Groundwater Contamination Characterization Project

Initial Study – Mitigated Negative Declaration

prepared by

City of San Luis Obispo
Utilities Department
879 Morro Street
San Luis Obispo, California 93401
Contact: Shawna Scott, Special Projects Manager

prepared with the assistance of

Rincon Consultants, Inc.
1530 Monterey Street, Suite D
San Luis Obispo, California 93401

December 2024

RINCON CONSULTANTS, INC. SINCE 1994

Table of Contents

Tables

Figures

Appendices

Initial Study

1. Project Title

Groundwater Contamination Characterization Project

2. Lead Agency/Project Sponsor Name and Address

City of San Luis Obispo
Public Utilities Department
879 Morro Street
San Luis Obispo, California 93401

3. Contact Person and Phone Number

Shawna Scott, Special Projects Manager
City of San Luis Obispo
Public Utilities Department
879 Morro Street
San Luis Obispo, California 93401-3218

4. Project Location

The project is located within the City of San Luis Obispo in San Luis Obispo County, California. The project site is in the southern portion of the City along U.S. Highway 101 (U.S. 101) between Prado Road and Los Osos Valley Road within Assessor's Parcel Numbers 053-051-045, 053-052-045, 053-131-013, 053-141-012, 053-152-006, 053-152-008, 053-153-014, and 053-153-008.

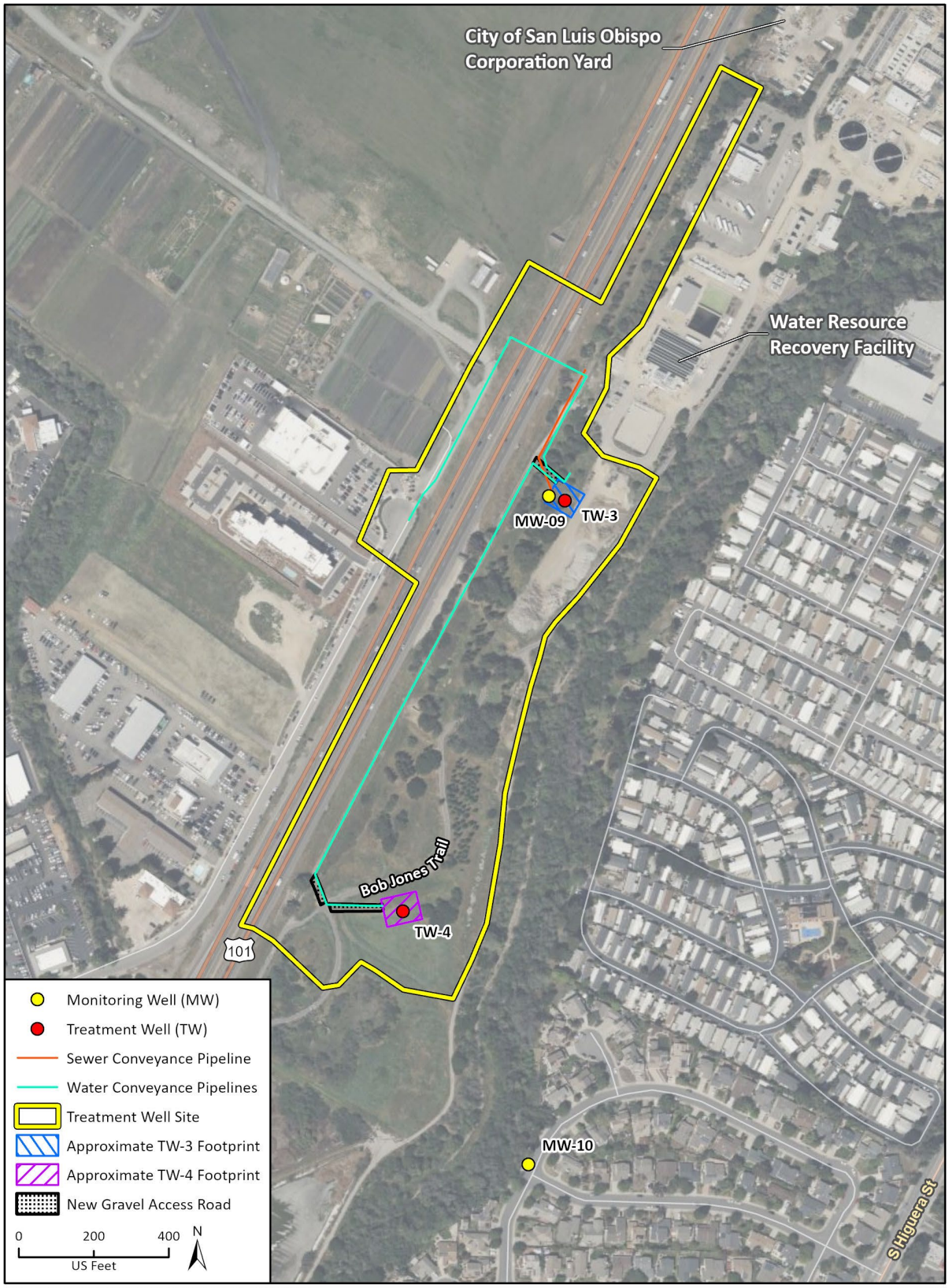
The approximately 30.4-acre project site encompasses a 22-acre site for the proposed groundwater extraction and treatment wells and up to 12 potential monitoring locations with a 100-foot surrounding buffer accounting for the remaining 8.4 acres. Figure 1 and Figure 2 provide a map illustration of the project components, in a regional and local context. The treatment well site is identified as a polygon boundary containing two treatment well locations TW-3 and TW-4,[1] and water conveyance and other associated infrastructure, and the monitoring well locations are identified as points MW-1 through MW-12. Representative site photographs are provided in Figure 3 and Figure 4.

[1] There are only two treatment wells proposed; however, during earlier planning stages the City considered other well locations in addition to TW-3 and TW-4.

Figure 1 Project Overview

Imagery provided by Microsoft Bing and its licensors © 2024.

Figure 2 Treatment Well Site



Imagery provided by Microsoft Bing and its licensors © 2024.

24-15910 EPS
Fig 2 Treatment Well Site

Figure 3 Site Photographs – General Project Location

Photograph 1. View of the treatment well site, east of U.S. 101, facing west. Photograph taken on April 26, 2024.

Photograph 2. View of the treatment well site, east of U.S. 101, facing northeast. Photograph taken on April 26, 2024.

Figure 4 Site Photographs - Treatment Well Location

Photograph 3. View of the water distribution connection area, west of U.S. 101, facing northeast. Photograph taken on April 26, 2024.

Photograph 4. View of the treatment well site, east of U.S. 101, facing northeast. Photograph taken on June 5, 2024.

5. General Plan and Zoning Designations

The southern portion of the treatment well site is zoned Conservation/Open Space (C/OS-20) and has a land use designation of Open Space. The northern portion is zoned Public Facility (PF) and Public Facility-Special Considerations (PF-S) with a land use designation of Public. Monitoring wells would be dispersed on City property or within City easements or right-of-way within the following zones: Conservation/Open Space (C/OS-20), Medium Density Residential (R-2), Low-Density Residential Specific Plan Overlay (R-1-SP), Public Facility (PF), Service Commercial (C-S), Service Commercial Mixed Use Overlay (C-S-MU), Service Commercial Planned Development Overlay (C-S-PD), Retail Commercial (C-R), Retail Commercial Planned development Overlay (C-R-PD), and Tourist Commercial (C-T). The monitoring wells are on land designated with the following land uses: Service and Manufacturing, General Retail, Tourist Commercial, Public, Low Density Residential, Medium Density Residential, and Open Space.

6. Description of Project

The purpose of the project is to clean-up and prevent PCE (tetrachloroethylene) contamination in drinking water supply wells in the San Luis Valley Subarea of the San Luis Obispo Valley Groundwater Basin and to expand local water supply resiliency and reduce reliance on local surface water supplies. In support of these goals, the City of San Luis Obispo proposes to install a network of monitoring wells and two treatment wells with associated utility infrastructure and a treatment system to monitor water levels and quality in the Subarea of the Basin, further characterize the PCE plume, and monitor the effectiveness of removing PCE impacted groundwater from the Subarea of the Basin. Funding for the implementation phase of the project includes California State Water Resources Control Board (SWRCB) Proposition 1 Groundwater Grant Program Agreement No. D2312550.

The project includes 12 possible monitoring well locations and one 22-acre site for the two proposed extraction treatment wells and the proposed water distribution line. The 12 monitoring well locations, water conveyance pipelines, and the 22-acre treatment well site collectively represent the project site. Details for the proposed treatment and monitoring wells are provided below.

The environmental analysis presented in this Initial Study includes all elements of the project described below, including but not limited to the construction and operation of the extraction/treatment wells, water conveyance lines, sewer lines, electrical lines, and associated infrastructure, treatment structures and equipment, buildings, fencing, monitoring wells, tree removals and compensatory replacement, ground disturbance, paving, and site restoration.

Monitoring Wells

The monitoring wells would be drilled using a hollow-stem auger or rotary sonic drilling method depending on the location and depth of the proposed location. The installation of the monitoring wells is anticipated to require an area measuring approximately 40 feet by 10 feet to account for the drill rig footprint. For the purposes of this assessment, a 100-foot buffer is added to the 40 feet by 10 feet to account for the work zone to accommodate the support truck and decontamination truck, as well as the work area for the crew.

Construction of the monitoring wells would include:

- Each well would be hand augured to a depth of approximately 4 to 8 feet below ground surface as an additional precautionary method to avoid subsurface utilities or infrastructure.
- Each well would consist of one 2-inch or 4-inch diameter, Schedule 40 Polyvinyl Chloride (PVC) casing.
- The annulus between the well casing and the formation would be backfilled with filter pack (sand) and Portland cement.
- A flush-mounted traffic rated steel well box would be installed over each well.
- The newly completed monitoring wells would be developed using a combination of bailing, surging, and pumping.
- The wells would likely be 60 to 160 feet deep, with a possibility of a maximum depth of 200 feet.
- The boreholes would be 10 inches in diameter, which would produce approximately 50 cubic feet of cuttings per 100 feet of borehole.
- Wastes derived from well installation and well development activities would include soil cuttings, decontamination water, and development water. Soil cuttings and water would be containerized in 55-gallon drums, temporarily stored on-site or at an appropriate location, and profiled for disposal. These investigation-derived wastes would be transported off-site and disposed of at an appropriate disposal facility in accordance with applicable regulations, if needed.
- As necessary, concrete or asphalt concrete coring would be conducted to penetrate the concrete surface at each boring location. The concrete coring process would advance a 12-inch diameter cutter through the concrete. The core would be considered complete when the core can be removed, and native soil or base fill can be found beneath the concrete slab.

Treatment Wells, Water Conveyance Lines, and Associated Infrastructure

Treatment Well #3 (TW-3) and Associated Infrastructure

The U.S. 101 well proposed to be equipped for treatment (TW-3) was drilled, constructed, and tested in February 2003, but has since been capped. The well has a 12-inch casing and is 145 feet deep, with a 40-foot-deep sanitary seal, set back approximately 300 feet from San Luis Obispo Creek. The proposed site layout for TW-3 includes new extraction well infrastructure (an approximately 650-square foot building to house the treatment well, electrical panels, and disinfection system) as well as the centralized treatment system (treatment pad with granulated activated carbon (GAC) vessels and bag filters, as well as two backwash storage tanks).

Water Conveyance Lines and Associated Infrastructure

The proposed TW-3 site layout would also include security fencing and utility infrastructure, entailing a new 6-inch sewer line connecting the backwash storage tank to the City's sanitary sewer system, a new 12-inch water line connecting the treatment infrastructure to the City's water distribution system, and a new 8-inch water line connecting TW-3 to the Bob Jones Trail treatment well (TW-4). The water conveyance line would cross under U.S. 101 via an existing conduit under the highway. A gravel access road would be constructed between TW-3 and an existing gravel road approximately 100 feet west of the TW-3 site to provide access to the TW-3 site. The utility infrastructure would be installed in the same locations as the gravel access road and underneath the existing disturbed access road as shown in Figure 3 and Figure 4. The affected area consists of

approximately 0.27 acre, including placement of gravel, paving, and structural elements. Construction of this utility infrastructure and the gravel access road would require the removal of three cypress trees and four oak trees. Tree removal would occur consistent with the requirements of Chapter 12.24 of the City's Municipal Code, including compensatory tree planting and protection of surrounding trees to remain.

Treatment Well #4 (TW-4) and Associated Infrastructure

TW-4 would involve drilling, construction, and testing of a new groundwater production well (Bob Jones Trail Well). The affected area consists of approximately 0.31 acre, including placement of gravel, paving, and structural elements. The sequence of work would include:

- Mobilization to the well site and installation of sound barriers, if identified as a requirement by the City.
- Drilling and installing a 50-foot deep conductor casing, annular materials, and cement seal.
- Drilling a pilot borehole to a depth of 205 below ground surface.
- Conducting a geophysical logging and deviation survey of the completed pilot borehole, and submitting formation samples selected by the City to a testing laboratory for grain size distribution analysis.
- Reaming the pilot borehole to the diameter and depth per final well design.
- Construction of the well, including mechanical, chemical, and pumping well development.
- Conducting well testing, including production tests, groundwater sampling and flowmeter survey, and video camera survey and plumbness/alignment survey.
- Disinfection of well casing and installation of well casing and tubing end caps.
- Demobilization, clean-up, and restoration of the well site. Restoration would include restoring the well location to pre-existing conditions in accordance with City Standard Specifications and Engineering Standards, and replacing plants and groundcover temporarily affected by the construction activities.

The TW-4 site layout would include perimeter security fencing, paving, and a 250-square-foot, one-story secure building to house the well and electrical panels. The building would be configured with a removable roof (or hatch) for future well maintenance. In addition, TW-4 includes a new gravel access road, connecting the TW-4 location to the existing Bob Jones Trail.

Construction Schedule/Staging/Equipment

Construction of the monitoring wells is anticipated to occur from April 2025 to October 2025. Drilling of TW-4 is anticipated to occur from March 2025 to August 2025. Well equipping[2] would begin in June 2025 and would be completed in July 2026. Construction of the TW-3 site would occur between August 2025 and February 2026. Construction of the TW-4 site would occur between August 2025 and February 2026. Construction activities would generally occur within the City's permitted hours between 7:00am and 7:00pm Monday through Saturdays. However, some construction activities may necessitate work outside of these hours in the event utility infrastructure is shut off during the day but must be made operational the next day (e.g., water lines). Well drilling is expected to last 40 days, and major Project construction activities associated with the development of the TW sites visible from U.S. 101 would last approximately 120 working days.

[2] Well equipping refers to the process of outfitting a drilled well with all necessary components to make the well operational.

All work would be conducted on City property or within City easement or right-of-way. Access to TW-4 would be provided by approximately 200 feet of new gravel access road in two approximately 100-foot segments, connecting the TW-4 location to the existing Bob Jones Trail. No work would occur within Caltrans right-of-way, with the exception of the installation of a water conveyance line within an existing conduit under U.S. 101. The following equipment is anticipated for all work: bucket auger drill rig for conductor, tremie pipe, cement truck and concrete pump (conductor casing), hand auger, hollow-stem auger or rotary sonic drill, support/water and decontamination truck, decontamination trailer, forklift or backhoe, Baker tank(s) for development water, roll off bins/drums for soil.

A plastic tarp and containment berm would be placed beneath the drilling rig during mobilization to protect the site against oil or hydraulic fluid spills or leaks and would remain beneath the rig until demobilization. A plastic tarp of the same thickness and containment berm would also be placed beneath other stationary equipment such as air compressors and fuel tanks. Containment berm protection for any fuel tanks would be equal to or greater than the maximum fuel capacity of the tank(s).

Soil Disposal

Approximately 45 cubic yards of drill cuttings and approximately 7,400 gallons of drilling mud would be generated at TW-4. Up to approximately 4 cubic yards of drill cuttings would be generated at each monitoring well site. The total volume of drill cuttings is expected to be up to approximately 90-100 cubic yards. The construction contractor would be required to contain and store all investigation-derived waste, including drill cuttings and drilling mud. Cuttings would not be allowed to be stored on the ground due to the potential for the presence of PCE.

The construction contractor would be required to submit samples of drilling spoils for analytical testing required for waste profiling. Based on the results of the analytical testing the drilling spoils will be containerized, transported, and disposed of at the appropriate waste disposal facility. The construction contractor would complete appropriately required waste disposal manifests and bills of lading and submit such documents to the City of San Luis Obispo for signature and approval prior to transporting waste from each monitoring well site. The construction contractor would furnish to the City one original waste disposal manifest signed and certified by the disposal facility confirming the volume and receipt of waste materials.

7. Surrounding Land Uses and Setting

The treatment well site is surrounded by U.S. 101 and commercial development to the north and west, the City Water Resource Recovery Facility (WRRF) to the north, and San Luis Obispo Creek to the east and south. U.S. 101 is partially included within the treatment well site, but no work is proposed as part of the project that would directly affect U.S. 101. The water conveyance line would be installed within an existing conduit located under the highway. The monitoring well sites are primarily located in developed residential and commercial portions of the City.

8. Other Public Agencies Whose Approval is Required

The City of San Luis Obispo is the lead agency with approval over the proposed project. The City will obtain permits from the County of San Luis Obispo for the new extraction well and each monitoring well. The project will require approval from the California Department of Drinking Water. An

encroachment permit is anticipated to be needed from Caltrans to install the proposed water conveyance line within the existing sewer conduit under U.S. 101.

9. Have California Native American Tribes Traditionally and Culturally Affiliated with the Project Area Requested Consultation Pursuant to Public Resources Code Section 21080.3.1?

Native American Tribes were notified on July 25, 2024 about the project consistent with City and State regulations including, but not limited to, Assembly Bill 52. During the request for consultation window, two responses were received. The Santa Ynez Band of Chumash Indians contacted the City on August 5, 2024 requesting a consultation meeting to discuss the project. The City consulted with the Tribe on September 17, 2024 and shared information regarding the project, the results of the cultural resources survey, and proposed mitigation measures. The Tribe informed the City that they are in agreement with the mitigation measures laid out in the public review Draft IS-MND for a workers environmental awareness program training, archaeological monitoring, and protocol in the event of unanticipated discoveries. The Salinan Tribe of Monterey responded on August 30, 2024 requesting notification in the event of a cultural resource discovery during construction. Pursuant to PRC §21080.3.1 (b) the request for consultation window closed on August 26, 2024. No other tribal agencies responded to the consultation request.

Environmental Factors Potentially Affected

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

■	Aesthetics	☐	Agriculture and Forestry 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

Determination

Based on this initial evaluation:

☐ I find that the proposed project COULD NOT have a significant effect on the environment, and a NEGATIVE DECLARATION will be prepared.

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

☐ I find that the proposed project MAY have a significant effect on the environment, and an ENVIRONMENTAL IMPACT REPORT is required.

☐ I find that the proposed project MAY have a "potentially significant impact" or "less than significant with mitigation incorporated" 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 mitigation measures 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 proposed project could have a significant effect on the environment, because all potential significant effects (a) have been analyzed adequately in an earlier EIR or NEGATIVE DECLARATION pursuant to applicable standards, and (b) have been avoided or mitigated pursuant to that earlier EIR or NEGATIVE DECLARATION, including revisions or mitigation measures that are imposed upon the proposed project, nothing further is required.

Shawna Scott	December 11, 2024
Signature	Date
Shawna Scott	Special Projects Manager
Printed Name	Title

Environmental Checklist

1 Aesthetics

	Potentially Significant Impact	Less than Significant with Mitigation Incorporated	Less-than - Significant Impact	No Impact
Except as provided in Public Resources Code Section 21099, would the project:				
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 a 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 that would adversely affect daytime or nighttime views in the area?	☐	■	☐	☐

Environmental Setting

The project site is located in the San Luis Valley, within the southern portion of the City of San Luis Obispo, in San Luis Obispo County, California. The topography of the treatment well site is relatively flat, with an approximate elevation ranging from 111 to 126 feet above mean sea level, sloping southward, with an average slope of 2 percent. Immediately surrounding land uses include transportation/roadways, including U.S. 101 and commercial development to the north and west, the City WRRF to the north, and San Luis Obispo Creek to the east and south (refer to Figure 2). San Luis Obispo Creek is immediately east and parallel to the eastern boundary of the treatment well site and Laguna Lake is approximately 0.6 mile to the northwest. The treatment well site is located on vegetative grasses and open space (refer to Figure 1). The monitoring well sites are located throughout the City, on City property or within City easements or right-of-way. The majority of the monitoring well locations are paved, except for MW-4, which is located on aggregate and topsoil.

The nearest officially designated state scenic highway, State Route 1,[3] is approximately three miles north of the treatment well site. There is no line of sight between this portion of State Route 1 and the treatment well site. West of the treatment well site, State Route 1 and U.S. 101 converge and share a designation of an Eligible Scenic Highway (Caltrans 2019). The City identifies the portion of U.S 101 adjacent to the treatment well site as having high scenic value. However, no scenic vistas are identified through the treatment well site. The nearest scenic vista is located 0.6 mile north, with north facing views from Madonna Road (City of San Luis Obispo 2014a).

Impact Analysis

a. Would the project have a substantial adverse effect on a scenic vista?

b. Would the project substantially damage scenic resources, including but not limited to, trees, rock outcroppings, and historic buildings within a state scenic highway?

The project site is not located in an area with an identified scenic vista. The project site is not visible from or located within the viewsheds experienced at Madonna Road (i.e., views of Laguna Lake Park, Irish Hills Natural Preserve, and Cerro San Luis) or any other designated scenic vista. Although the treatment well site is located along a high scenic value portion of State Route 1/U.S. 101, which is an Eligible Scenic Highway, project construction activities visible from U.S. 101 would be temporary, lasting approximately 120 working days. These temporary construction activities would not restrict views of scenic vistas through the treatment well site. Following construction completion, the treatment wells and associated structural infrastructure would not preclude views of surrounding scenic vistas as the height of proposed infrastructure would not pose substantial impediments to existing views. The monitoring wells do not include any development or structures; work would be conducted in the subsurface. Post completion, a flush-mounted traffic rated steel well box would be installed over each monitoring well. Therefore, the monitoring wells would not provide any visual impediments to surrounding scenic vistas.

There are no rock outcroppings, or historic buildings at the treatment well site locations, and no rock outcropping, or historic buildings would be modified or otherwise impacted as a result of the project. The project would remove seven trees to install the access road and utility infrastructure. The treatment well site and surroundings are lined with trees along San Luis Obispo Creek and the minimal tree removal required for the project would not have a substantial adverse effect on public views from U.S. 101 or the surrounding area.

The project would not include infrastructure with the potential to substantially affect views of scenic vistas and no rock outcropping, or historic buildings would be modified or otherwise impacted as a result of the project. The project would not have a substantial adverse effect on a scenic vista or damage scenic resources within a state scenic highway. Therefore, these impacts would be less than significant.

LESS-THAN-SIGNIFICANT IMPACT

[3] State Route 1 is officially designated as a scenic highway starting at the intersection of Santa Rosa Street and Highland Drive. At its convergence with U.S. 101 adjacent to the treatment well site it is designated as an eligible state scenic highway.

c. Would the project, in an urbanized area, conflict with applicable zoning and other regulations governing scenic quality?

The project site is adjacent to commercial, residential, public facilities uses, and U.S. 101. Given the population density of the City of San Luis Obispo, and the developed nature of the project site and its surroundings, the project is evaluated as an urban area consistent with CEQA Guidelines Section 15387.[4] Therefore, this discussion examines if the project would conflict with City zoning and other regulations governing scenic quality.

