consumption by County. Accessible at: http://www.ecdms.energy.ca.gov/gasbycounty.aspx (accessed March 2024).

_____. 2023. California Annual Retail Fuel Outlet Report Results (CEC-A15). Accessible at: https://www.energy.ca.gov/data-reports/energy-almanac/transportation-energy/california-retail-fuel-outlet-annual-reporting (accessed March 2024).

California Natural Resources Agency. 2019. California's Fourth Climate Assessment Statewide Summary Report. Accessible at: https://www.energy.ca.gov/sites/default/files/2019-11/Statewide_Reports-SUM-CCCA4-2018-013_Statewide_Summary_Report_ADA.pdf (accessed February 2024).

California Office of Historic Preservation. 2024. California Historical Resources. Accessible at: https://ohp.parks.ca.gov/ListedResources/?view=county&criteria=30 (accessed March 2024).

Corona, City of. 2019. Airport: Procedures, Traffic Pattern, and Noise Sensitive Areas. Accessible at: https://www.coronaca.gov/home/showpublisheddocument/17727/637177827131200000 (accessed February 2024).

Federal Emergency Management Agency. 2024. FEMA Flood Map Service Center. Accessible at: https://msc.fema.gov/portal/search? (accessed March 2024).

Federal Highway Administration. 2011. Highway Traffic Noise: Analysis and Abatement Guidance (FHWA-HEP-10-025). Accessible at: https://www.fhwa.dot.gov/environment/noise/regulations_and_guidance/analysis_and_abatement_guidance/revguidance.pdf (accessed February 2024).

Federal Transit Administration (FTA). 2018. Transit Noise and Vibration Impact Assessment Manual. Accessible at: https://www.transit.dot.gov/sites/fta.dot.gov/files/docs/research-innovation/118131/transit-noise-and-vibration-impact-assessment-manual-fta-report-no-0123_0.pdf (accessed February 2024).

Intergovernmental Panel on Climate Change (IPCC). 2021. Climate Change 2021: The Physical Science Basis. Contribution of Working Group I to the Sixth Assessment Report of the Intergovernmental Panel on Climate Change [Masson-Delmotte, V., P. Zhai, A. Pirani, S. L. Connors, C. Péan, S. Berger, N. Caud, Y. Chen, L. Goldfarb, M. I. Gomis, M. Huang, K. Leitzell, E. Lonnoy, J.B.R. Matthews, T. K. Maycock, T. Waterfield, O. Yelekçi, R. Yu and B. Zhou (eds.)] Cambridge University Press. Accessible at: https://www.ipcc.ch/report/ar6/wg1/downloads/report/IPCC_AR6_WGI_Full_Report.pdf (accessed February 2024).

Morton, D.M. and F.K. Miller. 2006. Geologic map of the San Bernardino and Santa Ana 30' x 60' quadrangles, California. [map.] United States Geological Survey, Open-File Report OF-2006-1217, scale 1:100,000.

National Park Service. 2024. National Register Database and Research. Accessible at: https://www.nps.gov/subjects/nationalregister/database-research.htm (accessed March 2024).

Norris, R.M., and R.W. Webb. 1976. Geology of California. John Wiley and Sons, Inc. New York.

Orange, County of. 2024a. Historic Sites. Accessible at: https://www.ocparks.com/historic-sites (accessed March 2024).

_____. 2024b. Current Projects. https://ocds.ocpublicworks.com/service-areas/oc-development-services/planning-development/current-projects (accessed March 2024).

_____. 2021. Local Hazard Mitigation Plan. Accessible at: https://www.ocsheriff.gov/sites/ocsd/files/2022-03/2021%20County%20of%20Orange%20and%20Orange%20County%20Fire%20Authority%20Local%20Hazard%20Mitigation%20Plan.pdf (accessed March 2024).

_____. 2020. Transportation Implementation Manual. Accessible at: https://ocds.ocpublicworks.com/sites/ocpwocds/files/2022-02/TIM_2021_FINAL_signed_with_Resolution_Number.pdf (accessed March 2024).

_____. 2016. Zoning Unincorporated County of Orange, California. Accessible at: https://ocds.ocpublicworks.com/sites/ocpwocds/files/import/data/files/52866.pdf (accessed March 2024).

_____. 2012a. Resources Element. Accessible at: https://ocds.ocpublicworks.com/sites/ocpwocds/files/import/data/files/40235.pdf (accessed February 2024).

_____. 2012b. Safety Element. Accessible at: https://ocds.ocpublicworks.com/sites/ocpwocds/files/import/data/files/40234.pdf (accessed March 2024).

_____. 2012c. General Plan. Public Services and Facilities. Accessible at: https://ocds.ocpublicworks.com/sites/ocpwocds/files/import/data/files/8639.pdf (accessed March 2024).

_____. 2012d. General Plan. Land Use Element. Accessible at: https://ocds.ocpublicworks.com/sites/ocpwocds/files/2022-10/Adopted%20Land%20Use%20Element%20Amendment%20-%20Sept%202022.pdf (accessed March 2024).

_____. 2005. Scenic Highway Plan. Accessible at: https://ocds.ocpublicworks.com/sites/ocpwocds/files/import/data/files/8588.pdf (accessed March 2024).

Orange County Fire Authority (OCFA). 2024. OCFA FY 2023/24 Adopted Budget. Accessible at: https://ocfa.org/Uploads/Transparency/OCFA%202023-2024%20Adopted%20Budget.pdf (accessed March 2024). Operations Division 4. https://www.ocfa.org/AboutUs/Departments/OperationsDirectory/Division4.aspx (accessed March 2024).