The southern portion of the treatment well site is zoned Conservation/Open Space (C/OS-20), and the northern portion is zoned Public Facility (PF) and Public Facility-Special Considerations (PF-S). The monitoring wells would not introduce above-ground infrastructure, and therefore, would not result in conflicts with regulations related to scenic quality. The treatment wells would introduce new above-ground infrastructure to the treatment well site such as perimeter security fencing, buildings to house each well and electrical panels, two GAC vessels, and two storage tanks within the Conservation/Open Space (C/OS-20), Public Facility (PF) and Public Facility-Special Considerations (PF-S) zones. These zones permit public service infrastructure. The proposed project would not interfere with established setbacks in these zones and would not exceed height requirements or otherwise interfere with regulations governing scenic quality in these zones. The project would not conflict with applicable zoning and other regulations governing scenic quality or substantially degrade existing visual character or quality. Therefore, this impact would be less than significant.

LESS-THAN-SIGNIFICANT IMPACT

d. Would the project create a new source of substantial light or glare that would adversely affect daytime or nighttime views in the area?

Pursuant to Municipal Code Section 9.12.050, construction work is limited to daytime hours between 7:00 a.m. and 7:00 p.m. unless discretionary approval for nighttime work is granted by the City's Community Development Department. Daytime work would not require the use of temporary flood lights or other light/glare generating sources during the day. Nighttime work, if necessary, would be carried out in accordance with lighting provisions set forth by the City's Community Development Department. However, nighttime construction work would have the potential to constitute a temporary source of new light that may affect nighttime views. This impact would be potentially significant.

Once construction activities are completed, potential sources of light may include shielded security lighting. Any exterior lighting would be required to be consistent with the City's Lighting and Night Sky Preservation standards, which require that outdoor lighting is fully shielded and directed downward and away from adjacent properties and public rights-of-way. Therefore, operation of the project would not create a new source of substantial light or glare which would adversely affect day or nighttime views in the area, and this impact would be less than significant.

[4] The population of San Luis Obispo is approximately 48,684 (California Department of Finance 2024). CEQA Guidelines Section 15387 provides that an urbanized area means a city with a population of 50,000 or an area having a population density of at least 1,000 persons per square mile. San Luis Obispo is approximately 13.2 square miles, providing a population density of approximately 3,688 persons per square mile. Therefore, San Luis Obispo meets the criteria of an urbanized area pursuant to CEQA Guidelines 15387.

Mitigation Measures

AES-1 Nighttime Work Requirements

In the event nighttime work is necessary during the project construction phase, any portable lighting shall be shielded and/or directed away from adjacent properties. Night lighting for construction activities shall be the minimum necessary to ensure safety and security for nighttime activities and operations. Lighting at the project site shall consist of light-emitting diode lights in all areas where nighttime construction activities will occur and be either motion-activated or use timers to ensure safety and security and reduce the impact of additional light pollution at night. The City shall verify compliance with the construction night lighting requirements via an inspection during nighttime construction activities.

Significance After Mitigation

Implementation of AES-1 would reduce potential project impacts related to nighttime lighting to a less than significant level by requiring shielding of lighting.

LESS THAN SIGNIFICANT WITH MITIGATION INCORPORATED

2 Agriculture and Forestry Resources

	Potentially Significant Impact	Less than Significant with Mitigation Incorporated	Less-than - Significant Impact	No Impact
Would the project:				
a. Convert Prime Farmland, Unique Farmland, or Farmland of Statewide Importance (Farmland), as shown on maps prepared pursuant to the Farmland Mapping and Monitoring Program of the California 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 Public Resources Code Section 12220(g)); timberland (as defined by Public Resources Code Section 4526); or timberland zoned Timberland Production (as defined by Government Code Section 51104(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?	☐	☐	■	☐

Environmental Setting

The California Department of Conservation's (DOC) Farmland Mapping and Monitoring Program classifies the treatment well site and each of the 12 monitoring well locations as Urban and Built-Up Land, which is defined as land that is occupied by structures with a building density of at least one unit to 1.5 acres (DOC 2022). The treatment well site is zoned Conservation/Open Space (C/OS-20), Public Facility (PF) and Public Facility-Special Considerations (PF-S). The treatment and monitoring well sites are not located within active agricultural uses, land zoned for agriculture, or classified forest land (City of San Luis Obispo 2014a).

Impact Analysis

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

b. Would the project conflict with existing zoning for agricultural use or a Williamson Act contract?

Construction equipment and well sites would be staged within individual work zones on City property or within City easement or right-of-way. No portions of the project are located on land designated as Prime Farmland, Unique Farmland, or Farmland of Statewide Importance as mapped by the DOC (DOC 2022). As such, there is no potential for the project to convert such lands to non-agricultural uses. No portions of the project are currently zoned for agriculture or held under Williamson Act or any other land conservation contract. The project would not convert Farmland or conflict with existing zoning for agricultural use or a Williamson Act contract. Therefore, no impact would occur.

NO IMPACT

c. Would the project conflict with existing zoning for, or cause rezoning of, forest land (as defined in Public Resources Code Section 12220(g)); timberland (as defined by Public Resources Code Section 4526); or timberland zoned Timberland Production (as defined by Government Code Section 51104(g))?

d. Would the project result in the loss of forest land or conversion of forest land to non-forest use?

No portions of the project are located on land that is in current timberland production, including any lands designated as forest land or timberland. Therefore, the project would not conflict with existing zoning for forest land, timberland, or timberland zoned Timberland Production, or result in the loss of forest land or conversion of forest land to non-forest use. No impact would occur.

NO IMPACT

e. Would the project 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 portions of the project are located on forest land or timberland. The portion of the project adjacent to the City Farm and San Luis Ranch agricultural area would be located within an existing easement, and within an existing access road along Highway 101; furthermore, infrastructure would be below ground, consisting of an underground water distribution pipe. No lands under cultivation would be affected by the project. Therefore, the project would not result in the conversion of Farmland to non-agricultural use or conversion of forest land to non-forest use. Impacts would be less than significant.

LESS-THAN-SIGNIFICANT IMPACT

3 Air Quality

	Potentially Significant Impact	Less than Significant with Mitigation Incorporated	Less-than - Significant Impact	No Impact
Would the project:				
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?	☐	■	☐	☐

Environmental Setting

The project site is located in the South Central Coast Air Basin (SCCAB) which covers San Luis Obispo, Santa Barbara, and Ventura counties (California Air Resources Board [CARB] 2014). The San Luis Obispo Air Pollution Control District (SLOAPCD) monitors and regulates the local air quality in San Luis Obispo County and enforces the Clean Air Plan. SLOAPCD is required to monitor air pollutant levels to ensure that National Ambient Air Quality Standards (NAAQS) and California Ambient Air Quality Standards (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 SCCAB is classified as being in "attainment" or "nonattainment" for air quality. The SCCAB is in nonattainment for the federal standards for ozone (eastern San Luis Obispo County only) and the state standards for ozone, and particulate matter less than 10 microns in diameter (PM_{10}). The SCCAB is designated in attainment for all other federal and state standards (SLOAPCD 2019).

SLOAPCD is required to prepare a plan for air quality improvement for pollutants for which its jurisdiction is in nonattainment. Because the SCCAB is currently designated nonattainment for federal and State standards for ozone and State standards for PM_{10}, SLOAPCD is required to implement strategies that would reduce pollutant levels to recognized acceptable standards. SLOAPCD adopted the Clean Air Plan in 2001 which evaluates long-term emissions and establishes programs to reach acceptable air quality levels (SLOAPCD 2001). SLOAPCD has also adopted the Particulate Matter Report to identify strategies to reduce public exposure to particulate matter, and the Ozone Emergency Episode Plan which provides the basis for taking action when ambient ozone concentrations reach a level that poses a threat to public health in the County (SLOAPCD 2005; SLOAPCD 2020).

SLOAPCD provides numerical thresholds to analyze the significance of a project's construction and operational impacts on regional air quality. These thresholds, listed in Table 1, are designed such that a project with estimated emissions that do not exceed the thresholds would not have an individually or cumulative significant impact on the air quality of the SCCAB.

Table 1 Construction Air Quality Thresholds of Significance

	Threshold		
Pollutant	**Daily (pounds per day)**	**Quarterly Tier 1 (tons per quarter)**	**Quarterly Tier 2 (tons per quarter)**
ROG + NO_x (combined)	137	2.5	6.3
Diesel Particulate Matter (DPM)	7	0.13	0.32
Fugitive Particulate Matter (PM_{10}), Dust	–	2.5	–

ROG = Reactive Organic Gases; NO_x = Nitrous Oxides

Source: SLOAPCD 2023

Sensitive receptors typically include residences, schools, healthcare facilities, and other live-in housing facilities such as prisons or dormitories. The closest sensitive receptors to the monitoring wells include single-family residences located approximately 15 feet east of MW-10, a single-family residence located approximately 45 feet north of MW-06, a single-family residence located approximately 50 feet east of MW-01, and mobile homes located approximately 65 feet north of MW-03. The closest sensitive receptors to the treatment well site are single-family residences located approximately 245 feet east of the treatment well site. The portion of the Bob Jones Trail within the treatment well site is a recreational use which is not considered a sensitive receptor.

Impact Analysis

a. Would the project conflict with or obstruct implementation of the applicable air quality plan?

The applicable air quality plan is the SLOAPCD Clean Air Plan. Based on SLOAPCD's CEQA Air Quality Handbook (2023), if a project is consistent with the land use assumptions and transportation control measures within the Clean Air Plan, the project would be consistent with the Clean Air Plan (SLOAPCD 2023). The transportation control measures within the Clean Air Plan are primarily related to providing alternative transportation options, enhancing bike infrastructure, and circulation management (SLOAPCD 2001). Because the proposed project would not result in population growth or result in changes to existing City land use designations or long-term transportation patterns, the transportation control measures in the Clean Air Plan are not directly applicable to the proposed project, and the proposed project would not conflict with the population projections and land use assumptions of the Clean Air Plan. Therefore, the proposed project would not conflict with or obstruct implementation of SLOAPCD's Clean Air Plan, and no impact would occur.

NO IMPACT

b. Would the project result in a cumulatively considerable net increase of any criteria pollutant for which the project region is non-attainment under an applicable federal or state ambient air quality standard?

The California Emissions Estimator Model (CalEEMod), version 2022.1.1.22 was used to estimate the project's air pollution emissions. CalEEMod uses project-specific information, including a project's land uses, construction equipment parameters, and location, to model a project's construction emissions. Operation of the proposed project would generate a nominal amount of air pollutants from minimal electricity consumption and vehicle trips to the well sites for maintenance activities and would not result in substantial air pollutant emissions or generate a cumulatively considerable net increase of any criteria pollutant for which the SCCAB is in nonattainment. Therefore, for the purposes of this analysis, only construction emissions were modeled and compared to SLOAPCD construction emission thresholds. CalEEMod modeling outputs are included in Appendix A.

Table 2 shows the proposed project's estimated criteria air pollutant emissions and compares the emissions to SLOPACD thresholds. Construction of the proposed project would not exceed SLOAPCD construction thresholds and would not result in a cumulatively considerable net increase of any criteria pollutant for which the SCCAB is in nonattainment. Therefore, this impact would be less than significant.

Table 2 Estimated Criteria Pollutant Emissions During Construction

	Estimated Emissions					
	ROG	**NO_x**	**CO**	**SO_2**	**PM_{10}**	**$PM_{2.5}$**
Construction Emissions (pounds per day)	6.3	48.0	55.7	0.2	1.9	1.6
Construction Emissions (tons per quarter)	0.1	0.6	0.7	<0.01	0.03	0.02
SLOAPCD Thresholds (Daily)	137 pounds per day (combined ROG and NO_x)		N/A	N/A	N/A	7 pounds per day
SLOAPCD Thresholds (Quarterly)	2.5 tons (combined ROG and NO_x)		N/A	N/A	2.5 tons	0.13 tons
Thresholds Exceeded?	**No**		**N/A**	**N/A**	**No**	**No**

ROG = reactive organic gases; NO_X = nitrogen oxides; CO = carbon monoxide; SO_2 = sulfur dioxide; PM_{10} = particulate matter 10 microns or less in diameter; $PM_{2.5}$ = particulate matter 2.5 microns or less in diameter

Source: SLOAPCD 2023; Appendix A

LESS-THAN-SIGNIFICANT IMPACT

c. Would the project expose sensitive receptors to substantial pollutant concentrations?

Fugitive Dust

Most of the proposed monitoring wells would be located in paved areas with minimal potential to generate substantial fugitive dust. However, MW-11 would be constructed approximately 815 feet from single-family residences, and TW-3, TW-4, and MW-09 would be constructed approximately 450 west of single-family residences. As described in Threshold 3(b), the project would not result in particulate matter emissions that would exceed SLOAPCD's regional thresholds. Construction personnel would be required to adhere to California Code of Regulations Title 13 Section 2485, which prohibits idling of diesel-powered vehicles for over five minutes to minimize diesel particulate

matter emissions. In addition to these requirements, SLOAPCD guidelines require projects that would disturb greater than four acres within 1,000 feet of a sensitive receptor to implement standard mitigation measures to minimize fugitive dust emissions (SLOAPCD 2023). For project construction activities at all sites, the City's Special Provisions and specifications would require the contractor implement applicable SLOAPCD fugitive dust measures as best management practices to minimize localized fugitive dust emissions during construction. These measures include, but are not limited to, watering to prevent airborne dust, stabilization of soils, limiting vehicle speeds on the project site, and use of devices to prevent sand or dirt from falling out of trucks during transport (SLOAPCD 2023). With the inclusion and implementation of SLOAPCD's standard mitigation for fugitive dust emissions reduction, the proposed project's potential to expose sensitive receptors to substantial fugitive dust emissions would be less than significant.

Naturally Occurring Asbestos

Naturally occurring asbestos (NOA) has been identified by CARB as a toxic air contaminant. Serpentinite and ultramafic rocks are common throughout San Luis Obispo and may contain naturally occurring asbestos (SLOAPCD 2018). Under CARB's Air Toxic Control Measures related to construction and grading, a geologic evaluation is required to determine of NOA is present prior to any grading activities at the project site. If NOA is identified at the site during ground-disturbing activities, requirements outlined in CARB's Air Toxic Control Measures would be enforced, in addition to requirements stipulated in the National Emission Standard for Hazardous Air Pollutants (40 Code of Federal Regulations Section 61, Subpart M -Asbestos). These requirements include notifying SLOAPCD at least 10 days prior to commencing construction, preparing an asbestos survey conducted by a Certified Asbestos Consultant, and implementation of removal and disposal protocol and requirements for identified NOA. A SLOAPCD Permit to Operate for Excavation of Contaminated Soils is included in the City's Standard Specifications and Engineering Standards (August 2020). This Permit states that required Naturally Occurring Asbestos and NESHAP requirements have been met, and monitoring, recordkeeping, and District notification procedures are in place. With adherence to the SLOAPCD permit and State requirements for NOA abatement, the proposed project would have a less than significant impact on sensitive receptors due to the presence of NOA.

LESS-THAN-SIGNIFICANT IMPACT

d. Would the project result in other emissions (such as those leading to odors) adversely affecting a substantial number of people?

The project would not involve operation of any land uses identified by SLOAPCD that may generate substantial odors, such as asphalt batch plants, chemical manufacturing, sanitary landfill, or a wastewater treatment plant (SLOAPCD 2023). Construction would generate temporary odors associated with diesel exhaust emitted by construction equipment. These odors would be localized to the project site and restricted to the duration of equipment use, which would be temporary and infrequent. The distances between both treatment well sites and receptors and most monitoring well sites and receptors are generally large enough such that construction would not result in nuisance due to odors. In addition, construction personnel would be required to adhere to idling restrictions for on- and off-road vehicles and equipment which would minimize diesel odors. However, due to the proximity of MW-01, MW-06, and MW-10 to single-family residences, there is potential that construction of these monitoring wells could result in short-term nuisance due to odors at nearby residences. This impact would be potentially significant.

Mitigation Measure

AQ-1 Odor Reduction

Where construction activities occur within 50 feet of a sensitive receptor, the construction contractor shall implement the following additional idling restrictions, which shall be shown on grading and construction plans:

- Idling Restrictions Near Sensitive Receptors for Both On- and Off-Road Equipment
  - Staging and queuing areas shall be located at the greatest distance feasible from sensitive receptor locations;
  - Diesel idling while equipment is not in use is not permitted;
  - Use of alternative-fueled equipment is recommended whenever possible; and
  - Signs that specify the no-idling requirements shall be posted and enforced at the construction site.

The City Utilities Department shall verify these measures are located on construction plans prior to the start of construction. Once during construction, City Inspector shall visit the project site to verify these idling restrictions have been implemented.

Significance After Mitigation

Implementation of Mitigation Measure AQ-1 would ensure construction within 50 feet of sensitive receptors would not result in substantial odors affecting the adjacent single-family residence through implementation of idling restrictions. Implementation of Mitigation Measure AQ-1 would reduce the proposed project's impact related to odors to a less than significant level.

LESS THAN SIGNIFICANT WITH MITIGATION INCORPORATED

This page intentionally left blank.

4 Biological Resources

	Potentially Significant Impact	Less than Significant with Mitigation Incorporated	Less-than - Significant Impact	No Impact
Would the project:				
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, or 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 Plan, Natural Community Conservation Plan, or other approved local, regional, or state habitat conservation plan?	☐	☐	☐	■

Rincon prepared a Botanical Survey Memorandum (Botanical Memorandum, Appendix B) in June 2024 to summarize methodology and results of protocol-level botanical surveys and literature review to determine presence or absence of federally and/or State-listed or other special-status

plant species within the treatment well site. Surveys were carried out in accordance with the California Native Plant Survey's (CNPS) *Botanical Survey Guidelines* and the California Department of Fish and Wildlife's (CDFW) *Protocols for Surveying and Evaluating Impacts to Special Status Native Plant Populations and Natural Communities*. The botanical surveys were conducted in April and June of 2024, and were timed to capture the flowering periods of all special-status plant species determined to have a low, moderate, or high potential to occur on-site based on the literature review and regionally specific knowledge. The monitoring well locations were not evaluated for the potential to support sensitive plant or animal species, or other potentially significant biological resources, as each of the monitoring well locations outside of the treatment well site would be developed on locations that are paved and feature existing infrastructure (as confirmed based on site visits conducted by City staff), and thus do not present the potential for encountering sensitive biological resources.

In addition, in July 2024, Rincon conducted a review of the California Natural Diversity Database (CNDDB) using a 5-Mile radius buffer, a review of the CNPS inventory, and completed an evaluation of the species-specific potential to occur at the treatment well site, based on a site visit on July 15, 2024 and the CNDDB/CNPS results (also included in Appendix B). The setting and impact analysis provided are summarized based on the results of the Botanical Memorandum and CNDDB documentation.

Environmental Setting

Plant Species

The CNDDB and CNPS identified 121 special-status plant and lichen species with documented occurrences within a five-mile radius of the treatment well site. Of these plant and lichen species, 11 have a low potential to occur, five have a moderate potential to occur, and four have a high potential to occur at the treatment well site.

Table 3 provides an overview of the CNDDB and CNPS results for species with moderate and high potential to occur.

Table 3 Plant Species Potential to Occur at The Treatment Well Site

Species	Potential to Occur	Potentially Suitable Habitat Present at Treatment Well Site
club-haired mariposa-lily (*Calochortus clavatus var. clavatus*)	High	Yes
Cambria morning-glory (*Calystegia subacaulis ssp. episcopalis*)	High	Yes
San Luis Obispo owl's-clover (*Castilleja densiflora var. obispoensis*)	High	Yes
Jones' layia (*Layia jonesii*)	High	Yes
Congdon's tarplant (*Centromadia parryi ssp. congdonii*)	Moderate	Yes
Chorro Creek bog thistle (*Cirsium fontinale var. obispoense*)	Moderate	Yes
large-flowered leptosiphon (*Leptosiphon grandifloras*)	Moderate	Yes
adobe sanicle (*Sanicula maritima*)	Moderate	Yes
saline clover (*Trifolium hydrophilum*)	Moderate	Yes

Source: Appendix B

Animal Species

The CNDDB review identified five invertebrate species, two fish species, five amphibian species, two reptile species, 20 bird species, and eight mammal species with documented occurrences within a five-mile radius of the treatment well site. Of these animal species, 16 have a low potential to occur, six have a moderate potential to occur, and two have a high potential to occur at the treatment well site.

Table 4 provides an overview of the CNDDB results for species with moderate and high potential to occur at the treatment well site.

Table 4 Animal Species Potential to Occur at The Treatment Well Site

Species	Potential to Occur	Potentially Suitable Habitat Present at Treatment Well Site
California red-legged frog (*Rana draytonii*)	High	Yes
loggerhead shrike (*Lanius ludovicianus*)	High	Yes
Crotch's bumble bee (*Bombus crotchii*)	Moderate	Yes
burrowing owl (*Athene cunicularia*)	Moderate	Yes
ferruginous hawk (*Buteo regalis*)	Moderate	Yes
Merlin (*Falco columbarius*)	Moderate	Yes
pallid bat (*Antrozous pallidus*)	Moderate	Yes
American badger (*Taxidea taxus*)	Moderate	Yes

Source: Appendix B

Land Cover Types/Vegetation Communities

Rincon conducted a review of vegetation communities present at the site, which are shown in Figure 5. A description of these vegetation communities is provided below.

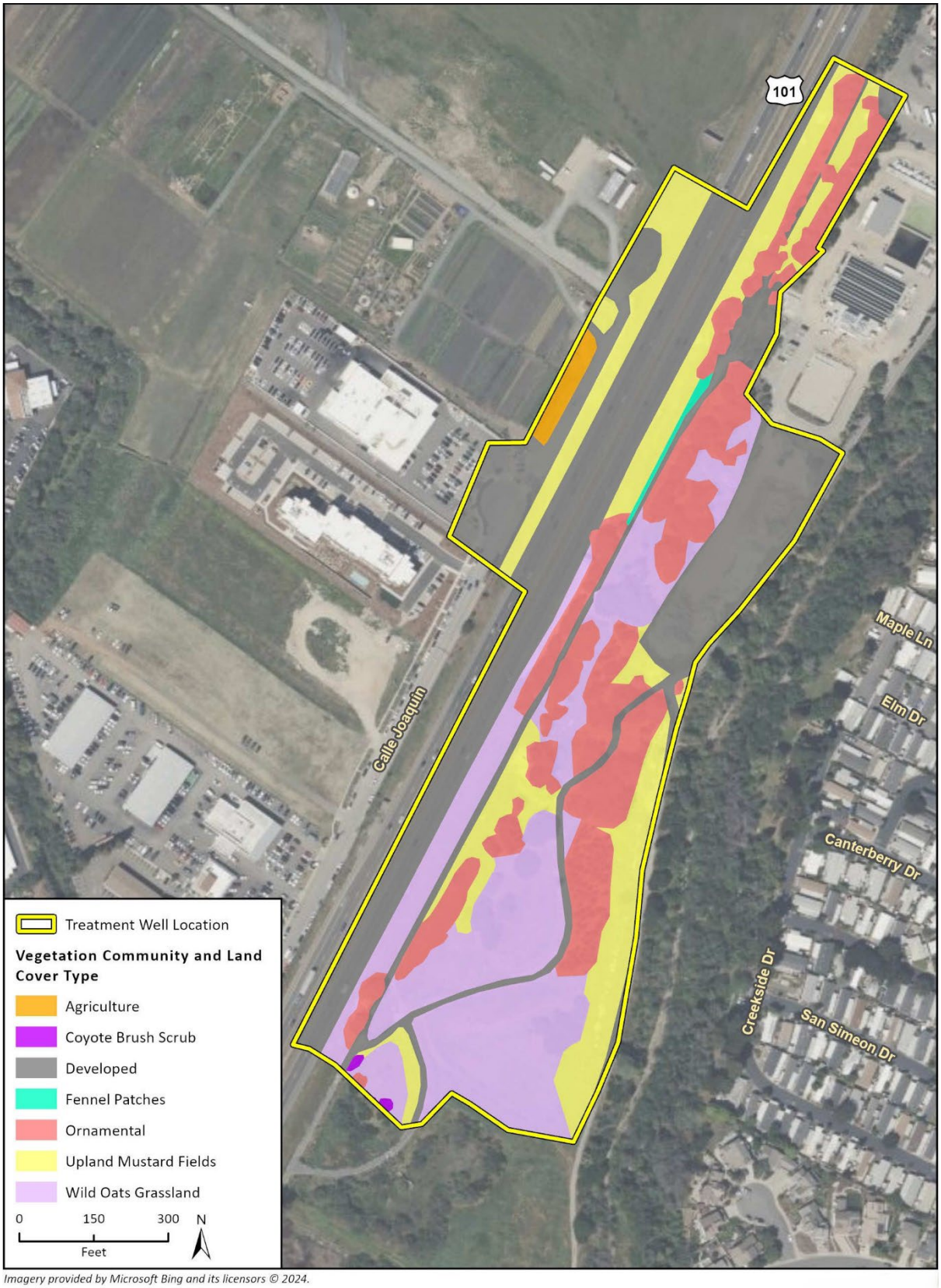
DEVELOPED

Developed land cover consists of areas that have been previously developed or modified to the extent that they no longer contain native soil and habitat conditions and no longer support most vegetation. This land cover type may also contain areas that are sparsely vegetated, primarily with non-native species. Within the treatment well site, these areas include buildings, paved areas and roadways, and gravel or hardpacked dirt roadways. This land cover type occurs throughout the treatment well site and is associated with commercial development west of U.S. 101, the City corporation yard and the WRRF, and existing paved and unpaved roadways and trails. Approximately 8.3 acres of this land cover type is present.

AGRICULTURE

Agriculture consists of areas associated with existing agricultural operations. Within the treatment well site (the area proposed for a water distribution pipe and connection to the City's existing water distribution system), these areas consist of hoop houses and row crops associated with existing agricultural operations. This land cover type occurs in the northwest portion of the treatment well site, west of U.S. 101. Approximately 0.2 acre of this land cover type is present.

Figure 5 Vegetation Communities and Land Cover Types



Imagery provided by Microsoft Bing and its licensors © 2024.

ORNAMENTAL

Ornamental land cover includes areas with planted vegetation, such as windbreaks, privacy screens, lawns, or other landscaped areas. Ornamental areas are located throughout the treatment well site and are often found adjacent to developed areas, particularly along roads, trails, and the San Luis Obispo treatment plant. Planted species within ornamental areas on-site include pepper tree (*Schinus molle*), Monterey pine (*Pinus radiata*), coast live oak (*Quercus agrifolia*), olive (*Olea europea*), Santa Cruz island ironwood (*Lyonothamnus floribundus ssp. aspleniifolius*), wattle (*Acacia sp.*), glossy privet (*Ligustrum lucidum*), and toyon (*Heteromeles arbutifolia*). Approximately 4.7 acres of this land cover type is present.

COYOTE BRUSH SCRUB

Coyote brush scrub (*Baccharis pilularis* Shrubland Alliance) is a native coastal scrub vegetation community that occurs on coastal bluffs, terraces, stabilized dunes, stream sides, and other similar areas and features variable soils with sandy or relatively heavy clay. Coyote brush (*Baccharis pilularis*) is dominant to co-dominant in the shrub canopy, occupying at least 50 percent absolute cover in the shrub canopy. This vegetation community is typically less than three meters tall, the shrub canopy is variable, and the herbaceous layer is variable. This vegetation community is ranked G5S5 and is not classified as a CDFW sensitive natural community (CDFW 2024a). Coyote brush scrub is present in several small patches in the southeastern portion of the treatment well site. These patches are associated with larger, undisturbed areas of coyote brush scrub immediately south of the treatment well site. Within the treatment well site, coyote brush is the dominant species in the shrub canopy, with non-native herbaceous species including slender oat, cheeseweed mallow (*Malva parviflora*), and milk thistle (*Silybum marianum*) present in the herbaceous layer. Less than 0.1 acre of this vegetation community is present.

FENNEL PATCHES

Fennel patches (*Foeniculum vulgare*, Herbaceous Semi-Natural Alliance) are a native vegetation community found across all topography between 0 and 1,000 meters. Fennel (*Foeniculum vulgare*) contributes at least 50 percent relative cover in the herbaceous layer, and the herbaceous layer is open to continuous. This vegetation community is not considered a CDFW sensitive natural community (CDFW 2024a). Fennel patches are present along the existing unpaved roadway that runs parallel to U.S. 101 in the eastern portion of the treatment well site. Within the treatment well site, fennel is the dominant species in the herbaceous layer, with non-native wild radish (*Raphanus sativus*) and bristly ox-tongue (*Helminthotheca echioides*) also present at lower cover. Approximately 0.1 acre of this vegetation community is present.

UPLAND MUSTARD FIELDS

Upland mustard fields (*Brassica nigra,* Herbaceous Semi-Natural Alliance) are an open to continuous semi-naturalized non-native vegetation community that occurs within fallow fields, rangelands, grasslands, roadsides, and disturbed coastal scrub habitats. The soils are variable and contain clay to sandy loams. This vegetation community is dominated by non-native ruderal forbs (e.g., black mustard, short podded mustard [*Hirschfeldia incana*], and tocalote [*Centaurea melitensis*]). This vegetation community is not classified as a CDFW sensitive natural community (CDFW 2024a). Upland mustard fields are present throughout the treatment well site and are typically associated with developed areas subject to frequent human disturbance, including paved and unpaved roadways and trails. Within the treatment well site, dominant species within this vegetation

community include non-native black mustard, short-podded mustard, tocalote, and prickly lettuce. Other non-native species present include slender oat, bristly ox-tongue, Bermuda grass (*Cynodon dactylon*), poison hemlock (*Conium maculatum*), and castor bean (*Ricinus communis*). Approximately 3.9 acres of this vegetation community is present.

WILD OATS GRASSLAND

Wild oats grassland (*Avena* spp., Semi-Natural Alliance) is an open-to-dense naturalized vegetation community that is dominated or co-dominated by non-native, often invasive, annual grasses (e.g., wild oats [*Avena* spp.] and foxtail barley [*Hordeum murinum*]). This vegetation community is often interspersed with native and non-native forbs. Emergent trees and shrubs may be present but at low cover. This vegetation community is not classified as a CDFW sensitive natural community (CDFW 2024a). Wild oats grassland is present throughout the eastern portion of the treatment well site and typically occurs in open areas adjacent to existing paved and unpaved roadways. Within the treatment well site, this vegetation community is subject to frequent human disturbance in the form of routine mowing and vegetation maintenance. Dominant species in the herbaceous layer include slender oat and foxtail barley, with non-native prickly lettuce, field bindweed, and bristly ox-tongue also present. Several small patches of native grasses, including purple needlegrass (*Stipa pulchra*) and creeping wildrye (*Elymus triticoides*), are also present within this vegetation community on-site. Additionally, several emergent coast live oak trees are present within this vegetation community on-site. Approximately 5.6 acres of this vegetation community is present.

Impact Analysis

a. Would the project 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?

Plant Species

Each of the monitoring well locations outside of the treatment well site would be developed on locations that are paved and feature existing infrastructure, and thus do not present the potential for encountering sensitive plant species. The CNDDB and CNPS review identified five plant species with a moderate potential to occur and four plant species with a high potential to occur at the treatment well site (which is inclusive of the wells, structures, water conveyance lines, and associated infrastructure). Based on the results of the Botanical Memorandum (Appendix B), no federal-listed, state-listed, or other special-status plant species were observed at the treatment well site during the botanical surveys. Therefore, no special-status plant species are present at the treatment well site, and the project would have no impact on special-status plant species.

Animal Species

Each of the monitoring well locations outside of the treatment well site would be developed on locations that are paved and feature existing infrastructure, and thus would not affect animal species or their habitats. As summarized in Table 4, the CNDDB review identified six animal species with a moderate potential to occur and two animal species with a high potential to occur at the treatment well site (which is inclusive of the wells, structures, water conveyance lines, and associated infrastructure). While no federal-listed, state-listed, or other special-status animal species were observed at the treatment well site during field visits conducted in April, June, and July

2024, the treatment well site does contain suitable habitat for these species. In addition to these species, the project site contains suitable nesting habitat for nesting bird species. Due to the presence of suitable habitat at the treatment well site, project construction could result in the direct disturbance of these special-status species (i.e., injury or mortality) if individuals are present in the work area during construction. Furthermore, destruction or abandonment of native bird nests would violate the California Fish and Game Code and Migratory Bird Treaty Act. These regulations make it unlawful to take, possess, or destroy birds of prey and migratory birds, and their nests and eggs. Therefore, potential direct impacts to special-status animal species are potentially significant.

Construction would also have the potential to result in indirect impacts to special-status species through the potential introduction of sediment or pollutants to San Luis Obispo Creek. As detailed in Section 7, *Geology and Soils,* the City's construction contractor would be required to obtain coverage under the *General Permit for Storm Water Discharges Associated with Construction and Land Disturbance Activities*, Order No. 2022-0057-DWQ, NPDES No. CAS000002 (Construction Stormwater General Permit), and would also be required to comply with the City's standard BMPs for erosion and sedimentation control (as required by the City's adopted Standard Specifications and Engineering Standards) which would ensure that best management practices (BMP) are implemented which would minimize erosion and stormwater pollution. With adherence to the Construction Stormwater General Permit and mandatory City Standards, the project would not introduce substantial erosion or other pollutants into San Luis Obispo Creek and would not result in substantial indirect impacts on the riparian habitat on the treatment well site or within San Luis Obispo Creek. Regarding indirect impacts to nesting birds, in general, avian species can typically avoid direct impacts from construction activity. However, construction activity around any active nests could result in nest abandonment because of noise, vibrations, or human activity. Accordingly, project construction could indirectly impact nesting birds, and this impact would be potentially significant.

Mitigation Measures

BIO-1 Worker Environmental Awareness Program

Prior to initiation of construction activities at the treatment well site, all personnel associated with project construction shall attend a Worker Environmental Awareness Program (WEAP) training, conducted by a qualified biologist, to aid workers in recognizing special-status species and nesting birds that may occur within the project site. The specifics of this program shall include identification of special-status species with potential to occur, a description of their regulatory status and habitat requirements, general ecological characteristics of any other sensitive resources, and a review of the limits of construction and measures required to avoid and/or reduce impacts to biological resources within the project site. A fact sheet conveying this information shall also be prepared for distribution to the construction contractor. All employees shall sign a form provided by the biologist indicating they have attended the WEAP training and understand the information presented to them. The construction foreman shall ensure crew members are aware of project boundaries and adhere to the mitigation measures designed to avoid or minimize effects to listed species, nesting birds, and other special-status species.

BIO-2 Pre-Construction Survey for Special-Status Wildlife Species

A qualified biologist shall conduct a pre-construction survey of the treatment well site and adjacent habitat no more than two weeks prior to the start of construction at the treatment well site. The biologist shall document the presence or absence of any special-status wildlife species with

potential to occur within the treatment well site plus a 50-foot buffer. If special-status species are observed onsite during the pre-construction surveys, they shall be allowed time to leave or be relocated prior to the initiation of construction activities. If special-status species are present during construction activities, they shall be handled in accordance with Mitigation Measure BIO-3.

BIO-3 Biological Monitoring and Special-Status Species Relocation

A qualified biologist shall be onsite at the treatment well site during all vegetation removal, initial ground disturbing activities, and/or during any construction activities that may impact sensitive biological resources. If the biologist discovers special-status animal species on the project site, the biologist shall have the authority to temporarily halt or redirect work to avoid potential impacts. If avoidance is not feasible, the biologist shall be responsible for relocating wildlife species out of the treatment well site in accordance with the requirements of applicable regulatory agencies, such as CDFW or the United States Fish and Wildlife Service. Special-status wildlife shall not be handled without prior permission from the necessary regulatory agencies. Species-specific monitoring requirements may be superseded or added to by resource agency permits and/or incidental take authorizations. Following the relocation of wildlife, the biologist shall submit a report to the City confirming the methodology and results of relocating the wildlife.

BIO-4 Nesting Bird Surveys

A preconstruction nesting bird survey shall be conducted by a qualified biologist no more than 14 days prior to initiation of project construction activities. The survey shall be conducted within the treatment well site and include a 50-foot buffer for passerines and a 500-foot buffer for raptors. The survey shall be conducted by a biologist familiar with the identification of avian species known to occur in the region and shall focus on trees, vegetated areas, and other potential nesting within the vicinity of the treatment well site. If active nests are identified in the survey, an appropriate avoidance buffer (typically 50 feet for passerine species and 500 feet for raptors) shall be determined and demarcated by the biologist with high visibility material located within or adjacent to the treatment well site. All project personnel shall be notified as to the existence of the buffer zones and to avoid entering buffer zones during the nesting season. No project construction activities shall occur within the buffer until the biologist has confirmed that breeding/nesting is complete, and the young have fledged the nest. Encroachment into the buffer shall occur only at the discretion of the qualified biologist.

Significance After Mitigation

Implementation of Mitigation Measures BIO-1 through BIO-4 would require worker environmental awareness training, pre-construction surveys for special-status species and nesting birds, biological monitoring and avoidance of special-status species and nesting birds, and, if necessary, relocation of special-status species. With implementation of Mitigation Measures BIO-1 through BIO-4, direct and indirect impacts to special-status species would be reduced to a less than significant level.

LESS THAN SIGNIFICANT WITH MITIGATION INCORPORATED

b. Would the project have a substantial adverse effect on any riparian habitat or other sensitive natural community identified in local or regional plans, policies, or regulations, or by the California Department of Fish and Wildlife or U.S. Fish and Wildlife Service?

Each of the monitoring well locations outside of the treatment well site would be developed on locations that are paved and feature existing infrastructure, and thus do not present the potential to

affect riparian habitat or sensitive natural communities. As described in the environmental setting and shown in Figure 5, there are five vegetation communities at the treatment well site. None of these vegetation communities are identified as sensitive natural communities. San Luis Obispo Creek and its associated riparian habitat are located adjacent to the treatment well site; however, the project would not directly impact this riparian habitat. As described in Section 10, *Hydrology and Water Quality*, adherence to the Construction Stormwater General Permit and the City's mandatory Standard Specifications and Engineering Standards would ensure appropriate BMPs are implemented to minimize erosion and stormwater pollution, ensuring construction at the treatment well site would not indirectly affect the riparian habitat of San Luis Obispo Creek through the introduction of stormwater pollutants. Therefore, the project result in less than significant direct and indirect impacts to riparian habitats or other sensitive natural communities.

LESS-THAN-SIGNIFICANT IMPACT

c. Would the project 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?

Each of the monitoring well locations outside of the treatment well site would be developed on locations that are paved and feature existing infrastructure, and thus do not present the potential to affect wetlands. Based on a review of the National Wetlands Inventory, no wetlands are located on the treatment well site or any of the monitoring well locations, but wetland habitat does exist within San Luis Obispo Creek (United States Fish and Wildlife Service 2024). As described in Threshold 4(b), construction would occur in accordance with the requirements of the Construction Stormwater General Permit and the City's mandatory Standard Specifications and Engineering Standards, which would minimize the potential for erosion to fill or otherwise adversely affect San Luis Obispo Creek. With regulatory adherence, the project would have a less than significant impact related to wetland habitat.

LESS-THAN-SIGNIFICANT IMPACT

d. Would the project 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?

Each of the monitoring well locations outside of the treatment well site would be developed on locations that are paved and feature existing infrastructure, and thus do not present substantial habitat connectivity. Based on a review of the CDFW Biogeographic Information and Observation System, the treatment well site is not located in an area of substantial habitat connectivity (CDFW 2024b). The treatment well site is adjacent to commercial, residential, public facilities uses, and U.S. 101, and as such does not provide effective migration corridors for terrestrial species. San Luis Obispo Creek is adjacent to the treatment well site; however, as described in Threshold 4(b), regulatory compliance would minimize potential indirect impacts to San Luis Obispo Creek which, subsequently, would minimize potential impacts to aquatic habitat utilizing San Luis Obispo Creek for movement or nursery sites. Therefore, the project would have a less than significant impact related to wildlife movement.

LESS-THAN-SIGNIFICANT IMPACT

e. Would the project conflict with any local policies or ordinances protecting biological resources, such as a tree preservation policy or ordinance?

The project would not interfere with the long-term natural function of the treatment well site's open space, consistent with the City's policies to protect natural communities and avoid habitat disturbance pursuant to the Conservation and Open Space Element of the General Plan (City of San Luis Obispo 2014b). The monitoring well locations are all located on City property or within City easement. The project would remove seven trees to install the access road and utility infrastructure. Tree removal would occur consistent with the requirements of Chapter 12.24 of the City's Municipal Code, including compensatory tree planting (minimum 1:1 ratio). There is adequate area within the City-owned parcel proposed for the treatment well site to accommodate the compensatory plantings. All proximate trees proposed to remain would be avoided and preserved pursuant to the City's mandatory Standard Specifications and Engineering Standards for tree protection. The project would not conflict with any local policies or ordinances protecting biological resources; therefore, impacts would be less than significant.

LESS-THAN-SIGNIFICANT IMPACT

f. Would the project conflict with the provisions of an adopted Habitat Conservation Plan, Natural Community Conservation Plan, or other approved local, regional, or state habitat conservation plan?

The project site is not located in any applicable adopted Habitat Conservation Plan, Natural Community Conservation Plan, or other approved local, regional, or state habitat conservation plan (City of San Luis Obispo 2006). Therefore, no impact would occur.

NO IMPACT

5 Cultural Resources

	Potentially Significant Impact	Less than Significant with Mitigation Incorporated	Less-than - Significant Impact	No Impact
Would the project:				
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?	☐	■	☐	☐

Rincon prepared a Cultural Resources Technical Report (CRTR) dated May 2024 which includes a California Historical Resources Information System (CHRIS) records search through the Central Coast Information Center (CCIC); a Native American Heritage Commission (NAHC) Sacred Lands File (SLF) search; background research including in-depth review, archival, academic, and ethnographic information; a review of a feasibility study that summarizes historical data and background studies to understand the current PCE plume; a cultural resources pedestrian survey of the project site; an analysis of the sensitivity of the project site to contain cultural resources; as well as management recommendations. The setting and impact analysis provided are summarized based on the results of the CRTR.[5]

Environmental Setting

On April 29, 2024, CCIC staff at the Santa Barbara Museum of Natural History conducted a CHRIS records search to identify previously recorded cultural resources within the project site (treatment well site and 12 monitoring well locations) and a 0.5-mile radius surrounding it. The CHRIS records search identified 177 previous cultural resource studies within the 0.5-mile records search area, 29 of which address portions of the project site. The records search identified 256 previously recorded cultural resources within the 0.5-mile records search radius. Of these, three are mapped as within the project site: two historic buildings and/or structures and one historic period Chinese American Cemetery. Of the remaining 253 previously recorded cultural resources, 25 are prehistoric and/or historic period archaeological sites, four are prehistoric isolated cultural materials, and 224 are built environment resources.

[5] The report contains sensitive and confidential information concerning archaeological sites and is therefore held confidential not for public distribution. Archaeological site locations are exempt from the California Public Records Act, as specified in Government Code 6254.10, 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]).

Impact Analysis

a. Would the project cause a substantial adverse change in the significance of a historical resource pursuant to §15064.5?

The CHRIS records search identified two previously recorded cultural resources within the treatment well site and one resource overlapping MW-02 and MW-03: two historic buildings and/or structures and one historic period Chinese American Cemetery. One of the resources identified within the treatment well site is documented as the San Luis Obispo WRRF and is mapped in CCIC records as overlapping approximately 60 percent of the eastern portion of the treatment well site; however, these areas are undeveloped and/or are developed with the Bob Jones Trail used for recreational purposes and no buildings or structures associated with the facility were identified within the project site. The other resource mapped within the treatment well site, Dalidio Ranch, is mapped in CCIC records as overlapping approximately 5 percent of the northwestern portion of the treatment well site; however, this portion of the treatment well site is undeveloped. Only minor utility installations associated with the project would occur in this location and would not alter any existing structures. Considering the absence of Dalidio Ranch structures and that the project would not affect existing WRRF structures, the project would not affect historical resources associated with Dalidio Ranch or the WRRF. According to the CRTR, the Chinese American Cemetery is mapped in CCIC records as overlapping two monitoring well locations; however, the CRTR states review of historical aerials and archival research suggests that it is possible that the resource is mapped further south than what is captured in CCIC records, west and outside of the monitoring well locations. Furthermore, there are no structures on at the monitoring well sites that suggest the presence of a cemetery as the treatment well site is primarily undeveloped aside from the Bob Jones Trail. Due to the lack of historic structures indicating the presence of a cemetery, the project would not cause a substantial change in the significance of the cemetery. Therefore, the project would not result in the substantial adverse change in the significance of a historical resource pursuant to CEQA Guidelines Section 15064.5. Impacts would be less than significant.

LESS-THAN-SIGNIFICANT IMPACT

b. Would the project cause a substantial adverse change in the significance of an archaeological resource pursuant to §15064.5?

The NAHC SLF search returned a positive result; no informal outreach was conducted as part of the CRTR.[6] Refer to Section 18, Tribal Cultural Resources for a summary of formal tribal consultation conducted for the project. The cultural resources pedestrian survey performed as part of the CRTR focused on areas with exposed ground surfaces, which was limited to the treatment well site (which is inclusive of the wells, structures, water conveyance lines, and associated infrastructure) and location of MW-09. The pedestrian field survey did not identify any cultural materials. Given the developed nature of monitoring well locations MW-01 through MW-08 and MW-10 through MW-12, and the method of construction activities proposed (i.e., drilling), there is limited potential to encounter archaeological resources at these sites. As discussed above, historical aerials and archival research suggests that it is possible that the Chinese American Cemetery resource is mapped further south than what is captured in CCIC records, west and outside of the monitoring well location. The alternative location believed to be the true location of resource of the Chinese American Cemetery is a developed area outside of the treatment well site and monitoring well locations. Although the

[6] SLF search results do not provide details on cultural resources and are based on the township, range, and section information for a project site rather than a precise location; therefore, the exact location and nature of the cultural resource is unknown.

treatment well site has been previously disturbed, the treatment well site is nevertheless considered sensitive for archaeological resources, consistent with the City's Archaeological Resource Preservation Program Guidelines and Conservation and Open Space Element. If project related construction activities were to interfere with subsurface archaeological resources, this would be a potentially significant impact.

Mitigation Measures

CUL-1 Workers Environmental Awareness Program Training

All construction personnel and monitors who are not trained archaeologists shall be briefed regarding unanticipated discoveries prior to the start of construction activities. A basic presentation shall be prepared and presented by a qualified archaeologist to inform all personnel working on the project about the archaeological sensitivity of the area. The purpose of the WEAP training is to provide specific details on the kinds of archaeological materials that may be identified during construction of the project and explain the importance of and legal basis for the protection of significant archaeological resources. Each worker shall also learn the proper procedures to follow in the event that archaeological resources or human remains are uncovered during ground-disturbing activities. These procedures include work curtailment or redirection, and the immediate contact of the on-call archaeologist and if appropriate, Native American representative. The necessity of training attendance shall be stated on all construction plans and the City of San Luis Obispo shall maintain records demonstrating construction worker WEAP participation.

CUL-2 Archaeological and Native American Monitoring

Prior to any ground disturbing activities, the project proponent shall retain an archaeologist meeting the Secretary of the Interior's Qualifications Standards (NPS 1983) (Qualified Archaeologist) to oversee the implementation of this measure.

Prior to any ground disturbing activities, the archaeologist shall provide a Cultural Resources Mitigation and Monitoring Plan (CRMMP) for review and approval by the City of San Luis Obispo. The CRMMP should include, but not be limited to, the following:

a. A list of personnel involved in the monitoring activities;
b. Description of Native American involvement;
c. Description of how the monitoring shall occur;
d. Description of location and frequency of monitoring (e.g., full time, part time, spot checking);
e. Description of what resources may be encountered;
f. Description of circumstances that would result in the halting of work at the project site;
g. Description of procedures for halting work on the site and notification procedures;
h. Description of monitoring reporting procedures; and
i. Provide specific, detailed protocols for what to do in the event of the discovery of human remains.