Orange County Water District (OCWD). 2024. Groundwater Management. Accessible at: https://www.ocwd.com/what-we-do/groundwater-management/ (accessed March 2024).

_____. 2022. Basin 8-1 Alternative 2022 Update. Accessible at: https://www.ocwd.com/wp-content/uploads/05cbasin-8-1-alternative-2022-update.pdf (accessed March 2024).

Orange County Airport Land Use Commission. 2019. AELUP Notification Area for FMA. Accessible at: https://files.ocair.com/media/2021-05/influence-area-fullerton-muni.pdf?VersionId=NXvUATlB6XT2qatYXABQ5oT4A4wuKthA (accessed February 2024).

Paleobiology Database. 2024. The Paleobiology Database. Accessible at: http://paleobiodb.org/ (accessed March 2024).

Society of Vertebrate Paleontology. 2010. Standard Procedures for the Assessment and Mitigation of Adverse Impacts to Paleontological Resources. Society of Vertebrate Paleontology Impact Mitigation Guidelines Revision Committee. Accessible at: https://vertpaleo.org/wp-content/uploads/2021/01/SVP_Impact_Mitigation_Guidelines-1.pdf (accessed March 2024).

South Coast Air Quality Management District (SCAQMD). 2023. South Coast AQMD Air Quality Significance Thresholds. Accessible at: https://www.aqmd.gov/docs/default-source/ceqa/handbook/south-coast-aqmd-air-quality-significance-thresholds.pdf?sfvrsn=25 (accessed February 2024).

_____. 2022. 2022 Air Quality Management Plan (AQMP). Accessible at: https://www.aqmd.gov/docs/default-source/clean-air-plans/air-quality-

management-plans/2022-air-quality-management-plan/final-2022-aqmp/final-2022-aqmp.pdf?sfvrsn=16 (accessed February 2024).

_____. 2018. NAAQS and CAAQS Attainment Status for South Coast Air Basin. Accessible at: http://www.aqmd.gov/docs/default-source/clean-air-plans/air-quality-management-plans/naaqs-caaqs-feb2016.pdf?sfvrsn=14 (accessed February 2024).

_____. 2017. Meteorological Data for Dispersion Modeling. Accessible at: https://www.aqmd.gov/home/air-quality/meteorological-data/aermod-table-1 (accessed February 2024).

_____. 2009. Appendix C – Mass Rate LST Look-up Tables. Accessible at: https://www.aqmd.gov/docs/default-source/ceqa/handbook/localized-significance-thresholds/appendix-c-mass-rate-lst-look-up-tables.pdf?sfvrsn=2 (accessed February 2024).

_____. 2005. Guidance Document for Addressing Air Quality Issues in General Plans and Local Planning. Accessible at: https://www.aqmd.gov/docs/default-source/planning/air-quality-guidance/complete-guidance-document.pdf (accessed February 2024).

Southern California Association of Governments. 2020. Connect SoCal 2020. Accessible at: https://scag.ca.gov/read-plan-adopted-final-connect-socal-2020 (accessed February 2024).

State Water Resources Control Board (SWRCB). 2024a. GeoTracker. Accessible at: https://geotracker.waterboards.ca.gov/ (accessed March 2024).

_____. 2024b. GeoTracker. CIELO VISTA PROJECT SITE (SLT8R0573941). Accessible at: https://geotracker.waterboards.ca.gov/profile_report.asp?global_id=SLT8R0573941 98 (accessed February 2025).

United States Census Bureau. 2024a. QuickFacts, Brea. Accessible at: https://www.census.gov/quickfacts/fact/table/breacitycalifornia,US/PST045222 (accessed March 2024).

United States Department of Agriculture. 2017. National soil survey handbook, title 430-VI. Accessible at: https://directives.sc.egov.usda.gov (accessed March 2024).

United States Fish and Wildlife Service. 2024. National Wetlands Inventory. Web Mapper. Accessible at: https://fwsprimary.wim.usgs.gov/wetlands/apps/wetlands-mapper/ (accessed April 2024).

6.2 LIST OF PREPARERS

MRS Environmental, Inc.
1306 Santa Barbara Street
Santa Barbara, CA 93101

Managers/Authors	Greg Chittick, Project Description, Air Quality, Noise, Engineering
	Nicole Trezza, Document Management and Editing
	Dean Dusette, Document Review

Rincon Consultants, Inc.
250 East 1st Street, Suite 1400
Los Angeles, California 90012

Project Managers:	Megan Jones, MPP, Managing Principal
	George Dix, Project Manager
Authors:	Ethan Knox, Environmental Planner
	Vivian De Anda, Environmental Planner
	Nichole Yee, Environmental Planner
	Amber McEldowney, Environmental Planner
	Hannah Bireschi, Environmental Planner
	Erin Knight, Planner
	Abby Robles, GIS Analyst
	Isaac Kreger, Biologist
	Andrew McGrath, Paleontologist
	Josh Carman, Director/Noise Analysis
	Dario Campos, Technical Editor
	Yaritza Ramirez, Publishing Specialist
	Rachel Dobrolenski, Document Accessibility Specialist

APPENDIX A

PERMANENT SEALING EQUIPMENT AND WELL SITE PHOTOS

APPENDIX B

AIR QUALITY AND GREENHOUSE GAS EMISSIONS

APPENDIX C

CALIFORNIA NATURAL DIVERSITY DATABASE RESULTS AND POTENTIAL TO OCCUR TABLE