The Qualified Archaeologist shall provide conditional monitoring as well as on call response in the case of an inadvertent discovery of archaeological resources. Given the developed nature of monitoring well locations MW-01 through MW-08 and MW-10 through MW-12, and the method of construction activities proposed (i.e., drilling), monitoring at these locations should be limited to

spot-checking and periodic examination of soils through selective sampling of soils brought to the surface as a result of the drilling activities. All construction-related ground disturbances, including clearing/grubbing and drilling, within the treatment well site, west and east of U.S. 101) and west of San Luis Obispo Creek be monitored by an archaeologist and a Native American representative. In general, archaeological, and Native American monitoring shall be limited to initial ground disturbance, which is defined as construction-related earthmoving of sediments from their native place of deposition and does not include any secondary movement of sediment that might be required for the project. The Qualified Archaeologist may adjust monitoring efforts as needed (increase, decrease, or discontinue monitoring frequency) based on the observed potential for construction activities to encounter archaeological deposits. The Qualified Archaeologist shall be responsible for maintaining daily monitoring logs.

Throughout the course of project construction activities, if a discovery is made by construction personnel and a monitor is not present, the protocols and procedures outlined in the Mitigation Measure CUL-3, Unanticipated Discovery of Archaeological Resources, shall be followed. Following the completion of construction, the Qualified Archaeologist shall prepare an archaeological monitoring report for submittal to the City and the CCIC with the results of the archaeological monitoring program.

CUL-3 Unanticipated Discovery of Archaeological Resources

In the event that archaeological remains are encountered during construction, City staff shall be notified and all work within 50 feet of the find shall be halted until the find is evaluated by the Qualified Archaeologist or other designated archaeologist working under the direction of the Qualified Archaeologist and appropriate mitigation, if necessary, is implemented. If archaeological remains are identified, the resource shall be evaluated for significance under City Archaeological Resource Preservation Program Guidelines, and further treatment measures, including but not limited to avoidance consistent with City General Plan Policies, Phase 2 Subsurface Archaeological Resource Evaluation, or Phase 3 Archaeological Data Recovery Excavation may be required. Work within 50 feet of the find shall not resume until authorization is received from the City. This measure shall be included on all construction plans.

Significance After Mitigation

Implementation of Mitigation Measures CUL-1, CUL-2, and CUL-3 would ensure construction personnel are informed of subsurface conditions and procedures are followed, such as halt of construction work, retaining a qualified archaeological and native American monitor, and if necessary, resource recovery. Adherence to Mitigation Measures CUL-1 through CUL-3 would reduce the project's impact on archaeological resources to a less than significant level.

LESS THAN SIGNIFICANT WITH MITIGATION INCORPORATED

c. Would the project disturb any human remains, including those interred outside of formal cemeteries?

Known prehistoric and historic period burials within or outside of formal cemeteries were identified within a 0.5-mile of the 22-acre site and within areas of proposed monitoring wells as a result of the CHRIS records search, literature review, and background research. According to the CRTC, a "Burial Sensitivity Area" overlaps with one of the monitoring well locations. As a result, due to the prehistoric and historical presence of Native Americans within the project area, including

documented burials within the 0.5-mile records search area, the project's proximity to Mission San Luis Obispo, and the Chinese American cemetery identified within CCIC records, there is a potential to encounter previously unknown or yet identified human remains during project construction activities.

In the event that human remains are inadvertently encountered during ground disturbing activities, they would be treated consistent with state and local regulations including California Health and Safety Code Section 7050.5, California Public Resources Code Section 5097.98, and the California Code of Regulations Section 15064.5(e). In accordance with these regulations, if human remains are found, the County Coroner must immediately notified of the discovery. No further disturbance would occur until the County Coroner has made a determination of origin and disposition pursuant to Public Resources Code Section 5097.98. If the County Coroner determines that the remains are, or believed to be Native American origin, the County Coroner is required to notify the NAHC, who in turn notifies those persons believed to be the most likely descendant (MLD). The MLD has 48 hours from being granted site access to make recommendations for the disposition of the remains. If the MLD does not make recommendations within 48 hours, the City would reinter the remains in an area of the property secure from subsequent disturbance. Compliance with California Health and Safety Code Section 7050.5, California Public Resources Code Section 5097.98, and the California Code of Regulations Section 15064.5(e) would ensure the project would have a less than significant impact related to the disturbance of human remains.

LESS THAN SIGNIFICANT WITH MITIGATION INCORPORATED

This page intentionally left blank.

6 Energy

	Potentially Significant Impact	Less than Significant with Mitigation Incorporated	Less-than - Significant Impact	No Impact
Would the project:				
a. Result in a 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?	☐	☐	■	☐

Environmental Setting

Energy consumption is directly related to environmental quality in that the consumption of nonrenewable energy resources releases criteria air pollutant and greenhouse gas (GHG) emissions into the atmosphere. Energy use during construction work would be in the form of fuel consumption (e.g., gasoline and diesel fuel) to operate construction equipment. The City's Conservation and Open Space Element and Climate Action Plan contain goals and policies primarily related to reducing operational energy, including introduction of solar power, implementation of energy conservation features in buildings, and implementation of carbon-sequestration measures (City of San Luis Obispo 2014b; City of San Luis Obispo 2020a).

The environmental impacts of air pollutant and GHG emissions associated with the project's energy consumption are discussed in detail in Section 3, *Air Quality*, and Section 8, *Greenhouse Gas Emissions*.

Impact Analysis

a. Would the project result in a potentially significant environmental impact due to wasteful, inefficient, or unnecessary consumption of energy resources, during project construction or operation?

Energy use during construction would be temporary for the duration of project construction activity. Construction contractors would be required to comply with the provisions of California Code of Regulations Title 13 Sections 2449 and 2485, which prohibit off-road diesel vehicles and diesel-fueled commercial motor vehicles, respectively, from idling for more than five minutes and would minimize unnecessary fuel consumption. Construction equipment would be subject to the United States Environmental Protection Agency (USEPA) Construction Equipment Fuel Efficiency Standard which would also minimize inefficient, wasteful, or unnecessary fuel consumption. Construction contractors would be required to utilize fuel-efficient equipment consistent with state regulations and would comply with state measures to ensure that inefficient, wasteful, or unnecessary consumption of energy does not occur. Operation of the proposed project would require minimal

energy in the form of electricity to power monitoring and treatment systems in addition to gasoline use for vehicle trips to the well sites. This minimal energy use would not be wasteful, inefficient, or unnecessary as it would be required to ensure proper function of the monitoring and treatment wells to clean-up and prevent PCE contamination. With adherence to applicable regulations related to energy efficiency, the proposed project's impact related to energy use would be less than significant.

LESS-THAN-SIGNIFICANT IMPACT

b. Would the project conflict with or obstruct a state or local plan for renewable energy or energy efficiency?

State regulations for energy conservation, such as the California Green Building Standards Code and California Energy Code, target energy efficiency in the development or renovation of buildings and would be inapplicable to the proposed project. In addition, the City's energy-related goals and policies within the Conservation and Open Space Element and Climate Action Plan have limited applicability to the project as they focus primarily on energy conservation in buildings, solar design, achieving carbon-free electricity, and carbon sequestration (City of San Luis Obispo 2014b; City of San Luis Obispo 2020a). As the proposed buildings are limited to housing treatment equipment and infrastructure, no State or local plans for renewable energy or energy efficiency would apply to the proposed project. Therefore, impacts would be less than significant.

LESS-THAN-SIGNIFICANT IMPACT

7 Geology and Soils

	Potentially Significant Impact	Less than Significant with Mitigation Incorporated	Less-than - Significant Impact	No Impact
Would the project:				
a. Directly or indirectly cause potential substantial adverse effects, including the risk of loss, injury, or death involving:				
1. 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?	☐	☐	■	☐
2. Strong seismic ground shaking?	☐	☐	■	☐
3. Seismic-related ground failure, including liquefaction?	☐	☐	■	☐
4. 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 wastewater disposal systems where sewers are not available for the disposal of wastewater?	☐	☐	☐	■
f. Directly or indirectly destroy a unique paleontological resource or site or unique geologic feature?	☐	■	☐	☐

Environmental Setting

The project site is within the southern Coast Range geomorphic province. The Coast Range province is comprised of sub-parallel northwest-southeast trending faults, folds, and mountain ranges (City of San Luis Obispo 2014a). According to the California Geological Survey the project site is not within an Alquist-Priolo Fault Zone or overlay an active earthquake fault, the closest active fault to the treatment well site is the Los Osos Fault Zone, located approximately one mile northwest (California Geological Survey 2021). The Safety Element of the City's General Plan recognizes the treatment well site as an area having high liquefaction potential (City of San Luis Obispo 2014c). The treatment well site is not within a landslide hazard zone (City of San Luis Obispo 2014c). Soils underlying the treatment well site are primarily Salinas silty clay loam soil with zero to two percent slopes (United States Department of Agriculture [USDA] 2024).

Impact Analysis

a.1. Would the project directly or indirectly cause potential substantial adverse effects, including the risk of loss, injury, or death involving 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?

a.2. Would the project directly or indirectly cause potential substantial adverse effects, including the risk of loss, injury, or death involving strong seismic ground shaking?

a.3. Would the project directly or indirectly cause potential substantial adverse effects, including the risk of loss, injury, or death involving seismic-related ground failure, including liquefaction?

a.4. Would the project directly or indirectly cause potential substantial adverse effects, including the risk of loss, injury, or death involving landslides?

c. Would the project 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. Would the project 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?

Individual well installation activities would include drilling to a maximum of 200 feet and would not create conditions that would exacerbate unstable seismic conditions or stresses in the Earth's crust. Although the well locations are located near seismically active areas such as the Los Osos Fault Zone, the project does not include development of occupiable buildings or infrastructure, thereby exposing persons to geologic or soil related hazards, including ground shaking, fault rupture, lateral spreading, subsidence, soil expansivity, landside, liquefaction or collapse. While there is a potential for disturbance of the proposed water and wastewater distribution lines during a major seismic event, the project would be designed to minimize the potential hazard and the City would implement standard emergency protocols to minimize any related potential hazards due to pipe displacement. Therefore, potential impacts would be less than significant.

LESS-THAN-SIGNIFICANT IMPACT

b. Would the project result in substantial soil erosion or the loss of topsoil?

Each monitoring well would consist of one 2-inch or 4-inch diameter well. Due to the minimal ground disturbance required for drilling and installation of a 2-inch or 4-inch diameter well, there is no potential for monitoring well drilling to result in substantial erosion or siltation. As the overall footprint of construction activities, including work at the treatment well site (which is inclusive of the wells, structures, water conveyance lines, and associated infrastructure), would exceed one acre, the project would be required to comply with the Construction Stormwater General Permit, adopted by the SWRCB. This State requirement was developed to ensure that stormwater is managed, and that erosion is controlled on construction sites. The Construction Stormwater General Permit requires preparation and implementation of a Storm Water Pollution Prevention Plan (SWPPP), which requires implementation of BMPs to control stormwater run-on and runoff from construction work sites. The project would also be required to comply with the City's standard BMPs for erosion and sedimentation control (as required by the City's adopted Standard Specifications and Engineering Standards). BMPs may include, but would not be limited to, physical barriers to reduce erosion and sedimentation, construction of sedimentation basins, limitations on work periods during storm events, use of infiltration swales, protection of stockpiled materials, and a variety of other measures to be identified by a qualified SWPPP developer that would substantially reduce erosion from occurring during construction. With adherence to the Construction Stormwater General Permit and the City's mandatory Engineering Standards and Specifications, the project would have a less than significant impact related to soil erosion.

LESS-THAN-SIGNIFICANT IMPACT

e. Would the project have soils incapable of adequately supporting the use of septic tanks or alternative wastewater disposal systems where sewers are not available for the disposal of wastewater?

The project would not include or require the use of septic tanks or alternative wastewater disposal systems. On-site portable restroom facilities would be provided by the construction contractor for workers operating at the site. No impact would occur.

NO IMPACT

f. Would the project directly or indirectly destroy a unique paleontological resource or site or unique geologic feature?

Paleontological resources, or fossils, are the evidence of once-living organisms preserved in the rock record. Such resources include both the fossilized remains of ancient plants and animals and the traces of such remains. Paleontological resources are not found in "soil" but are rather found in 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 preserved in sedimentary rocks. Although rare, fossils can also be preserved in volcanic rocks or low-grade metamorphic rocks under certain conditions (Society of Vertebrate Paleontology [SVP] 2010). Fossils often occur in an unpredictable distribution within some sedimentary units.

Ground disturbing activities associated with the monitoring wells include drilling a 10-inch diameter hole to install the wells. Only soil cuttings would be derived from the drilling; no underlying geological units would be excavated. Soil cuttings do not produce geological materials with the potential to discover or identify fossils. Accordingly, paleontological monitoring of monitoring well installation could not result in quantitative or qualitative evaluations of potential paleontological

resources. As defined by SVP (2010), a fossil's significance is tied directly to its scientific value; as such, fossils that would not be exposed during project activity or reasonably could be anticipated to be exposed as a result of future human or natural events lack the access to scientific inquiry necessary to be found as significant under CEQA. Therefore, because no known paleontological resources would be impacted and any undiscovered resources would not otherwise be encountered, ground disturbing activities at the monitoring wells would have a less than significant impact on paleontological resources.

Ground disturbing activities at the treatment well site would involve drilling as well as grading to install utility infrastructure and gravel access roads. According to mapping by Jennings (1958), the treatment well site is underlain by Quaternary-aged alluvium (Jennings 1958). Similar to the discussion of monitoring well drilling, drilling treatment well TW-4 would have a less than significant impact on paleontological resources. Other ground disturbing activities at the treatment well site are not anticipated to reach depths where older, potentially more sensitive sediments could be encountered. However, the possibility remains that unanticipated paleontological resources could be discovered during ground-disturbing activities at the treatment well site. Therefore, this impact would be potentially significant.

Mitigation Measure

GEO-1 Unanticipated Discovery of Paleontological Resources

In the event of a fossil discovery by construction personnel at the treatment well site, the construction contractor shall halt all construction activities within the 50 feet of the fossil, and a Qualified Professional Paleontologist shall be retained to evaluate the find prior to resuming construction activity. If it is determined the fossil(s) is (are) scientifically significant, the Qualified Professional Paleontologist shall complete the following conditions to mitigate impacts to significant fossil resources:

- **Fossil Salvage.** If fossils are discovered, the Qualified Professional Paleontologist shall have the authority to halt or temporarily divert construction equipment within 50 feet of the find until the Qualified Professional Paleontologist evaluate the discovery and determine if the fossil may be considered significant. Bulk matrix sampling may be necessary to recover small invertebrates or microvertebrates from within paleontologically sensitive deposits.
- **Fossil Preparation and Curation.** Once salvaged, significant fossils shall be identified to the lowest possible taxonomic level, prepared to a curation-ready condition, and curated in a scientific institution with a permanent paleontological collection along with all pertinent field notes, photos, data, and maps. Fossils of undetermined significance at the time of collection may also warrant curation at the discretion of the Qualified Professional Paleontologist.
- **Final Paleontological Report.** The Qualified Professional Paleontologist shall submit a report describing the results of the paleontological monitoring efforts associated with the project. The report shall include a summary of the field and laboratory methods, an overview of the project geology and paleontology, a list of taxa recovered (if any), an analysis of fossils recovered (if any) and their scientific significance, and recommendations. The report shall be submitted to the City.

Significance After Mitigation

Mitigation Measure GEO-1 describes procedures that shall be followed in the event an unanticipated paleontological resource is encountered during construction at the treatment well site. With implementation of Mitigation Measure GEO-1, potential impacts to paleontological resources would be reduced to a less than significant level.

LESS THAN SIGNIFICANT WITH MITIGATION INCORPORATED

This page intentionally left blank.

8 Greenhouse Gas Emissions

	Potentially Significant Impact	Less than Significant with Mitigation Incorporated	Less-than - Significant Impact	No Impact
Would the project:				
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?	☐	☐	■	☐

Environmental Setting

The principal state GHG reduction plans and policies are Assembly Bill (AB) 32, the California Global Warming Solutions Act of 2006, and the subsequent legislation, Senate Bill (SB) 32 and AB 1279. The goal of SB 32 is to reduce GHG emissions to 40 percent below 1990 levels by 2030. In 2022, the State passed AB 1279, which declares the State would achieve net-zero GHG emissions by 2045 and would reduce GHG emissions by 85 percent below 1990 levels by 2045. To implement these requirements, CARB has published the 2022 Scoping Plan, which focuses on outcomes needed to achieve carbon neutrality by assessing paths for clean technology, energy deployment, natural and working lands, and others, and is designed to meet the state's long-term climate objectives and support a range of economic, environmental, energy security, environmental justice, and public health priorities (CARB 2022).

SLOAPCD has developed GHG thresholds of significance through 2045 in accordance with Assembly Bill 1279 and the California Air Resource Board's 2022 Scoping Plan, which set forth a goal of reducing GHG emissions by 85 percent below 1990 levels no later than 2045 (SLOAPCD 2023). Pursuant to SLOAPCD guidance, projects which result in less than 830 metric tons of carbon dioxide equivalent[7] (MT CO_2e) per year in 2026 would have a less than significant impact related to GHG emissions.

In 2020, the City adopted a Climate Action Plan, which establishes 2030 GHG emissions targets and a carbon neutrality target by 2035 (City of San Luis Obispo 2020a).

[7] Carbon dioxide equivalent is a unit of measurement used to standardize the climate effects of various GHGs in terms of the amount of carbon dioxide that would create the same amount of global warming.

Impact Analysis

a. Would the project generate GHG emissions, either directly or indirectly, that may have a significant impact on the environment?

Based on the results of the CalEEMod modeling (Appendix A), construction of all components of the proposed project would generate approximately 842 MT CO_2e. Amortized over a 30-year period, construction of the project would generate approximately 28 MT CO_2e per year. This level of GHG emission does not exceed SLOAPCD's annual threshold of 830 MT CO_2e. Therefore, construction of the proposed project would have a less than significant impact related to GHG emissions.

Operation of the project would generate a nominal amount of GHG emissions from electricity consumption to operate the treatment wells and occasional vehicle trips to the monitoring and treatment well sites for maintenance activities, which would not have the potential to exceed SLOAPCD GHG emissions thresholds. Therefore, the proposed project would have a less than significant impact related to GHG emissions.

LESS-THAN-SIGNIFICANT IMPACT

b. Would the project conflict with an applicable plan, policy, or regulation adopted for the purpose of reducing the emissions of greenhouse gases?

The City adopted a Climate Action Plan in 2020 with a goal of carbon neutrality by 2035. Since the release of the City's Climate Action Plan, the State adopted AB 1279, which sets a goal of achieving statewide carbon neutrality by 2045. Although the City's Climate Action Plan was released prior to the adoption of AB 1279, because the Climate Action Plan sets a carbon neutrality goal consistent with statewide efforts to achieve carbon neutrality, the Climate Action Plan is consistent with the AB 1279 carbon neutrality targets. Therefore, for the purposes of this analysis, the City's Climate Action Plan is the applicable plan for the project. Appendix C of the City's Climate Action Plan includes thresholds and guidance for preparation of GHG emissions analyses for projects within the city. To support progress toward the City's carbon neutrality goal, projects in San Luis Obispo must demonstrate consistency with the Climate Action Plan.

Table 5 summarizes the proposed project's consistency with the City's Climate Action Plan, based on applicable GHG Emissions Compliance Checklist measures (City of San Luis Obispo 2020a). As described therein, the proposed project would not conflict with the Climate Action Plan. Therefore, this impact would be less than significant.

Table 5 Project Consistency with the Climate Action Plan

Climate Action Plan Measures	Project Consistency
Pillar 4: Connected Community	
6a. Is the estimated Project/Plan-generated Vehicle Miles Traveled (VMT) within the City's adopted thresholds, as confirmed by the City's Transportation Division?	**Consistent.** Trips associated with the proposed project would not exceed the City's 110 trip per day threshold of significance. For more information, refer to Section 17, *Transportation.*
Pillar 6: Natural Solutions	
9. Does the Project/Plan comply with Municipal Code requirements for trees?	**Consistent.** The project would remove seven trees to install the access road and utility infrastructure. Tree removal would occur consistent with the requirements of Chapter 12.24 of the City's Municipal Code, including compensatory tree planting (minimum 1:1 ratio). There is adequate area within the City-owned parcel proposed for the treatment well site to accommodate the compensatory plantings. All proximate trees proposed to remain would be avoided and preserved pursuant to the City's mandatory Standard Specifications and Engineering Standards for tree protection.

Source: City of San Luis Obispo 2020a

LESS-THAN-SIGNIFICANT IMPACT

This page intentionally left blank.

9 Hazards and Hazardous Materials

	Potentially Significant Impact	Less than Significant with Mitigation Incorporated	Less-than - Significant Impact	No Impact
Would the project:				
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 0.25 mile of an existing or proposed school?	☐	☐	■	☐
d. Be located on a site that is included on a list of hazardous material 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 in 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?	☐	☐	■	☐
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?	☐	☐	■	☐

Environmental Setting

The following databases were reviewed in July 2024 for known hazardous material contamination at the treatment well site:

- The SWRCB Geotracker database
- The California Department of Toxic Substances Control's (DTSC) EnviroStor database
- The Superfund Enterprise Management System (SEMS) database

The treatment well site (which is inclusive of the wells, structures, water conveyance lines, and associated infrastructure) does not appear on any hazardous material site list compiled pursuant to Government Code Section 65962.5 (DTSC 2024; SWRCB 2024a; U.S. EPA 2024). The treatment well site is located within the San Luis Obispo County Regional Airport Land Use Plan, inside Zone 6, Traffic Pattern Zone (RS&H 2021). There are no schools within 0.25-mile of the treatment well site.

The monitoring wells are not located on a hazardous material site list compiled pursuant to Government Code Section 65962.5 (DTSC 2024; SWRCB 2024a; U.S. EPA 2024). The closest hazardous materials sites to the monitoring wells are located approximately 320 feet west of MW-01, 280 feet west of MW-02, 300 feet west of MW-03, and 150 feet north of MW-05. The sites located proximate to MW-01, MW-03, and MW-05 are identified as "Completed- Case Closed" which means site investigation and remedial action has been completed, and the Central Coast Regional Water Quality Control Board determined no further action was required (SWRCB 2024a). The site 280 feet west of MW-02, the South Higuera Street and Pismo Street Pipeline, is case open for verification monitoring, meaning that remediation has been completed and monitoring of the site has continued to ensure no further action is required (SWRCB 2024b). MW-04, MW-05, MW-07, MW-09, MW-10, MW-11, and MW-12 are located within the San Luis Obispo County Regional Airport Land Use Plan, inside Zone 6, Traffic Pattern Zone (RS&H 2021). MW-08 is located approximately 0.25-mile southeast of Pacific Beach High School.

Impact Analysis

a. Would the project create a significant hazard to the public or the environment through the routine transport, use, or disposal of hazardous materials?

b. Would the project 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. Would the project emit hazardous emissions or handle hazardous or acutely hazardous materials, substances, or waste within 0.25 mile of an existing or proposed school?

The project would not involve the routine use or disposal of hazardous materials, as project activities would only last the duration of the construction phase (approximately 120 working days), and no permanent project features would involve the operational use or disposal of hazardous materials. There are no schools within 0.25-mile of the treatment well site. MW-08 is located approximately 0.25-mile southeast of Pacific Beach High School.

Construction equipment would require the use of diesel fuel, gasoline, motor oil, and other similar materials. Wastes derived from well installation and well development activities would include soil cuttings, decontamination water, and development water. Pursuant to Title 22 of the California Code of Regulations, the construction contractor would be required to submit samples of drilling

spoils for analytical testing required for waste profiling. Based on the results of the analytical testing, soil cuttings and water would be containerized in 55-gallon drums, temporarily stored on-site or at an appropriate location, and profiled for disposal; derived wastes would be transported off-site and disposed of at an appropriate disposal facility.

These materials would be properly handled and disposed of in accordance with applicable regulations. Construction personnel would be required to have the necessary training and/or certifications to operate equipment used during project activities, minimizing the risk of accidental release of hazardous materials due to equipment failure. The project would not increase, encourage, or otherwise facilitate the transportation of hazardous materials above existing conditions. The amount of fuels and oil to power construction equipment would be typical of similar projects and no long-term operational impacts related to the routine transport, handling, or disposal of hazardous materials would result from the project. Therefore, the project would not create a significant hazard to the public or environment through the routine transport, use, or disposal of hazardous materials, through reasonably foreseeable upset and accident conditions involving the release of hazardous materials, or through use of hazardous materials within 0.25-mile of a school. These impacts would be less than significant.

LESS-THAN-SIGNIFICANT IMPACT

d. Would the project be located on a site that is included on a list of hazardous material 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?

The treatment well site is not included on any lists of hazardous materials compiled pursuant to Government Code Section 65962.5 (DTSC 2024; SWRCB 2024a; U.S. EPA 2024).

Therefore, the project would not create a significant hazard to the public or environment due to being located on a hazardous materials site compiled pursuant to Government Code Section 65962.5. No impact would occur. The site 280 feet west of MW-02, the South Higuera Street and Pismo Street Pipeline, is case open for verification monitoring, meaning that remediation has been completed and monitoring of the site has continued to ensure no further action is required (SWRCB 2024b). Due to the nature of construction at MW-02, temporary drilling lasting approximately 120 days would not have the potential to create a significant hazard to the public. As described in Thresholds 9 (a)(b)(c), the construction contractor would be required to submit samples of drilling spoils for analytical testing required for waste profiling transported off-site and disposed of at an appropriate disposal facility. Therefore, any potentially contaminated soil from the hazardous materials site 280 feet west of MW-02 would be safely disposed. MW-02 would be operated remotely and would not continuously introduce the public to significant hazards. Therefore, this impact would be less than significant.

LESS-THAN-SIGNIFICANT 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?

The closest airport to the project site is the San Luis Obispo County Regional Airport, approximately 1.5 miles southeast of the treatment well site. Although the treatment well site is located in the Traffic Pattern Zone, the project includes the installation of subsurface monitoring wells associated with the treatment of groundwater. The project does not include development of habitable

structures and, therefore, would not continuously expose workers to airport noise. Temporary project workers at the treatment well site would only be required during the length of the construction period (approximately 120 working days) or routine operational maintenance. As such, the project would not result in a safety hazard or excessive noise for working at the project site. This impact would be less than significant.

LESS-THAN-SIGNIFICANT IMPACT

f. Would the project impair implementation of or physically interfere with an adopted emergency response plan or emergency evacuation plan?

Construction at the treatment wells would not involve interference with roadways. Construction of a majority of the monitoring wells would be located adjacent to and within existing roadways which could pose temporary interference with roadways due to staging of construction equipment. Pursuant to the City's Specifications and Engineering Standards, the construction contractor would be required to create a temporary traffic control plan that adheres to standards for emergency access in order to allow construction staging areas into the street network (City of San Luis Obispo 2020b). The traffic control plan would address required equipment, barricading, flagmen, use of pilot vehicles, signing, tapers, and other components required to maintain traffic circulation. The traffic control plan is required to address how traffic would be routed, including traffic from cross streets, alleys, and private driveways. The traffic control plan would be subject to the approval of the City Engineer prior to the start of construction activities. With development and implementation of the traffic control plan, the project would not interfere with traffic management such that it would conflict with City emergency response or evacuation plans. The project would not conflict with adopted emergency response plan or emergency evacuation plan. This impact would be less than significant.

LESS-THAN-SIGNIFICANT IMPACT

g. Would the project expose people or structures, either directly or indirectly, to a significant risk of loss, injury, or death involving wildland fires?

The project site is located within a Local Responsibility Area and are not within a Very High Fire Hazard Severity Zone, as defined by the California Department of Forestry and Fire Protection (CAL FIRE) (CAL FIRE 2024). California Public Resources Code Section 4442 mandates the use of spark arrestors, which prevent the emission of flammable debris from exhaust on earth-moving and portable construction equipment with internal combustion engines that are operating on any forest-covered, brush-covered, or grass-covered land. California Public Resources Code Section 4428 requires construction contractors to maintain fire suppression equipment during the highest fire danger period (April 1 to December 1) when operating on or near any forest-covered, brush-covered, or grass-covered land. Pursuant to compliance with this existing regulation, the project would not expose people or structures, directly or indirectly, to a significant risk of loss, injury, or death involving wildland fires. This impact would be less than significant.

LESS-THAN-SIGNIFICANT IMPACT

10 Hydrology and Water Quality

	Potentially Significant Impact	Less than Significant with Mitigation Incorporated	Less-than - Significant Impact	No Impact
Would the project:				
a. Violate any water quality standards or waste discharge requirements or otherwise substantially degrade surface or ground water quality?	☐	☐	■	☐
b. Substantially decrease groundwater supplies or interfere substantially with groundwater recharge such that the project may impede sustainable groundwater management of the basin?	☐	☐	■	☐
c. Substantially alter the existing drainage pattern of the site or area, including through the alteration of the course of a stream or river or through the addition of impervious surfaces, in a manner which would:				
(i) Result in substantial erosion or siltation 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 of polluted runoff; or	☐	☐	■	☐
(iv) Impede or redirect flood flows?	☐	☐	■	☐
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?	☐	☐	■	☐

Environmental Setting

The San Luis Obispo Creek watershed is an approximately 53,271-acre coastal basin in southern San Luis Obispo County, which rises to an elevation of about 2,500 feet above sea level in the Santa Lucia Range. San Luis Obispo Creek flows to the Pacific Ocean and has six major tributary basins: Stenner Creek, Prefumo Creek, Laguna Lake, East Branch San Luis Obispo Creek, Davenport Creek, and See Canyon. The creek flows through the City and empties into the Pacific Ocean just west of Avila Beach.

The City of San Luis Obispo is not subject to inundation from tsunami or seiche (City of San Luis Obispo 2014c). The treatment well site is not located in a Special Flood Hazard Area, but is located in an "Other Area of Flood Hazard" identified with a 0.2 percent annual chance flood hazard; areas of one percent annual chance flood with average depth less than one foot or with drainage areas of less than one square mile (FEMA 2024).

In 2015, the state legislature approved the Sustainable Groundwater Management Act (SGMA). SGMA requires governments and water agencies of high and medium priority basins to halt overdraft and bring groundwater basins into balanced levels of pumping and recharge. Under SGMA, these basins should reach sustainability within 20 years of implementing their sustainability plans. The project is located within the San Luis Obispo Valley Groundwater Basin, which has been designated by the California Department of Water Resources (DWR) as a high-priority basin (DWR 2022). The County and City formed Groundwater Sustainability Agencies (GSAs) within their respective jurisdictions to ensure full compliance with SGMA throughout the entire San Luis Obispo Valley Groundwater Basin. The City is the GSA with jurisdiction over the well locations (City of San Luis Obispo Department of Public Works 2022).

The project was initiated to characterize a PCE plume within the San Luis Valley Subarea of the San Luis Obispo Valley Groundwater Basin, DWR Bulletin 118 Basin No. 3-09 (Basin), in San Luis Obispo County.

Impact Analysis

a. Would the project violate any water quality standards or waste discharge requirements or otherwise substantially degrade surface or ground water quality?

As stormwater flows over a construction site, it can pick up sediment, debris, and chemicals and transport them to receiving water bodies. Additionally, soil disturbance during project construction would increase the potential for erosion and sedimentation. Construction of the monitoring wells would require minimal construction activities limited to linear drilling at one location for each monitoring well, precluding the possibility of erosion. Construction at the treatment well site would involve excavation for utility installation in addition to surface work to construct foundations for the buildings, GAC vessels, and storage tanks, and the gravel access roads. As described in Threshold 7(b), construction would be required to comply with the Construction Stormwater General Permit, which mandates preparation and implementation of a SWPPP and associated BMPs to control stormwater run-on and runoff from construction work sites. The project is also required to comply with the City's standard BMPs for erosion and sedimentation control (as required by the City's adopted Standard Specifications and Engineering Standards). BMPs may include, but would not be limited to, physical barriers to reduce erosion and sedimentation, construction of sedimentation basins, limitations on work periods during storm events, use of infiltration swales, protection of stockpiled materials, and a variety of other measures to be identified by a qualified SWPPP developer that would substantially reduce erosion from occurring during construction. At the

completion of construction, the project would not introduce stormwater pollutants. With adherence to these regulations, project construction would have a less than significant impact related to violating water quality standards or waste discharge requirements.

LESS-THAN-SIGNIFICANT IMPACT

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

The purpose of the project is to improve water quality, through clean-up of existing PCE contamination within in the San Luis Valley Subarea of the San Luis Obispo Valley Groundwater Basin, and to expand local water supply resiliency by reducing reliance on local surface water supplies. Extraction of groundwater would occur in compliance with SGMA and the approved Groundwater Sustainability Plan (GSP), and meters would be installed to ensure compliance, consistent with the City's requirements to monitor all new wells within the City. Impervious surfaces would be limited to structural foundations and paving within the protected and fenced treatment well sites (approximately 0.4 acre). The project is required to comply with City Standard Specifications and Engineering Standards for post-construction stormwater compliance. Therefore, based on compliance with existing standards and requirements, including on-going metering and monitoring of the groundwater extractions, the project would not substantially decrease groundwater supplies, or substantially interfere with groundwater recharge such that the project would impede sustainable groundwater management of the basin. Therefore, impacts would be less than significant.

LESS-THAN-SIGNIFICANT IMPACT

c.(i) Would the project substantially alter the existing drainage pattern of the site or area, including through the alteration of the course of a stream or river or through the addition of impervious surfaces, in a manner which would result in substantial erosion or siltation on- or off-site?

c.(ii) Would the project 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 substantially increase the rate or amount of surface runoff in a manner which would result in flooding on- or off-site?

c.(iii) Would the project 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 that would create or contribute runoff water which would exceed the capacity of existing or planned stormwater drainage systems or provide substantial additional sources of polluted runoff?

c.(iv) Would the project substantially alter the existing drainage pattern of the site or area, including through the alteration of the course of a stream or river or through the addition of impervious surfaces, in a manner which would impede or redirect flood flows?

Construction activities would be limited to linear drilling at one location for each monitoring well, precluding the possibility for exposing soil to erosion or siltation, exacerbating flooding, contributing excess runoff, or impeding or redirecting flood flows. The monitoring wells would not introduce new impervious surfaces which have the potential to alter existing drainage patterns which could result in flooding or increase run off. Once subsurface monitoring wells are installed, a flush-mounted traffic rated steel well box will be installed over each well. The project would create approximately

0.40 acre of impervious surfaces due to structural foundations and paving within the two treatment well locations. The project is required to comply with City Standard Specifications and Engineering Standards for post-construction stormwater compliance. New gravel access roads would be installed at the TW-3 and TW-4 sites; however, these would not be paved roads and therefore would not result in additional impervious surfaces. Therefore, the project would not significantly alter the existing drainage pattern of the site or area. Potential impacts would be less than significant.

LESS-THAN-SIGNIFICANT IMPACT

d. In flood ha9zard, tsunami, or seiche zones, would the project risk release of pollutants due to project inundation?

The City of San Luis Obispo is not subject to inundation from tsunami or seiche and the treatment well site is not located in a Special Flood Hazard Area. Facilities or construction activities that use or store large quantities of hazardous materials could harm the environment if inundated by a flood resulting from a storm event or dam failure. As discussed in Section 9, *Hazards and Hazardous Materials*, the project would not involve the routine use or disposal of hazardous materials beyond the construction period, as project activities would only last the duration of construction (approximately 120 working days for TW-4 and 50 working days for monitoring wells), and no permanent features would be constructed that would involve the use or disposal of hazardous materials. Groundwater contaminated with PCE would be treated and discharged into backwash tanks, and wastewater would be transported to the City's sewer system, all within a contained system. There are no operational components which have the potential to introduce new pollutants to the project site or result in a change to the existing flood patterns. Since the project would not risk pollutant release due to project inundation in a flood hazard area, there would be no impact.

NO IMPACT

e. Would the project conflict with or obstruct implementation of a water quality control plan or sustainable groundwater management plan?

The Water Quality Control Plan for the Central Coast Basin, adopted by the Central Coast Regional Water Quality Control Board, is the water quality control plan applicable to the project site. The Basin Plan establishes implementation programs to achieve water quality objectives to protect beneficial uses. As described in Threshold 10(a), construction of the would be conducted in compliance with the Construction Stormwater General Permit and the City's mandatory Standards Specifications and Engineering Standards to minimize the potential for pollutants to degrade water quality. Operation of the project would not introduce new stormwater pollutants. Therefore, the project would not conflict with the water quality objectives within the Water Quality Control Plan for the Central Coast Basin.

The San Luis Obispo Valley Basin Groundwater Sustainability Plan is the applicable sustainable groundwater management plan to the project site. As described in Threshold 10(b), the purpose of the project is to improve water quality, through clean-up and prevention of PCE contamination in drinking water supply wells in the San Luis Valley Subarea of the San Luis Obispo Valley Groundwater Basin, and to expand local water supply resiliency by reducing reliance on local surface water supplies. Extraction of groundwater would occur in compliance with SGMA and the approved GSP, and meters would be installed to ensure compliance, consistent with the City's requirements to monitor all new wells within the City. Therefore, the project would not conflict with or obstruct implementation of the San Luis Obispo Valley Basin Groundwater Sustainability Plan.

LESS-THAN-SIGNIFICANT IMPACT

11 Land Use and Planning

	Potentially Significant Impact	Less than Significant with Mitigation Incorporated	Less-than - Significant Impact	No Impact
Would the project:				
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?	☐	☐	■	☐

Environmental Setting

The 22-acre treatment well site (which is inclusive of the wells, structures, water conveyance lines, and associated infrastructure) is located in the southern portion of the City along U.S. 101 between Prado Road and Los Osos Valley Road, the monitoring wells are dispersed on City property or within City easement or right-of-way. The southern portion of the treatment well site is zoned Conservation/Open Space (C/OS-20) and has a land use designation of Open Space. The northern portion is zoned Public Facility (PF) and Public Facility-Special Considerations (PF-S) with a land use designation of Public. The treatment well site is surrounded by U.S. 101 and commercial development to the north, the City Water Resource Recovery Facility (WRRF) to the north, San Luis Obispo Creek and residential development to the north/south.

Monitoring wells would be dispersed on City property or within City easements within the following zones: Conservation/Open Space (C/OS-20), Medium Density Residential (R-2), Low-Density Residential Specific Plan Overlay (R-1-SP), Public Facility (PF), Service Commercial (C-S), Service Commercial Mixed Use Overlay (C-S-MU), Service Commercial Planned Development Overlay (C-S-PD), Retail Commercial (C-R), Retail Commercial Planned development Overlay (C-R-PD), and Tourist Commercial (C-T). The monitoring wells are on land designated with the following land uses: Service and Manufacturing, General Retail, Tourist Commercial, Public, Low Density Residential, Medium Density Residential, and Open Space.

Impact Analysis

a. Would the project physically divide an established community?

Construction staging for treatment well installation would occur in an area measuring approximately 40 feet by 10 feet to account for the drill rig footprint. As discussed in the *Project Description*, a 100-foot buffer is added to the 40 feet by 10 feet to account for the work zone to accommodate the support and decontamination truck, as well as the work area for the crew. Treatment well installation would occur in City maintained open space along U.S. 101. Staging for monitoring well locations would be conducted to maintain local access for residents to the extent practicable in compliance with temporary traffic control measures specified within the City's Standard

Specifications & Engineering Standards (City of San Luis Obispo 2020b). All work would occur within City property or City easement or right-of-way and would be temporary, lasting approximately 120 days for TW-4 and 50 days for monitoring wells. The project would not involve changes in land uses or the creation of highways or other large-scale development or infrastructure with the potential to divide an established community. Therefore, no impact would occur.

NO IMPACT

b. Would the project 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?

The project does not propose any land use designation or zoning changes. The purpose of the project is to monitor water quality and monitor the effectiveness of extracting and treating impacted groundwater via the installation of treatment wells in an area surrounded by existing public facility uses, such as the City corporation yard and the WRRF. Monitoring wells would be dispersed on City property or within City easement or right-of-way. The project would not conflict with any land use plan, policy, or regulation adopted for the purpose of avoiding or mitigating an environmental effect. The project incorporates identified standards and regulations in effect for the protection of the environment.

LESS-THAN-SIGNIFICANT IMPACT

12 Mineral Resources

	Potentially Significant Impact	Less than Significant with Mitigation Incorporated	Less-than - Significant Impact	No Impact
Would the project:				
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?	☐	☐	☐	■

Environmental Setting

Pursuant to Policy 6.5.1 of the Conservation and Open Space Element of the City's General Plan, mineral extraction is prohibited within City limits (City of San Luis Obispo 2014b).

Impact Analysis

a. Would the project 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. Would the project 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?

The well sites are located on land classified as a Mineral Resources Zone-3, a classification where mineral resources of unknown significance exist (DOC 1989). The well sites are within an existing urbanized area of the City and the Conservation and Open Space Element of the City's General Plan prohibits mineral extraction. As such, the project would not result in the loss of availability of a known mineral resource or locally important mineral resource recovery site delineated on a local general plan, specific plan, or other land use plan. Therefore, no impacts would occur.

NO IMPACT

This page intentionally left blank.

13 Noise

	Potentially Significant Impact	Less than Significant with Mitigation Incorporated	Less-than - Significant Impact	No Impact
Would the project result in:				
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?	☐	☐	☐	■

Environmental Setting

Sound is a vibratory disturbance created by a moving or vibrating source, which is capable of being detected by the hearing organs. Noise is defined as sound that is loud, unpleasant, unexpected, or undesired and may therefore be classified as a more specific group of sounds. The effects of noise on people can include general annoyance, interference with speech communication, sleep disturbance, and, in the extreme, hearing impairment. Noise levels are commonly measured in decibels (dB) using the A-weighted sound pressure level (dBA). The A-weighting scale is an adjustment to the actual sound pressure levels so that they are consistent with the human hearing response. Groundborne vibration of concern in environmental analysis consists of the oscillatory waves that move from a source through the ground to adjacent buildings or structures and vibration energy may propagate through the buildings or structures. The primary concern from vibration is that it may cause structural damage.

The City Municipal Code Chapter 9.12 - Noise Control, mandates that operating tools or equipment used for construction activities between weekday hours of 7:00 p.m. and 7:00 a.m. or any time on Sundays or holidays is strictly prohibited, except for emergency works of public service utilities or by exception issued by the City Community Development Department. The Municipal Code also states that construction activities shall be conducted in such a manner, where technically and economically feasible, that the maximum noise levels at affected properties shall not exceed 75 dBA at single-family residences, 80 dBA at multi-family residences, and 85 dBA at mixed residential/commercial uses. The Municipal Code prohibits operating any device that creates ground vibration above the

vibration perception threshold of an individual at or beyond 150 feet from the source on a public space or right-of-way.

Noise exposure for various types of land uses reflect the varying noise sensitivities associated with those uses. Sensitive receptors typically include residences, schools, healthcare facilities, and other live-in housing facilities such as prisons or dormitories. The closest sensitive receptors to the project site include single-family residences located approximately 15 feet east of MW-10, a single-family residence located approximately 45 feet north of MW-06, a single-family residence located approximately 50 feet east of MW-01 and mobile homes located approximately 65 feet north of MW-03.

Regarding human perception, vibration levels would begin to be perceptible at levels of 0.04 inches per second peak particle velocity (in/sec ppv) for continuous events and 0.25 in/sec ppv for transient events (Caltrans 2020).

Impact Analysis

a. Would the project result in 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?

Noise from construction equipment, site disturbance, and other project activities may temporarily and intermittently dominate the noise environment in the immediate vicinity of the wells. As stated above, the closest sensitive receptors to the project site include single-family residences located approximately 15 feet east of MW-10, a single-family residence located approximately 45 feet north of MW-06, a single-family residence located approximately 50 feet east of MW-01 and mobile homes located approximately 65 feet north of MW-03. The nearest sensitive receptors to the treatment well site are single-family residences located approximately 245 feet east of the treatment well site. The portion of the Bob Jones Trail within the treatment well site is a recreational use which is not considered a sensitive receptor. Table 6 shows typical noise levels produced by common construction equipment anticipated to be used during construction of the proposed monitoring wells and treatment well.

Table 6 Typical Noise Levels for Construction Equipment

Equipment	Typical Noise Level 50 Feet from Source, dBA
Backhoe	80
Concrete Pump	82
Crane, Mobile	83
Rock Drill	95

Source: Federal Transit Administration 2018

At 245 feet, use of the construction equipment shown in Table 6 would result in a maximum noise level of approximately 71 dBA which would not exceed the 75 dBA threshold established in the City Municipal Code (Appendix C). Therefore, construction at the treatment well site would have a less than significant impact related to construction noise.

Construction activities would occur at each monitoring well for approximately four days; therefore, the time which sensitive noise receptors near monitoring well locations would be exposed to construction noise would be short-term. However, use of this construction equipment could exceed

75 dBA as far as 150 feet from each monitoring well site (Appendix C). Therefore, sensitive noise receptors near monitoring well locations (primarily residential properties within 150 feet of MW-01, MW-02, MW-03, MW-06, and MW-10) would be exposed to intermittent and temporary construction noise levels that exceed Municipal Code standards for construction near single-family residential properties. As such, there would be a potentially significant impact to residential properties surrounding monitoring well locations from short-term construction noise.

The proposed project would not include any operational components that create substantial noise or otherwise introduce any long-term operational noise sources in the city. Therefore, operation of the proposed project would have a less than significant impact related to excessive noise.

Mitigation Measures

N-1 Noise Reducing Best Management Practices

During monitoring well installation at MW-01, MW-02, MW-03, MW-06, and MW-10, the following construction noise best management practices shall be adhered to:

- Stationary construction equipment that generates noise that exceeds 60 dBA shall be shielded with the most modern noise control devices (i.e. mufflers, lagging, and/or motor enclosures).
- Impact tools (e.g., drills) used for project construction shall be hydraulically or electrically powered wherever possible to avoid noise associated with compressed-air exhaust from pneumatically powered tools.
- Where use of pneumatic tools is unavoidable, an exhaust muffler on the compressed-air exhaust shall be used.
- All construction equipment shall have the manufacturers' recommended noise abatement methods installed, such as mufflers, engine enclosures, and engine vibration insulators, intact and operational.
- All construction equipment shall undergo inspection at periodic intervals to ensure proper maintenance and presence of noise control devices (e.g., mufflers, shrouding, etc.).
- At least 21 days prior to the start of construction, notify off-site businesses and residents within 150 feet of construction of planned construction activities. The notification shall provide brief description of the project, activities that would occur, hours of construction, the duration of construction, and a phone number to the City Community Development Department for the public to direct noise-related complaints.

N-2 City Approval and Personnel Briefing

Construction plans shall note construction hours, truck routes, and all construction noise best management practices, and shall be reviewed and approved by the City Utilities Department prior to advertisement of the construction request for bids. All construction workers shall be briefed at a preconstruction meeting on construction hour limitations and how, why, and where best management practices are to be implemented.

Significance After Mitigation

Mitigation Measures N-1 and N-2 require implementation of standards noise best management practices, such as the use of electric or hydraulically powered impact tools, and requirements for signs and briefing of construction employees regarding all noise control measures to be implemented throughout the construction phase. The Municipal Code states, where technically and

economically feasible, construction activities shall be conducted in such a manner that the maximum noise levels at affected properties will not exceed listed thresholds. Mitigation Measures N-1 and N-2 serve as mitigation that would lower temporary and intermittent noise levels to the extent technically and economically feasible. Therefore, following implementation of Mitigation Measures N-1 and N-2, the proposed project would be consistent with the Municipal Code, and this impact would be reduced to a less than significant level.

LESS THAN SIGNIFICANT WITH MITIGATION INCORPORATED

b. Would the project result in generation of excessive groundborne vibration or groundborne noise levels?

Use of a rotary sonic drill or hollow-stem auger for drilling would generate temporary and intermittent groundborne noise or groundborne vibration during construction. These construction activities would be periodic and limited in duration. As stated above, the closest sensitive receptors to the project site include single-family residences located near monitoring well sites, including a single-family residence located approximately 15 feet east of MW-10, a single-family residence located approximately 45 feet north of MW-06, a single-family residence located approximately 50 feet east of MW-01 and mobile homes located approximately 65 feet north of MW-03.

Vibration levels associated with monitoring well drilling would begin to be perceptible at levels of 0.04 in/sec ppv for continuous events and 0.25 in/sec ppv for transient events. Given the short duration and infrequent nature of drilling at the monitoring wells occurring during daytime hours, the 0.25 in/sec ppv threshold for transient events is utilized for this analysis. At 15 feet, drilling could result in a vibration level of approximately 0.19 in/sec ppv which would not exceed the exceed the 0.25 in/sec ppv for transient events (Appendix C). Given that the 15 feet represents the closest distance between a proposed well (MW-10) and sensitive receptor, monitoring well drilling would not generate substantial groundborne vibration or groundborne noise exceeding applicable human annoyance thresholds.

During operation, the proposed project would not include any components which would generate any significant groundborne vibration or noise. Therefore, this impact would be less than significant.

LESS-THAN-SIGNIFICANT IMPACT

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?

All wells except for MW-01 and MW-02 would be located within two miles of San Luis Obispo County Regional Airport. However, according to the Airport Land Use Plan for the airport, the well sties would be located outside of the noise contours of the San Luis Obispo County Regional Airport (RS&H 2021). Therefore, the project would not expose construction workers to excessive airport noise. Furthermore, the project does not include development of habitable or occupiable structures and therefore would not expose any occupants to excessive airport noise. No impact would occur.

NO IMPACT

14 Population and Housing

	Potentially Significant Impact	Less than Significant with Mitigation Incorporated	Less-than - Significant Impact	No Impact
Would the project:				
a. Induce substantial unplanned population growth in an area, either directly (e.g., by proposing new homes and businesses) or indirectly (e.g., through extension of roads or other infrastructure)?	☐	☐	☐	■
b. Displace substantial numbers of existing people or housing, necessitating the construction of replacement housing elsewhere?	☐	☐	☐	■

Environmental Setting

As of January 1, 2024, San Luis Obispo County's population was 278,469 with 262,597 households, and the City's population was 48,684 persons, with 47,293 households (California Department of Finance [DOF] 2024).

Impact Analysis

a. Would the project induce substantial unplanned 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. Would the project displace substantial numbers of existing people or housing, necessitating the construction of replacement housing elsewhere?

The project would not require the removal of housing and therefore would not displace people or housing. The project would not result in the construction of habitable structures or commercial/industrial uses and would not induce population growth. The project would utilize a minor number of temporary construction personnel over the course of the approximate 120 working day period for TW-4 and 50 working days for monitoring wells. Construction equipment would be staged within individual work zones on City property or within City easement, which would not interfere with surrounding infrastructure. Once completed, the project would not involve ongoing operational uses that would result in new employment opportunities. The project would not induce substantial unplanned population growth in an area, either directly or indirectly, or require the displacement of existing people or housing. No impact would occur.

NO IMPACT

This page intentionally left blank.

15 Public Services

	Potentially Significant Impact	Less than Significant with Mitigation Incorporated	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, or the 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:				
1 Fire protection?	☐	☐	■	☐
2 Police protection?	☐	☐	■	☐
3 Schools?	☐	☐	☐	■
4 Parks?	☐	☐	☐	■
5 Other public facilities?	☐	☐	☐	■

Environmental Setting

The San Luis Obispo Fire Department (SLOFD) provides fire protection services for the City. The fire stations nearest to the well sites are Station 1, located at 2160 Santa Barbara Avenue, approximately 0.75-mile northeast of MW-1, and Station 4, located at 1395 Madonna Road, 2,000 feet northwest of MW-6. In 2023, SLOFD maintained an average travel time of five minutes and 53 seconds, with a total response time of eight minutes and 41 seconds (SLOFD 2023).

The San Luis Obispo Police Department (SLOPD) provides public safety services for the City. SLOPD's Operation Bureau provides 24-hours emergency and non-emergency response, traffic enforcement, and neighborhood outreach (SLOPD 2024). The SLOPD operates out of one police station located at 1042 Walnut Street.

Impact Analysis

a. Would the project result in substantial adverse physical impacts associated with the provision of new or physically altered governmental facilities, or the 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:

1 Fire protection?

2 Police protection?

The project would not induce population growth, either directly or indirectly, or include any actions that would have the potential to increase demand for fire protection or police protection services such that new or physically altered fire or police stations would be warranted. If necessary, supporting fire or police protective services during temporary construction activities would be provided by the City's police or fire departments. The project would not result in substantial physical impacts associated with the provision of 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 fire protection services or police protection services. No significant impacts to public services would occur.

LESS-THAN-SIGNIFICANT IMPACT

a. Would the project result in substantial adverse physical impacts associated with the provision of new or physically altered governmental facilities, or the 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:

3 Schools?

4 Parks?

5 Other public facilities?

The project would not induce population growth, either directly or indirectly, or include any actions that would have the potential to increase demand for schools, libraries or other public services such that new or physically altered public facilities would be warranted. Project activities would be temporary and contained within individual work zones on City property or within City easement or right-of-way, precluding the possibility to interfere with the existing use of parks or recreational facilities. The project would not result in substantial physical impacts associated with the provision of new or physically altered governmental facilities, the construction of which could cause significant environmental impacts, in order to maintain acceptable service ratios or other performance objectives for schools, parks, or other public facilities. No impact would occur.

NO IMPACT

16 Recreation

	Potentially Significant Impact	Less than Significant with Mitigation Incorporated	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?	☐	☐	☐	■

Environmental Setting

The Park and Recreation Blueprint for the Future identifies 28 City parks and 15 recreational facilities in the City, including a golf course, sports complex, stadium, swim center, community center, skate park, senior center, and community gardens. Additionally, the City owns and manages 13 open spaces and recreational trails that cover approximately 4,050 acres (City of San Luis Obispo 2021).

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?

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?

The project would not induce population growth, either directly or indirectly, which would have the potential to increase the demand for parks or other recreational facilities. Temporary construction activities would be staged within individual work zones on City property or within City easement, precluding the possibility to interfere with or prohibit the use of existing neighborhood or regional parks or other recreational facilities such that other parks or recreational facilities would be utilized more frequently, and substantial physical deterioration of the facility would occur or be accelerated. The project does not include construction of recreational facilities and would not require the construction or expansion of recreational facilities which might have an adverse physical effect on the environment. Therefore, no impacts to recreation would occur.

NO IMPACT

This page intentionally left blank.

17 Transportation

	Potentially Significant Impact	Less than Significant with Mitigation Incorporated	Less-than - Significant Impact	No Impact
Would the project:				
a. Conflict with a program, plan, ordinance or policy addressing the circulation system, including transit, roadway, bicycle and pedestrian facilities?	☐	☐	■	☐
b. Conflict or be inconsistent with CEQA Guidelines section 15064.3, subdivision (b)?	☐	☐	■	☐
c. Substantially increase hazards due to a geometric design feature (e.g., sharp curves or dangerous intersections) or incompatible use (e.g., farm equipment)?	☐	☐	■	☐
d. Result in inadequate emergency access?	☐	☐	■	☐

Environmental Setting

Regional access to the project site is available via U.S. 101. Monitoring wells are located throughout the City of San Luis Obispo and are accessed via local roads. Local access to the treatment well site (which is inclusive of the wells, structures, water conveyance lines, and associated infrastructure) is provided via Prado Road, Los Osos Valley Road, and Calle Joaquin. Bicycle facilities on these streets include buffered lanes and protected bike lanes (City of San Luis Obispo 2024a). In addition, the treatment well site includes a portion of the Bob Jones Trail which is a multi-use path available for cyclists and pedestrians.

Impact Analysis

a. Would the project conflict with a program, plan, ordinance or policy addressing the circulation system, including transit, roadway, bicycle and pedestrian facilities?

Trips associated with project activities would be limited to worker trips to and from the project site, delivery trips for heavy equipment and construction tools, and trips to dispose of soil and other construction debris. Construction-related vehicle trips would be temporary and would cease once construction is complete. Construction contractors would be required to comply with the temporary traffic control provisions set forth in the City's Standard Specifications and Engineering Standards (City of San Luis Obispo 2020b). This document provides guidelines for traffic control during construction, including maintaining traffic, specifications for flagging, pavement delineation, among other topics. In addition, a Traffic Control Plan, compliant with the provisions set forth in the Caltrans Manual on Uniform Traffic Control Devices would be required to be approved by the City Engineer or their designee prior to the start of construction activities. All traffic coordination on City Streets and within the Bob Jones Bikepath undertaken by construction contractors would require

the City Engineer's approval no fewer than three days prior to implementation of traffic coordination activities (City of San Luis Obispo 2020b). Compliance with these existing standards and measures would ensure that project construction would not conflict with a program, plan, ordinance or policy addressing the circulation system.

Operation of the project would result in minimal vehicle trips for occasional monitoring activities, and these trips would not result in vehicle traffic which could conflict with a program, plan, ordinance or policy addressing the circulation system. Therefore, this impact would be less than significant.

LESS-THAN-SIGNIFICANT IMPACT

b. Would the project conflict or be inconsistent with CEQA Guidelines section 15064.3, subdivision (b)?

CEQA Guidelines Section 15064.3 describes specific considerations for evaluating a project's transportation impacts. Specifically, the guidelines state VMT exceeding an applicable threshold of significance may indicate a significant impact. Pursuant to CEQA Guidelines Section 15064.3(b)(3), a lead agency may include a qualitative analysis of project-related traffic. The City has adopted VMT thresholds consistent with the thresholds and methodologies contained in the California Governor's Office of Land Use and Climate Innovation's (formerly the Governor's Office of Planning and Research) Technical Advisory on Evaluating Transportation Impacts in CEQA (City of San Luis Obispo 2020c). As described therein, a project that is anticipated to generate less than 110 vehicle trips per day may be assumed to cause a less than significant impact.

Construction of the proposed project would result in short-term, temporary vehicle trips to and from the project site during the construction period. These temporary vehicle trips would not result in long-term changes to VMT within San Luis Obispo; therefore, project construction VMT would not conflict or be inconsistent with *CEQA Guidelines* Section 15064.3(b).

During operation, minimal maintenance trips would be required to monitor the wells and maintain the extraction and treatment system; however, these trips would not result in an exceedance of 110 daily vehicle trips, and the project would not generate growth or create an increase in traffic such that substantial increases in VMT could occur. Therefore, the project would not conflict or be inconsistent with CEQA Guidelines Section 15064.3(b), and this impact would be less than significant.

LESS-THAN-SIGNIFICANT IMPACT

c. Would the project substantially increase hazards due to a geometric design feature (e.g., sharp curves or dangerous intersections) or incompatible use (e.g., farm equipment)?

The proposed project would not alter or affect the city's existing street network. Construction of MW-01, MW-05, MW-07, MW-08, MW-10, and MW-12 may temporarily result in partial road closures; however, construction contractors would be required to comply with temporary traffic control provisions set forth in the City's Standard Specifications and Engineering Standards, including implementation of a traffic control plan to reduce temporary traffic hazards during construction (City of San Luis Obispo 2020b). At the completion of construction activity, equipment would be removed, and the monitoring wells would be located underground. The project site would not have any new geometric design features or incompatible uses that would increase hazards for vehicular and pedestrian traffic. Therefore, the proposed project would not substantially increase

hazards due to a geometric design feature or incompatible uses. This impact would be less than significant.

LESS-THAN-SIGNIFICANT IMPACT

d. Would the project result in inadequate emergency access?

Traffic impacts during project construction would be primarily associated with minor roadway and multi-use pathway delays and temporary partial lane closures. However, any minor delays during project construction would be temporary in nature and would not result in long-term inadequate emergency access. To minimize potential impacts to emergency access during construction, the project would be required to comply with the City's Standard Specifications and Engineering Standards and implement a traffic control plan that adheres to City standards for emergency access, including prohibiting personal vehicles of construction workers from parking on the traveled way of the construction zone and approval from the City's Engineer or their designee for any traffic restrictions (City of San Luis Obispo 2020b). Operation of the project would not impair emergency access as wells would be located underground, and minimal operational vehicle trips would be required. Therefore, the proposed project would have a less than significant impact related to emergency access.

LESS-THAN-SIGNIFICANT IMPACT

This page intentionally left blank.

18 Tribal Cultural Resources

	Potentially Significant Impact	Less than Significant with Mitigation Incorporated	Less-than - Significant Impact	No Impact
Would the project cause a substantial adverse change in the significance of a tribal cultural resource, defined in a Public Resources Code Section 21074 as either a site, feature, place, or 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:				
a. 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)?	☐	■	☐	☐
b. 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 Section 5024.1? In applying the criteria set forth in subdivision (c) of Public Resources Code Section 5024.1, the lead agency shall consider the significance of the resource to a California Native American tribe.	☐	■	☐	☐

Environmental Setting

California Assembly Bill 52 of 2014 (AB 52) expanded CEQA by defining a new resource category, "tribal cultural resources." AB 52 establishes that "a project with an effect that may cause a substantial adverse change in the significance of a tribal cultural resource is a project that may have a significant effect on the environment" (PRC Section 21084.2). It further states that the lead agency shall establish measures to avoid impacts that would alter the significant characteristics of a tribal cultural resource, when feasible (PRC Section 21084.3).

PRC Section 21074 (a)(1)(A-B) defines tribal cultural resources as "sites, features, places, cultural landscapes, sacred places, and objects with cultural value to a California Native American tribe" and are:

1. Listed or eligible for listing in the CRHR, or in a local register of historical resources as defined in PRC Section 5020.1(k), or
2. A resource determined by the lead agency, in its discretion and supported by substantial evidence, to be significant pursuant to criteria set forth in PRC Section 5024.1(c). In applying these criteria, the lead agency shall consider the significance of the resource to a California Native American tribe.

The City sent notification letters to listed tribal contacts in the region on July 25, 2024, which included the Santa Ynez Band of Mission Indians, the Barbareno/Ventureno Band of Mission Indians, the Salinan Tribe of Monterey and San Luis Obispo County, the Tule River Indian TribeYak Tityu Tityu – Northern Chumash Tribe, the Northern Chumash Tribal Council, the Torres Martinez Desert Cahuilla Indians, the Chumash Council of Bakersfield, and the Coastal Band of the Chumash Nation.

Native American Tribes were notified on July 25, 2024 about the project consistent with City and State regulations including, but not limited to, Assembly Bill 52. During the request for consultation window, two responses were received. The Salinan Tribe of Monterey responded on August 30, 2024 requesting notification in the event of a cultural resource discovery during construction. The Santa Ynez Band of Chumash Indians contacted the City on August 5, 2024 requesting a consultation meeting to discuss the project. The City consulted with the Tribe on September 17, 2024 and shared information regarding the project, the results of the cultural resources survey, and proposed mitigation measures. The Tribe informed the City that they are in agreement with the mitigation measures laid out in the public review Draft IS-MND for a workers environmental awareness program training, archaeological monitoring, and protocol in the event of unanticipated discoveries. Pursuant to PRC §21080.3.1 (b) the request for consultation window closed on August 26, 2024. No other tribal agencies responded to the consultation request.

Impact Analysis

a. Would the project cause a substantial adverse change in the significance of a tribal cultural resource as defined in Public Resources Code Section 21074 that is 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)?

b. Would the project cause a substantial adverse change in the significance of a tribal cultural resource as defined in Public Resources Code 21074 that is 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 Section 5024.1?

During preparation of the Cultural Resources Assessment, Rincon contacted the NAHC on December 17, 2021, requesting an SLF search for traditional cultural resources. The NAHC responded on March 11, 2022, indicating the results of the SLF search was positive, meaning traditional cultural resources are present within the SLF search area. The NAHC provided a consultation list of 14 Native American groups within traditional lands or cultural places located within the SLF search area.

SLF searches are conducted by using USGS quadrangle maps, each of which covers an approximately 50- to 70-square-mile area, and the NAHC does not provide the specific location of tribal heritage resources. Consequently, a positive SLF search does not explicitly indicate the presence of tribal cultural resources on the project site. However, based on the positive results of the SLF search, the project site could have the potential to contain tribal cultural resources that could be eligible for

listing in the CRHR or local register, or considered to be a tribal cultural resource under CEQA. As discussed in Section 5, *Cultural Resources*, the potential to encounter archaeological resources during ground-disturbing activities exists. If encountered, previously undiscovered cultural resources could potentially be considered eligible for listing in the CRHR or a local register or be considered tribal cultural resources. As such, impacts to tribal cultural resources would be potentially significant.

Mitigation Measures CR-1, CR-2, and CR-3 would implement a worker's environmental awareness program, standard procedures for the unanticipated discovery of cultural resources, require a Native American representative to participate in the evaluation of unanticipated cultural resources discovered during construction activities, and enforce procedures for Native American consultation in the event human remains are discovered. Upon implementation of Mitigation Measures CR-1, CR-2, and CR-3, the project would not cause a substantial adverse change in the significance of a tribal cultural resource.

LESS THAN SIGNIFICANT WITH MITIGATION INCORPORATED

This page intentionally left blank.

19 Utilities and Service Systems

	Potentially Significant Impact	Less than Significant with Mitigation Incorporated	Less-than - Significant Impact	No Impact
Would the project:				
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 management and reduction statutes and regulations related to solid waste?	☐	☐	■	☐

Environmental Setting

The City's Utilities Department provides water and wastewater services to the City. Wastewater generated within the City, California Polytechnic State University, and the County airport is treated at the Water Resource Recovery Facility (WRRF). The WRRF treats approximately 4.5 million gallons of wastewater daily (City of San Luis Obispo 2024c). The City's Utilities Department is also responsible for administering an agreement with the San Luis Garbage Company for waste collection services. Most solid waste collected in the City is disposed of at the Cold Canyon Landfill (City of San Luis Obispo 2014a). Cold Canyon Landfill has a maximum permitted capacity of 1,650 tons per day (California Department of Resources, Recycling, and Recovery [CalRecycle] 2020). As of 2020, the landfill's estimated remaining capacity was 13,000,000 cubic yards with an estimated closure date of December 2040 (CalRecycle 2020). Electricity services in the City are provided by

Pacific Gas & Electric Company and natural gas services are provided by the Southern California Gas Company.

Impact Analysis

a. Would the project 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. Would the project have sufficient water supplies available to serve the project and reasonably foreseeable future development during normal, dry and multiple dry years?

c. Would the project 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?

As described under Section 3, *Air Quality*, construction activities would require minimum amounts of water for dust suppression. Adequate water supplies would be available to meet the needs of the project for dust suppression purposes. In accordance with Municipal Code Section 13.07.070(c), potable City water would not be used for major construction activities, such as grading and dust control, and would not be used to wash down sidewalks, driveways, or parking areas except to alleviate immediate fire or sanitation hazards. Consequently, the project would not use the City's drinking water for dust suppression. No buildings or structures would be constructed that would result in new long-term water demand. Minimal wastewater would be generated by construction worker personnel during temporary construction activities (approximately 120 working days for the TW-4 and 50 working days for the monitoring wells, including testing) which would be served by on-site portable restroom facilities. The City's WRRF and collection system has sufficient capacity to accept the wastewater generated by the treatment process. Groundwater extraction would occur in compliance with SGMA and the adopted GSP to ensure to adverse impacts occur to the groundwater basin or flows within San Luis Obispo Creek.

Therefore, the project would have sufficient water supplies available, would not require or result in relocation or construction of new or expanded water or stormwater facilities, and would not exceed wastewater treatment demand beyond existing conditions.

As discussed in Section 6, *Energy*, the project would require minimal, temporary energy use throughout construction, and construction equipment used would be typical of similar-sized construction projects in the region. Project operation would not increase the demand for additional electric power or natural gas as compared to existing conditions. Therefore, the project would not require or result in additional electric power or natural gas facilities. Similarly, the project would not require the need for additional telecommunications facilities.

Overall, the project would not require relocation or construction of new or expanded utilities facilities, increase water demand, or result in inadequate wastewater treatment capacity. These impacts would be less than significant.

LESS-THAN-SIGNIFICANT IMPACT

d. Would the project 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. Would the project comply with federal, state, and local management and reduction statutes and regulations related to solid waste?

Project construction activities would generate construction waste; wastes derived from well installation and well development activities would include soil cuttings, decontamination water, and development water. The construction contractor would be required to submit samples of drilling spoils for analytical testing required for waste profiling. Based on the results of the analytical testing, soil cuttings and water would be containerized in 55-gallon drums, temporarily stored on-site or at an appropriate location, and profiled for disposal; derived wastes would be transported off-site and disposed of at an appropriate disposal facility.

For other temporary solid waste applicable to landfill (i.e. trash, green, sand, and/or non-recyclable PCC), Cold Canyon Landfill has sufficient permitted capacity to accommodate the project's temporary solid waste disposal needs associated with construction activities. Pursuant to Assembly Bill 939 and Municipal Code Chapter 8.04, recoverable materials generated during construction would be separated and recycled to minimize construction and waste exportation from the site, resulting in limited demand on the landfills within the County. Operation of the project would not generate solid waste. Therefore, the project would not generate solid waste in excess of State or local standards, or in the excess of capacity of local infrastructure, and the project would comply with federal, state, and local management reduction statues and regulations related to solid waste. These impacts would be less than significant.

LESS-THAN-SIGNIFICANT IMPACT

This page intentionally left blank.

20 Wildfire

	Potentially Significant Impact	Less than Significant with Mitigation Incorporated	Less-than - Significant Impact	No Impact
If located in or near state responsibility areas or lands classified as very high fire hazard severity zones, would the project:				
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 downslopes or downstream flooding or landslides, as a result of runoff, post-fire slope instability, or drainage changes?	☐	☐	■	☐

Environmental Setting

The central coast of California is prone to wildfire due to a warm, dry climate and expansive coverage of ignitable vegetation. However, the project site is not within a State Responsibility Area or a Very High Fire Hazard Severity Zone as defined by CAL FIRE (CALFIRE 2024). The closest Fire Hazard Severity Zone to the treatment well site is approximately one mile west, extending from foothills of Mine Hill.

Impact Analysis

a. If located in or near state responsibility areas or lands classified as very high fire hazard severity zones, would the project substantially impair an adopted emergency response plan or emergency evacuation plan?

b. If located in or near state responsibility areas or lands classified as very high fire hazard severity zones, would the project, 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. If located in or near state responsibility areas or lands classified as very high fire hazard severity zones, would the project 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. If located in or near state responsibility areas or lands classified as very high fire hazard severity zones, would the project expose people or structures to significant risks, including downslopes or downstream flooding or landslides, as a result of runoff, post-fire slope instability, or drainage changes?

The project site is not within a State Responsibility Area or a Very High Fire Hazard Severity Zone (CAL FIRE 2024). The project would involve the movement of construction equipment, hauling of construction equipment, and transportation of construction personnel which could temporarily increase traffic on roadways when accessing the well locations, which could possibly delay emergency vehicles. However, any minor delays during project construction would be temporary in nature and would not impair an adopted emergency response plan or emergency evacuation plan. The project would be required to comply with the City's Standard Specifications and Engineering Standards and implement a traffic control plan that adheres to City standards for emergency access. Therefore, the project would not substantially impair an adopted emergency response plan or emergency evacuation plan.

Heavy duty equipment used during construction that may produce sparks that could ignite vegetation would be limited through regulatory compliance. California Public Resources Code Section 4442 mandates the use of spark arrestors, which prevent the emission of flammable debris from exhaust on earth-moving and portable construction equipment with internal combustion engines that are operating on any forest-covered, brush-covered, or grass-covered land. PRC Section 4428 requires construction contractors to maintain fire suppression equipment during the highest fire danger period (April 1 to December 1) when operating on or near any forest-covered, brush-covered, or grass-covered land. These regulations would minimize the risk of fire resulting from project construction activities. No roads, fuel breaks, emergency water sources, or power lines would be installed. In addition, the project would not result in additional housing and would not accommodate occupants. Thus, the project would not expose persons to pollutant concentrations from a wildfire, exacerbate fire risk due to installation or maintenance of associated infrastructure, or expose people or structures to significant risks as a result of runoff, post-fire slope instability, or drainage changes. These impacts would be less than significant.

LESS-THAN-SIGNIFICANT IMPACT

21 Mandatory Findings of Significance

	Potentially Significant Impact	Less than Significant with Mitigation Incorporated	Less-than - Significant Impact	No Impact
Does the project:				
a. Have the potential to substantially degrade the quality of the environment, substantially reduce the habitat of a fish or wildlife species, cause a fish or wildlife population to drop below self-sustaining levels, threaten to eliminate a plant or animal community, substantially reduce the number or restrict the range of a rare or endangered plant or animal or eliminate important examples of the major periods of California history or prehistory?	☐	■	☐	☐
b. Have impacts that are individually limited, but cumulatively considerable? ("Cumulatively considerable" means that the incremental effects of a project are considerable when viewed in connection with the effects of past projects, the effects of other current projects, and the effects of probable future projects)?	☐	■	☐	☐
c. Have environmental effects which will cause substantial adverse effects on human beings, either directly or indirectly?	☐	■	☐	☐

Impact Analysis

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?

The project is limited to activities that would occur at the treatment well site and monitoring well sites; therefore, the project would not impact the total mapped habitat areas of the special-status plant and animal species with potential to occur at these sites. The project does not include large-scale activities which would pose a substantial threat to special-status species or their mapped habitats. Due to the local scale of the project, 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.

The well sites do not contain important examples of the major periods of California history or prehistory. Therefore, the project would not have a substantial effect on these resources. As discussed in Section 5, *Cultural Resources*, Mitigation Measures CR-1, CR-2, CR-3, and CR-4 would minimize potential effects on cultural and tribal cultural resources. Accordingly, the project would not eliminate important examples of the major periods of California history or prehistory.

LESS THAN SIGNIFICANT WITH MITIGATION INCORPORATED

b. Does the project have impacts that are individually limited, but cumulatively considerable? ("Cumulatively considerable" means that the incremental effects of a project are considerable when viewed in connection with the effects of past projects, the effects of other current projects, and the effects of probable future projects)?

As described in Sections 1 through 20, with respect to all environmental issues, the project's potential impacts associated with project construction activities would be either less than significant or reduced to a less than significant level with implementation of required mitigation. This is because project construction would be temporary, and project operation would not result in adverse effects on the environmental baseline conditions. Cumulatively considerable impacts could occur if the construction of other projects occurs at the same time as the project and in the same vicinity, such that the effects of similar impacts of multiple projects combine to expose a resource to greater levels of impact than would occur under the project.

Certain resource areas (e.g., Geology and Soils, Hazards and Hazardous Materials) are by their nature specific to a project location, such that impacts at one location do not add to impacts at other locations.

Other resource areas inherently address cumulative impacts. As noted in Section 3, *Air Quality*, and Section 8, *Greenhouse Gas Emissions*, the project would comply with SLOAPCD's Clean Air Plan and the City's Climate Action Plan, along with other regulations that would reduce the project's air quality impacts and greenhouse gas emissions to less than significant levels. The Clean Air Plan establishes thresholds, and the Climate Action Plan contains a consistency checklist, both of which that are designed such that a project that demonstrates compliance with these items would not have an individually or cumulatively significant impact. Consequently, the project would not generate a cumulatively considerable impacts to air quality or greenhouse gas emissions.

Additionally, the project would have no impact on agriculture and forestry resources, land use, mineral resources, population and housing, public services, or recreation, and therefore, would not have the potential to contribute to cumulative impacts to these environmental issue areas. The discussion of cumulative impacts is limited to the following issue areas:

- **Aesthetics.** Projects within San Luis Obispo have the potential to result in cumulative changes to the city's visual environment by introducing development that blocks scenic views, is visually inconsistent with its surroundings, or introduces substantial light and glare. However, these projects would be subject to the City's applicable regulations related to scenic quality, height limitations, and minimum setback requirements established within the City's General Plan and Municipal Code. These projects would implement City lighting standards to shield lighting from adjacent sites. With adherence to City regulations related to aesthetics, cumulative development in the City of San Luis Obispo would have a less than significant impact related to aesthetics.

- **Biological Resources.** Cumulative projects that may be developed within the city would be subject to similar regulatory requirements as the project. These include, but are not limited to, the federal Endangered Species Act, California Endangered Species Act, and Migratory Bird Treaty Act. 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 subject to review from agencies including, but not limited to, CDFW and the United States Fish and Wildlife Service, 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 has the potential to impact special-status species and nesting birds during construction, but the project would incorporate mitigation measures, including worker environmental awareness training, pre-construction surveys, and biological monitoring and special status species relocation or avoidance. With incorporation of these measures, the project would not contribute considerably to cumulative impacts related to biological resources.
- **Cultural Resources.** Projects within San Luis Obispo, particularly those in undeveloped areas, may disturb archaeological resources during construction and other ground-disturbing activities. Therefore, cumulative development has the potential to have a significant impact on cultural resources. Project construction at the well sites could result in potential disturbance to subsurface archaeological resources; however, implementation of Mitigation Measures CUL-1 through CUL-3, which require construction worker training on identifying archaeological resources, monitoring during ground disturbance activities, and procedures for the unanticipated discovery of archaeological resources. With incorporation of these measures, the project would not contribute considerably to cumulative impacts related to cultural resources.
- **Energy.** Cumulative projects in the city would use energy during construction and operation in the form of gasoline, diesel, natural gas, and electricity. Cumulative development would be required to comply with existing State regulations such as California Code of Regulations Title 13 Sections 2449 and 2485, the California Green Building Standards Code, and California Energy Code, which are implemented, in part, to ensure development does not result in the wasteful, inefficient, or unnecessary consumption of energy resources. With adherence to these regulatory requirements, cumulative impacts related to energy would be less than significant.
- **Hydrology and Water Quality.** The geographic area used to assess cumulative impacts to surface water is the San Luis Obispo Creek watershed. The geographic area used to assess cumulative impacts to groundwater is the San Luis Obispo Valley Groundwater Basin. A cumulative impact could occur if projects discharge pollutants to the San Luis Obispo Creek watershed and violate water quality standards, or if these projects would result in substantially decreased groundwater supplies. Cumulative projects would be required to comply with federal, state, and City water quality requirements, such as the Construction Stormwater General Permit and City Standard Specifications and Engineering Standards (erosion and sedimentation control, and water quality standards). Cumulative impacts to hydrology and surface water quality would be minimized with adherence to these regulations. Therefore, cumulative impacts to surface water would be less than significant. Cumulative development could result in increased water demand from the San Luis Obispo Valley Groundwater Basin. However, the basin is managed through the San Luis Obispo Valley Basin Groundwater Sustainability Plan which would ensure cumulative development in San Luis Obispo does not increase groundwater extraction beyond sustainable levels. As a result, cumulative development would not receive groundwater in conflict with the sustainable management

policies of the San Luis Obispo Valley Groundwater Basin. Cumulative impacts related to sustainable groundwater management would be less than significant

- **Noise.** Construction and operational noise and vibration are localized and rapidly attenuate. Cumulative construction impacts could occur if cumulative development in San Luis Obispo is located proximate to the treatment or monitoring wells such that overlapping construction schedules or operational noise- or vibration-generating sources could result in increased noise and vibration at the same sensitive receptors. The closest cumulative development to the project site is expansion of the WRRF, currently under construction, located adjacent to the treatment well stie to the northeast (City of San Luis Obispo 2024d). Due to the proximity to the project site, there is potential that if construction of the project and the WRRF overlapped, nearby sensitive receptors could potentially be exposed to substantial noise. Therefore, cumulative impacts are potentially significant. At the treatment well site the project would not exceed the City's 75 dBA threshold for construction noise. Therefore, the project would not contribute considerably to cumulative noise impacts.
- **Transportation.** Cumulative development could result in a greater number of vehicle trips in San Luis Obispo compared to existing conditions, increasing citywide VMT, which would be a significant cumulative impact. The project would require temporary construction trips which would not result in long-term changes to VMT in San Luis Obispo. Operation of the project would require minimal maintenance trips which would not exceed 110 daily trips, and would not result in substantial increases in citywide VMT. Therefore, the project would not contribute considerably to cumulative transportation impacts.
- **Utilities and Service Systems.** Cumulative development could result in increased water demand in excess of existing supplies, wastewater generation and solid waste generation in excess of existing facilities' capacity, and increased electric and natural gas demand requiring substantial infrastructure. As described in the City's Urban Water Management Plan, the City anticipates having adequate water to supply cumulative development through 2040 in normal, single dry years, and multiple dry years (City of San Luis Obispo 2024e). Therefore, cumulative water supply impacts would be less than significant. The WRRF treats approximately 4.5 million gallons per day and has a capacity of 5.1 million gallons per day. However, expansion to the WRRF, anticipated to be completed in late 2024, would increase treatment capacity to 5.4 million gallons per day, which is planned to accommodate wastewater flows in the City under full General Plan buildout. Therefore, cumulative wastewater impacts would be less than significant. Cold Canyon Landfill has an estimated remaining capacity of 13,000,000 cubic yards with an estimated closure date of December 2040. Therefore, adequate landfill capacity is available to serve cumulative development and cumulative solid waste impacts would be less than significant. Existing electric and natural gas infrastructure is present throughout San Luis Obispo, and cumulative development is anticipated to only require minor connections to existing natural gas and electric infrastructure. Therefore, cumulative impacts to electric and natural gas infrastructure would be less than significant.
- **Wildfire.** Cumulative development in San Luis Obispo could result in wildfire hazards that could potentially expose residents and employees within San Luis Obispo to wildfire or pollutants associated with wildfire smoke. Cumulative development would be required to adhere to applicable regulations to minimize fire risk, including the California Fire Code, California Public Resources Code Regulations, and San Luis Obispo Fire Department requirements. These regulations would ensure cumulative development would minimize the potential for wildfire to occur within SaSan Luis Obispo. Therefore, cumulative wildfire impacts would be less than significant.

Based on the analysis above, the project would not result in a cumulatively considerable contribution to a significant cumulative impact.

LESS-THAN-SIGNIFICANT IMPACT

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

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 3, *Air Quality*, Section 8, *Hazards and Hazardous Materials*, and Section 12, *Noise*. As discussed in detail in these sections, the project would not result in substantial adverse effects to humans due to exposure to air quality criteria pollutants in excess of established regulatory thresholds set by SLOAPCD. The project would not result in substantial impacts related to hazards and hazardous materials. With implementation of Mitigation Measures N-1 and N-2, the project would minimize temporary and intermittent noise levels during construction. Therefore, the project would not have environmental effects which would cause substantial adverse effects on human beings and this impact would be less than significant with mitigation incorporated.

LESS THAN SIGNIFICANT WITH MITIGATION INCORPORATED

This page intentionally left blank.

References

Bibliography

California Air Resources Control Board (CARB). 2014. California Air Basin Map. https://www.arb.ca.gov/ei/maps/statemap/abmap.htm (accessed August 2024).

_____. 2022. 2022 Scoping Plan. https://ww2.arb.ca.gov/sites/default/files/2022-12/2022-sp_1.pdf (accessed August 2024).

California Department of Conservation (DOC). 1989. Aggregate Resources and Active Mines of All Other Mineral Commodities San Luis Obispo-Santa Barbara P-C Region. https://maps.conservation.ca.gov/cgs/informationwarehouse/index.html?map=mlc (accessed July 2024).

_____. 2022. California Important Farmland Finder. https://maps.conservation.ca.gov/DLRP/CIFF/ (accessed July 2024).

California Department of Finance (DOF). 2024. Table 2: E-5 City/County Population and Housing Estimates, 1/1/2022. Accessible at: https://dof.ca.gov/Forecasting/Demographics/Estimates/e-5-population-and-housing-estimates-for-cities-counties-and-the-state-2020-2024// (accessed July 2024).

California Department of Fish and Wildlife (CDFW). 2024a. California Natural Community List. Available at: https://www.wildlife.ca.gov/Data/VegCAMP/Natural-Communities (accessed May 2023).

California Department of Forestry and Fire Protection (CAL FIRE). 2024. FHSZ Viewer. https://calfire-forestry.maps.arcgis.com/apps/mapviewer/index.html?layers=ac8ed44d76ed4988bceb07d35d80f4cb (accessed July 2024).

California Department of Resources, Recycling, and Recovery (CalRecycle). 2020. SWIS Facility/Site Activity Details Cold Canyon Landfill, Inc. (40-AA-0004). https://www2.calrecycle.ca.gov/SolidWaste/SiteActivity/Details/1509?siteID=3171 (accessed July 2024).

California Department of Toxic Substances Control (DTSC). 2024. EnviroStor. https://www.envirostor.dtsc.ca.gov/public/map/?myaddress=san+luis+obispo (accessed July 2024).

California Department of Transportation (Caltrans). 2019. California State Scenic Highway System Map. https://dot.ca.gov/programs/design/lap-landscape-architecture-and-community-livability/lap-liv-i-scenic-highways (accessed July 2024).

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

California Department of Water Resources (DWR). 2022. SGMA Basin Prioritization Dashboard. https://gis.water.ca.gov/app/bp-dashboard/final/ (accessed July 2024).

California Geological Survey (CGS). 2024. EQ Zapp: California Earthquake Hazard Zones Application. https://maps.conservation.ca.gov/cgs/EQZApp/app/ (accessed July 2024).

City of San Luis Obispo. 2014a. Land Use and Circulation Element Update Volume I Draft Program EIR. June 2014. https://www.slocity.org/home/showpublisheddocument/6723/635671221997970000 (accessed July 2024).

_____. 2014b. Conservation and Open Space Element. https://www.slocity.org/home/showpublisheddocument/6651/635670212786530000 (accessed July 2024).

_____. 2014c. Safety Element. December 9, 2014. https://www.slocity.org/home/showpublisheddocument/6645/635670212766530000 (accessed July 2024).

_____. 2020a. Climate Action Plan For Community Recovery. https://www.slocity.org/government/department-directory/city-administration/office-of-sustainability-and-natural-resources/climate-action/climate-action-plan (accessed August 2024).

_____. 2020b. Standard Specifications & Engineering Standards. https://www.slocity.org/home/showpublisheddocument/27919/637341402080900000 (accessed July 2024).

_____. 2020c. Transportation Impact Study Guidelines. https://www.slocity.org/home/showpublisheddocument/26883/637290299618070000 (accessed August 2024).

_____. 2021. Parks + Recreation Blueprint for the Future: 2021-2041. July 2021. https://www.slocity.org/home/showpublisheddocument/29503/637690273249070000 (accessed July 2024).

_____. 2024a. San Luis Obispo Bike Map. https://slocity.maps.arcgis.com/apps/Viewer/index.html?appid=26dbd38b9b46474a9f067ace6a453fc4 (accessed August 2024).

_____. 2024b. SLO Transit Rider Portal. https://slo.rider.peaktransit.com/ (accessed August 2024).

_____. 2024c. Wastewater Treatment. https://www.slocity.org/government/department-directory/utilities-department/wastewater/wastewater-treatment (accessed July 2024).

_____. 2024d. Current Development Projects. https://storymaps.arcgis.com/stories/d6ad7b71ca324c5b95773617e182a042 (accessed September 2024).

_____. 2024e. 2020 Urban Water Management Plan. https://www.slocity.org/home/showpublisheddocument/31041/637673768464130000 (accessed September 2024).

City of San Luis Obispo Department of Public Works. 2022. Interactive Data Viewer. https://gis.slocounty.ca.gov/Html5Viewer/Index.html?configBase=/Geocortex/Essentials/REST/sites/PW_SGMA/viewers/PW_Viewer/virtualdirectory/Resources/Config/Default&LayerTheme=3 (accessed July 2024).

Federal Emergency Management Agency (FEMA). 2024. National Flood Hazard Layer. https://hazards-fema.maps.arcgis.com/apps/webappviewer/index.html?id=8b0adb51996444d4879338b5529aa9cd (accessed July 2024).

Jennings, C. 1958. Geologic Map of California San Luis Obispo Sheet. https://www.conservation.ca.gov/cgs/Documents/Publications/Geologic-Atlas-Maps/GAM_18-SanLuisObispo-1958-Map.pdf (accessed September 2024).

RS&H. 2021. Amended and Restated San Luis Obispo County Regional Airport – Airport Land Use Plan. Accessible at: https://sloairport.com/wp-content/uploads/2024/02/Airport_Land_Use_Plan_Amended_5-26-21.pdf (accessed July 2024).

San Luis Obispo Air Pollution Control District (SLOAPCD). 2001. Clean Air Plan. https://storage.googleapis.com/slocleanair-org/images/cms/upload/files/business/pdf/CAP.pdf (accessed August 2024).

_____. 2005. Particulate Matter Report Implementation of SB 656 Requirements. https://storage.googleapis.com/slocleanair-org/images/cms/upload/files/PM.ReportFin.pdf (accessed August 2024).

_____. 2018. SLO APCD NOA Screening. https://www.google.com/maps/d/u/0/viewer?mid=1YAKjBzVkwi1bZ4rQ1p6b2OMyvIM&ll=35.364986805363785%2C-120.52563349999998&z=10 (accessed August 2024).

_____. 2019. San Luis Obispo County Attainment Status. https://storage.googleapis.com/slocleanair-org/images/cms/upload/files/AttainmentStatus29January2019.pdf (accessed August 2024).

_____. 2020. Ozone Emergency Episode Plan. https://storage.googleapis.com/slocleanair-org/images/cms/upload/files/San%20Luis%20Obispo%20County%20Ozone%20Emergency%20Episode%20Plan%2022%20January%202020.pdf (accessed August 2024).

_____. 2023. CEQA Air Quality Handbook. https://storage.googleapis.com/slocleanair-org/images/cms/upload/files/CEQA%20Handbook%202023_Final.pdf (accessed August 2024).

San Luis Obispo Fire Department (SLOFD). 2023. 2023 Annual Report. https://www.slocity.org/home/showpublisheddocument/35237/638518006009370000 (accessed July 2024).

San Luis Obispo Police Department (SLOPD). 2024. About the Department. https://www.slocity.org/government/department-directory/police-department/about-the-department (accessed July 2024).

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

State Water Resources Control Board (SWRCB). 2022. GeoTracker. https://geotracker.waterboards.ca.gov/map/?CMD=runreport&myaddress=city+of+san+luis+obsipo (accessed July 2024).

United States Department of Agriculture (USDA). 2024. Web Soil Survey. https://websoilsurvey.sc.egov.usda.gov/app/WebSoilSurvey.aspx (accessed July 2024).

United States Environmental Protection Agency (U.S.EPA). 2024. Superfund Enterprise Management System. July 1, 2024. https://enviro.epa.gov/envirofacts/sems/search (accessed July 2024).

List of Preparers

Rincon Consultants, Inc. prepared this IS-MND under contract to the City of San Luis Obispo. Persons involved in data gathering analysis, project management, and quality control are listed below.

Rincon Consultants, Inc.

Richard Daulton, MURP, Vice President/Senor Principal
Megan Jones, Principal
Chris Bersbach, MESM, Senior Supervising Planner
Nik Kilpelainen, Environmental Planner
Ethan Knox, Environmental Planner
Bryan Valladares, GIS Analyst
Debra Jane Seltzer, Formatting Specialist

Appendix A

Air Quality and Greenhouse Gas Modeling

PCE Plume Characterization Detailed Report

Table of Contents

1. Basic Project Information

1.1. Basic Project Information

Data Field	Value
Project Name	PCE Plume Characterization
Construction Start Date	1/2/2025
Lead Agency	—
Land Use Scale	Project/site
Analysis Level for Defaults	County
Windspeed (m/s)	3.20
Precipitation (days)	26.6
Location	35.249893196861194, -120.67849021021235
County	San Luis Obispo
City	San Luis Obispo
Air District	San Luis Obispo County APCD
Air Basin	South Central Coast
TAZ	3332
EDFZ	6
Electric Utility	Pacific Gas & Electric Company
Gas Utility	Southern California Gas
App Version	2022.1.1.29

1.2. Land Use Types

Land Use Subtype	Size	Unit	Lot Acreage	Building Area (sq ft)	Landscape Area (sq ft)	Special Landscape Area (sq ft)	Population	Description
Other Non-Asphalt Surfaces	30.4	Acre	30.4	0.00	0.00	—	—	—

1.3. User-Selected Emission Reduction Measures by Emissions Sector

No measures selected

2. Emissions Summary

2.1. Construction Emissions Compared Against Thresholds

Criteria Pollutants (lb/day for daily, ton/yr for annual) and GHGs (lb/day for daily, MT/yr for annual)

Un/Mit.	TOG	ROG	NOx	CO	SO2	PM10E	PM10D	PM10T	PM2.5E	PM2.5D	PM2.5T	BCO2	NBCO2	CO2T	CH4	N2O	R	CO2e
Daily, Summer (Max)	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Unmit.	7.43	6.25	48.0	55.7	0.16	1.70	0.18	1.88	1.57	0.04	1.61	—	17,834	17,834	0.73	0.15	0.81	17,899
Daily, Winter (Max)	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Unmit.	7.43	6.25	48.0	55.7	0.16	1.70	0.18	1.88	1.57	0.04	1.61	—	17,826	17,826	0.72	0.15	0.02	17,890
Average Daily (Max)	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Unmit.	2.11	1.77	13.7	15.8	0.05	0.49	0.04	0.52	0.45	0.01	0.46	—	5,070	5,070	0.21	0.04	0.08	5,088
Annual (Max)	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Unmit.	0.39	0.32	2.50	2.89	0.01	0.09	0.01	0.10	0.08	< 0.005	0.08	—	839	839	0.03	0.01	0.01	842

2.2. Construction Emissions by Year, Unmitigated

Criteria Pollutants (lb/day for daily, ton/yr for annual) and GHGs (lb/day for daily, MT/yr for annual)

Year	TOG	ROG	NOx	CO	SO2	PM10E	PM10D	PM10T	PM2.5E	PM2.5D	PM2.5T	BCO2	NBCO2	CO2T	CH4	N2O	R	CO2e
Daily - Summer (Max)	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
2025	7.43	6.25	48.0	55.7	0.16	1.70	0.18	1.88	1.57	0.04	1.61	—	17,834	17,834	0.73	0.15	0.81	17,899

2026	1.77	1.48	11.3	13.9	0.04	0.39	0.00	0.39	0.36	0.00	0.36	—	4,456	4,456	0.18	0.04	0.00	4,471
Daily - Winter (Max)	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
2025	7.43	6.25	48.0	55.7	0.16	1.70	0.18	1.88	1.57	0.04	1.61	—	17,826	17,826	0.72	0.15	0.02	17,890
2026	5.46	4.59	33.9	41.2	0.12	1.19	0.09	1.28	1.09	0.02	1.11	—	13,289	13,289	0.54	0.11	0.01	13,336
Average Daily	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
2025	2.11	1.77	13.7	15.8	0.05	0.49	0.04	0.52	0.45	0.01	0.46	—	5,070	5,070	0.21	0.04	0.08	5,088
2026	0.87	0.73	5.48	6.71	0.02	0.19	0.01	0.20	0.17	< 0.005	0.18	—	2,157	2,157	0.09	0.02	0.01	2,165
Annual	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
2025	0.39	0.32	2.50	2.89	0.01	0.09	0.01	0.10	0.08	< 0.005	0.08	—	839	839	0.03	0.01	0.01	842
2026	0.16	0.13	1.00	1.22	< 0.005	0.03	< 0.005	0.04	0.03	< 0.005	0.03	—	357	357	0.01	< 0.005	< 0.005	358

3. Construction Emissions Details

3.1. Monitoring Well Construction (2025) - Unmitigated

Criteria Pollutants (lb/day for daily, ton/yr for annual) and GHGs (lb/day for daily, MT/yr for annual)

Location	TOG	ROG	NOx	CO	SO2	PM10E	PM10D	PM10T	PM2.5E	PM2.5D	PM2.5T	BCO2	NBCO2	CO2T	CH4	N2O	R	CO2e
Onsite	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Daily, Summer (Max)	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Off-Road Equipment	1.80	1.51	12.0	13.9	0.04	0.42	—	0.42	0.39	—	0.39	—	4,451	4,451	0.18	0.04	—	4,467
Dust From Material Movement	—	—	—	—	—	—	< 0.005	< 0.005	—	< 0.005	< 0.005	—	—	—	—	—	—	—

Onsite truck	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	—	0.00	0.00	0.00	0.00	0.00	0.00
Daily, Winter (Max)	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Off-Road Equipment	1.80	1.51	12.0	13.9	0.04	0.42	—	0.42	0.39	—	0.39	—	4,451	4,451	0.18	0.04	—	4,467
Dust From Material Movement	—	—	—	—	—	—	< 0.005	< 0.005	—	< 0.005	< 0.005	—	—	—	—	—	—	—
Onsite truck	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	—	0.00	0.00	0.00	0.00	0.00	0.00
Average Daily	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Off-Road Equipment	0.25	0.21	1.64	1.91	0.01	0.06	—	0.06	0.05	—	0.05	—	610	610	0.02	< 0.005	—	612
Dust From Material Movement	—	—	—	—	—	—	< 0.005	< 0.005	—	< 0.005	< 0.005	—	—	—	—	—	—	—
Onsite truck	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	—	0.00	0.00	0.00	0.00	0.00	0.00
Annual	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Off-Road Equipment	0.04	0.04	0.30	0.35	< 0.005	0.01	—	0.01	0.01	—	0.01	—	101	101	< 0.005	< 0.005	—	101
Dust From Material Movement	—	—	—	—	—	—	< 0.005	< 0.005	—	< 0.005	< 0.005	—	—	—	—	—	—	—
Onsite truck	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	—	0.00	0.00	0.00	0.00	0.00	0.00

Offsite	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Daily, Summer (Max)	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Worker	0.06	0.06	0.04	0.49	0.00	0.00	0.09	0.09	0.00	0.02	0.02	—	91.4	91.4	0.01	< 0.005	0.38	93.2
Vendor	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	—	0.00	0.00	0.00	0.00	0.00	0.00
Hauling	< 0.005	< 0.005	0.01	< 0.005	< 0.005	< 0.005	< 0.005	< 0.005	< 0.005	< 0.005	< 0.005	—	8.77	8.77	< 0.005	< 0.005	0.02	9.21
Daily, Winter (Max)	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Worker	0.06	0.06	0.04	0.48	0.00	0.00	0.09	0.09	0.00	0.02	0.02	—	87.6	87.6	< 0.005	< 0.005	0.01	88.9
Vendor	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	—	0.00	0.00	0.00	0.00	0.00	0.00
Hauling	< 0.005	< 0.005	0.01	< 0.005	< 0.005	< 0.005	< 0.005	< 0.005	< 0.005	< 0.005	< 0.005	—	8.77	8.77	< 0.005	< 0.005	< 0.005	9.20
Average Daily	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Worker	0.01	0.01	0.01	0.06	0.00	0.00	0.01	0.01	0.00	< 0.005	< 0.005	—	12.1	12.1	< 0.005	< 0.005	0.02	12.3
Vendor	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	—	0.00	0.00	0.00	0.00	0.00	0.00
Hauling	< 0.005	< 0.005	< 0.005	< 0.005	< 0.005	< 0.005	< 0.005	< 0.005	< 0.005	< 0.005	< 0.005	—	1.20	1.20	< 0.005	< 0.005	< 0.005	1.26
Annual	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Worker	< 0.005	< 0.005	< 0.005	0.01	0.00	0.00	< 0.005	< 0.005	0.00	< 0.005	< 0.005	—	2.00	2.00	< 0.005	< 0.005	< 0.005	2.03
Vendor	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	—	0.00	0.00	0.00	0.00	0.00	0.00
Hauling	< 0.005	< 0.005	< 0.005	< 0.005	< 0.005	< 0.005	< 0.005	< 0.005	< 0.005	< 0.005	< 0.005	—	0.20	0.20	< 0.005	< 0.005	< 0.005	0.21

3.3. Well Equipping (2025) - Unmitigated

Criteria Pollutants (lb/day for daily, ton/yr for annual) and GHGs (lb/day for daily, MT/yr for annual)

Location	TOG	ROG	NOx	CO	SO2	PM10E	PM10D	PM10T	PM2.5E	PM2.5D	PM2.5T	BCO2	NBCO2	CO2T	CH4	N2O	R	CO2e
Onsite	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Daily, Summer (Max)	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—

Off-Road	1.80	1.51	12.0	13.9	0.04	0.42	—	0.42	0.39	—	0.39	—	4,451	4,451	0.18	0.04	—	4,467
Onsite truck	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	—	0.00	0.00	0.00	0.00	0.00	0.00
Daily, Winter (Max)	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Off-Road Equipment	1.80	1.51	12.0	13.9	0.04	0.42	—	0.42	0.39	—	0.39	—	4,451	4,451	0.18	0.04	—	4,467
Onsite truck	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	—	0.00	0.00	0.00	0.00	0.00	0.00
Average Daily	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Off-Road Equipment	0.75	0.63	4.99	5.80	0.02	0.18	—	0.18	0.16	—	0.16	—	1,855	1,855	0.08	0.02	—	1,862
Onsite truck	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	—	0.00	0.00	0.00	0.00	0.00	0.00
Annual	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Off-Road Equipment	0.14	0.11	0.91	1.06	< 0.005	0.03	—	0.03	0.03	—	0.03	—	307	307	0.01	< 0.005	—	308
Onsite truck	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	—	0.00	0.00	0.00	0.00	0.00	0.00
Offsite	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Daily, Summer (Max)	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Worker	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	—	0.00	0.00	0.00	0.00	0.00	0.00
Vendor	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	—	0.00	0.00	0.00	0.00	0.00	0.00
Hauling	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	—	0.00	0.00	0.00	0.00	0.00	0.00

Daily, Winter (Max)	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Worker	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	—	0.00	0.00	0.00	0.00	0.00	0.00
Vendor	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	—	0.00	0.00	0.00	0.00	0.00	0.00
Hauling	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	—	0.00	0.00	0.00	0.00	0.00	0.00
Average Daily	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Worker	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	—	0.00	0.00	0.00	0.00	0.00	0.00
Vendor	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	—	0.00	0.00	0.00	0.00	0.00	0.00
Hauling	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	—	0.00	0.00	0.00	0.00	0.00	0.00
Annual	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Worker	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	—	0.00	0.00	0.00	0.00	0.00	0.00
Vendor	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	—	0.00	0.00	0.00	0.00	0.00	0.00
Hauling	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	—	0.00	0.00	0.00	0.00	0.00	0.00

3.5. Well Equipping (2026) - Unmitigated

Criteria Pollutants (lb/day for daily, ton/yr for annual) and GHGs (lb/day for daily, MT/yr for annual)

Location	TOG	ROG	NOx	CO	SO2	PM10E	PM10D	PM10T	PM2.5E	PM2.5D	PM2.5T	BCO2	NBCO2	CO2T	CH4	N2O	R	CO2e
Onsite	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Daily, Summer (Max)	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Off-Road Equipment	1.77	1.48	11.3	13.9	0.04	0.39	—	0.39	0.36	—	0.36	—	4,456	4,456	0.18	0.04	—	4,471
Onsite truck	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	—	0.00	0.00	0.00	0.00	0.00	0.00
Daily, Winter (Max)	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—

Off-Roa Equipment	1.77	1.48	11.3	13.9	0.04	0.39	—	0.39	0.36	—	0.36	—	4,456	4,456	0.18	0.04	—	4,471
Onsite truck	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	—	0.00	0.00	0.00	0.00	0.00	0.00
Average Daily	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Off-Roa d Equipm ent	0.63	0.53	4.01	4.95	0.01	0.14	—	0.14	0.13	—	0.13	—	1,587	1,587	0.06	0.01	—	1,592
Onsite truck	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	—	0.00	0.00	0.00	0.00	0.00	0.00
Annual	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Off-Roa d Equipm ent	0.11	0.10	0.73	0.90	< 0.005	0.03	—	0.03	0.02	—	0.02	—	263	263	0.01	< 0.005	—	264
Onsite truck	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	—	0.00	0.00	0.00	0.00	0.00	0.00
Offsite	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Daily, Summer (Max)	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Worker	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	—	0.00	0.00	0.00	0.00	0.00	0.00
Vendor	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	—	0.00	0.00	0.00	0.00	0.00	0.00
Hauling	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	—	0.00	0.00	0.00	0.00	0.00	0.00
Daily, Winter (Max)	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Worker	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	—	0.00	0.00	0.00	0.00	0.00	0.00
Vendor	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	—	0.00	0.00	0.00	0.00	0.00	0.00
Hauling	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	—	0.00	0.00	0.00	0.00	0.00	0.00
Average Daily	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—

Worker	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	—	0.00	0.00	0.00	0.00	0.00	0.00
Vendor	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	—	0.00	0.00	0.00	0.00	0.00	0.00
Hauling	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	—	0.00	0.00	0.00	0.00	0.00	0.00
Annual	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Worker	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	—	0.00	0.00	0.00	0.00	0.00	0.00
Vendor	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	—	0.00	0.00	0.00	0.00	0.00	0.00
Hauling	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	—	0.00	0.00	0.00	0.00	0.00	0.00

3.7. TW-3 Construction (2025) - Unmitigated

Criteria Pollutants (lb/day for daily, ton/yr for annual) and GHGs (lb/day for daily, MT/yr for annual)

Location	TOG	ROG	NOx	CO	SO2	PM10E	PM10D	PM10T	PM2.5E	PM2.5D	PM2.5T	BCO2	NBCO2	CO2T	CH4	N2O	R	CO2e
Onsite	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Daily, Summer (Max)	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Off-Road Equipment	1.90	1.60	12.0	13.0	0.04	0.44	—	0.44	0.41	—	0.41	—	4,276	4,276	0.17	0.03	—	4,291
Onsite truck	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	—	0.00	0.00	0.00	0.00	0.00	0.00
Daily, Winter (Max)	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Off-Road Equipment	1.90	1.60	12.0	13.0	0.04	0.44	—	0.44	0.41	—	0.41	—	4,276	4,276	0.17	0.03	—	4,291
Onsite truck	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	—	0.00	0.00	0.00	0.00	0.00	0.00
Average Daily	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—

Off-Road	0.56	0.47	3.52	3.81	0.01	0.13	—	0.13	0.12	—	0.12	—	1,255	1,255	0.05	0.01	—	1,260
Onsite truck	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	—	0.00	0.00	0.00	0.00	0.00	0.00
Annual	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Off-Road Equipment	0.10	0.09	0.64	0.70	< 0.005	0.02	—	0.02	0.02	—	0.02	—	208	208	0.01	< 0.005	—	209
Onsite truck	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	—	0.00	0.00	0.00	0.00	0.00	0.00
Offsite	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Daily, Summer (Max)	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Worker	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	—	0.00	0.00	0.00	0.00	0.00	0.00
Vendor	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	—	0.00	0.00	0.00	0.00	0.00	0.00
Hauling	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	—	0.00	0.00	0.00	0.00	0.00	0.00
Daily, Winter (Max)	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Worker	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	—	0.00	0.00	0.00	0.00	0.00	0.00
Vendor	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	—	0.00	0.00	0.00	0.00	0.00	0.00
Hauling	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	—	0.00	0.00	0.00	0.00	0.00	0.00
Average Daily	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Worker	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	—	0.00	0.00	0.00	0.00	0.00	0.00
Vendor	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	—	0.00	0.00	0.00	0.00	0.00	0.00
Hauling	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	—	0.00	0.00	0.00	0.00	0.00	0.00
Annual	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Worker	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	—	0.00	0.00	0.00	0.00	0.00	0.00
Vendor	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	—	0.00	0.00	0.00	0.00	0.00	0.00

Hauling	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	—	0.00	0.00	0.00	0.00	0.00	0.00

3.9. TW-3 Construction (2026) - Unmitigated

Criteria Pollutants (lb/day for daily, ton/yr for annual) and GHGs (lb/day for daily, MT/yr for annual)

Location	TOG	ROG	NOx	CO	SO2	PM10E	PM10D	PM10T	PM2.5E	PM2.5D	PM2.5T	BCO2	NBCO2	CO2T	CH4	N2O	R	CO2e
Onsite	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Daily, Summer (Max)	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Daily, Winter (Max)	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Off-Road Equipment	1.87	1.57	11.3	12.9	0.04	0.41	—	0.41	0.38	—	0.38	—	4,279	4,279	0.17	0.03	—	4,294
Onsite truck	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	—	0.00	0.00	0.00	0.00	0.00	0.00
Average Daily	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Off-Road Equipment	0.12	0.10	0.73	0.84	< 0.005	0.03	—	0.03	0.02	—	0.02	—	276	276	0.01	< 0.005	—	277
Onsite truck	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	—	0.00	0.00	0.00	0.00	0.00	0.00
Annual	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Off-Road Equipment	0.02	0.02	0.13	0.15	< 0.005	< 0.005	—	< 0.005	< 0.005	—	< 0.005	—	45.8	45.8	< 0.005	< 0.005	—	45.9
Onsite truck	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	—	0.00	0.00	0.00	0.00	0.00	0.00
Offsite	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—

Daily, Summer (Max)	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Daily, Winter (Max)	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Worker	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	—	0.00	0.00	0.00	0.00	0.00	0.00
Vendor	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	—	0.00	0.00	0.00	0.00	0.00	0.00
Hauling	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	—	0.00	0.00	0.00	0.00	0.00	0.00
Average Daily	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Worker	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	—	0.00	0.00	0.00	0.00	0.00	0.00
Vendor	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	—	0.00	0.00	0.00	0.00	0.00	0.00
Hauling	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	—	0.00	0.00	0.00	0.00	0.00	0.00
Annual	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Worker	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	—	0.00	0.00	0.00	0.00	0.00	0.00
Vendor	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	—	0.00	0.00	0.00	0.00	0.00	0.00
Hauling	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	—	0.00	0.00	0.00	0.00	0.00	0.00

3.11. TW-4 Drilling (2025) - Unmitigated

Criteria Pollutants (lb/day for daily, ton/yr for annual) and GHGs (lb/day for daily, MT/yr for annual)

Location	TOG	ROG	NOx	CO	SO2	PM10E	PM10D	PM10T	PM2.5E	PM2.5D	PM2.5T	BCO2	NBCO2	CO2T	CH4	N2O	R	CO2e
Onsite	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Daily, Summer (Max)	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Off-Road Equipment	1.80	1.51	12.0	13.9	0.04	0.42	—	0.42	0.39	—	0.39	—	4,451	4,451	0.18	0.04	—	4,467

Dust From Material Movement	—	—	—	—	—	—	< 0.005	< 0.005	—	< 0.005	< 0.005	—	—	—	—	—	—	—
Onsite truck	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	—	0.00	0.00	0.00	0.00	0.00	0.00
Daily, Winter (Max)	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Off-Road Equipment	1.80	1.51	12.0	13.9	0.04	0.42	—	0.42	0.39	—	0.39	—	4,451	4,451	0.18	0.04	—	4,467
Dust From Material Movement	—	—	—	—	—	—	< 0.005	< 0.005	—	< 0.005	< 0.005	—	—	—	—	—	—	—
Onsite truck	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	—	0.00	0.00	0.00	0.00	0.00	0.00
Average Daily	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Off-Road Equipment	0.53	0.44	3.51	4.09	0.01	0.12	—	0.12	0.11	—	0.11	—	1,307	1,307	0.05	0.01	—	1,311
Dust From Material Movement	—	—	—	—	—	—	< 0.005	< 0.005	—	< 0.005	< 0.005	—	—	—	—	—	—	—
Onsite truck	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	—	0.00	0.00	0.00	0.00	0.00	0.00
Annual	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Off-Road Equipment	0.10	0.08	0.64	0.75	< 0.005	0.02	—	0.02	0.02	—	0.02	—	216	216	0.01	< 0.005	—	217

Dust From Material Movement	—	—	—	—	—	—	< 0.005	< 0.005	—	< 0.005	< 0.005	—	—	—	—	—	—	—
Onsite truck	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	—	0.00	0.00	0.00	0.00	0.00	0.00
Offsite	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Daily, Summer (Max)	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Worker	0.06	0.06	0.04	0.49	0.00	0.00	0.09	0.09	0.00	0.02	0.02	—	91.4	91.4	0.01	< 0.005	0.38	93.2
Vendor	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	—	0.00	0.00	0.00	0.00	0.00	0.00
Hauling	< 0.005	< 0.005	0.02	0.01	< 0.005	< 0.005	< 0.005	< 0.005	< 0.005	< 0.005	< 0.005	—	12.2	12.2	< 0.005	< 0.005	0.02	12.8
Daily, Winter (Max)	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Worker	0.06	0.06	0.04	0.48	0.00	0.00	0.09	0.09	0.00	0.02	0.02	—	87.6	87.6	< 0.005	< 0.005	0.01	88.9
Vendor	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	—	0.00	0.00	0.00	0.00	0.00	0.00
Hauling	< 0.005	< 0.005	0.02	0.01	< 0.005	< 0.005	< 0.005	< 0.005	< 0.005	< 0.005	< 0.005	—	12.2	12.2	< 0.005	< 0.005	< 0.005	12.8
Average Daily	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Worker	0.02	0.02	0.01	0.14	0.00	0.00	0.02	0.02	0.00	0.01	0.01	—	25.9	25.9	< 0.005	< 0.005	0.05	26.3
Vendor	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	—	0.00	0.00	0.00	0.00	0.00	0.00
Hauling	< 0.005	< 0.005	0.01	< 0.005	< 0.005	< 0.005	< 0.005	< 0.005	< 0.005	< 0.005	< 0.005	—	3.57	3.57	< 0.005	< 0.005	< 0.005	3.75
Annual	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Worker	< 0.005	< 0.005	< 0.005	0.03	0.00	0.00	< 0.005	< 0.005	0.00	< 0.005	< 0.005	—	4.29	4.29	< 0.005	< 0.005	0.01	4.36
Vendor	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	—	0.00	0.00	0.00	0.00	0.00	0.00
Hauling	< 0.005	< 0.005	< 0.005	< 0.005	< 0.005	< 0.005	< 0.005	< 0.005	< 0.005	< 0.005	< 0.005	—	0.59	0.59	< 0.005	< 0.005	< 0.005	0.62

3.13. TW-4 Drilling (2026) - Unmitigated

Criteria Pollutants (lb/day for daily, ton/yr for annual) and GHGs (lb/day for daily, MT/yr for annual)

Location	TOG	ROG	NOx	CO	SO2	PM10E	PM10D	PM10T	PM2.5E	PM2.5D	PM2.5T	BCO2	NBCO2	CO2T	CH4	N2O	R	CO2e
Onsite	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Daily, Summer (Max)	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Daily, Winter (Max)	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Off-Road Equipment	1.77	1.48	11.3	13.9	0.04	0.39	—	0.39	0.36	—	0.36	—	4,456	4,456	0.18	0.04	—	4,471
Dust From Material Movement	—	—	—	—	—	—	< 0.005	< 0.005	—	< 0.005	< 0.005	—	—	—	—	—	—	—
Onsite truck	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	—	0.00	0.00	0.00	0.00	0.00	0.00
Average Daily	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Off-Road Equipment	0.11	0.10	0.73	0.90	< 0.005	0.03	—	0.03	0.02	—	0.02	—	288	288	0.01	< 0.005	—	289
Dust From Material Movement	—	—	—	—	—	—	< 0.005	< 0.005	—	< 0.005	< 0.005	—	—	—	—	—	—	—
Onsite truck	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	—	0.00	0.00	0.00	0.00	0.00	0.00
Annual	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Off-Road Equipment	0.02	0.02	0.13	0.16	< 0.005	< 0.005	—	< 0.005	< 0.005	—	< 0.005	—	47.6	47.6	< 0.005	< 0.005	—	47.8

Dust From Material Movement	—	—	—	—	—	—	< 0.005	< 0.005	—	< 0.005	< 0.005	—	—	—	—	—	—	—
Onsite truck	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	—	0.00	0.00	0.00	0.00	0.00	0.00
Offsite	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Daily, Summer (Max)	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Daily, Winter (Max)	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Worker	0.06	0.06	0.04	0.45	0.00	0.00	0.09	0.09	0.00	0.02	0.02	—	86.1	86.1	< 0.005	< 0.005	0.01	87.3
Vendor	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	—	0.00	0.00	0.00	0.00	0.00	0.00
Hauling	< 0.005	< 0.005	0.02	0.01	< 0.005	< 0.005	< 0.005	< 0.005	< 0.005	< 0.005	< 0.005	—	11.9	11.9	< 0.005	< 0.005	< 0.005	12.5
Average Daily	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Worker	< 0.005	< 0.005	< 0.005	0.03	0.00	0.00	0.01	0.01	0.00	< 0.005	< 0.005	—	5.60	5.60	< 0.005	< 0.005	0.01	5.69
Vendor	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	—	0.00	0.00	0.00	0.00	0.00	0.00
Hauling	< 0.005	< 0.005	< 0.005	< 0.005	< 0.005	< 0.005	< 0.005	< 0.005	< 0.005	< 0.005	< 0.005	—	0.77	0.77	< 0.005	< 0.005	< 0.005	0.81
Annual	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Worker	< 0.005	< 0.005	< 0.005	0.01	0.00	0.00	< 0.005	< 0.005	0.00	< 0.005	< 0.005	—	0.93	0.93	< 0.005	< 0.005	< 0.005	0.94
Vendor	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	—	0.00	0.00	0.00	0.00	0.00	0.00
Hauling	< 0.005	< 0.005	< 0.005	< 0.005	< 0.005	< 0.005	< 0.005	< 0.005	< 0.005	< 0.005	< 0.005	—	0.13	0.13	< 0.005	< 0.005	< 0.005	0.13

4. Operations Emissions Details

4.10. Soil Carbon Accumulation By Vegetation Type

4.10.1. Soil Carbon Accumulation By Vegetation Type - Unmitigated

Criteria Pollutants (lb/day for daily, ton/yr for annual) and GHGs (lb/day for daily, MT/yr for annual)

Vegetati	TOG	ROG	NOx	CO	SO2	PM10E	PM10D	PM10T	PM2.5E	PM2.5D	PM2.5T	BCO2	NBCO2	CO2T	CH4	N2O	R	CO2e
Daily, Summer (Max)	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Total	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Daily, Winter (Max)	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Total	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Annual	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Total	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—

4.10.2. Above and Belowground Carbon Accumulation by Land Use Type - Unmitigated

Criteria Pollutants (lb/day for daily, ton/yr for annual) and GHGs (lb/day for daily, MT/yr for annual)

Land Use	TOG	ROG	NOx	CO	SO2	PM10E	PM10D	PM10T	PM2.5E	PM2.5D	PM2.5T	BCO2	NBCO2	CO2T	CH4	N2O	R	CO2e
Daily, Summer (Max)	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Total	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Daily, Winter (Max)	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Total	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Annual	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Total	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—

4.10.3. Avoided and Sequestered Emissions by Species - Unmitigated

Criteria Pollutants (lb/day for daily, ton/yr for annual) and GHGs (lb/day for daily, MT/yr for annual)

Species	TOG	ROG	NOx	CO	SO2	PM10E	PM10D	PM10T	PM2.5E	PM2.5D	PM2.5T	BCO2	NBCO2	CO2T	CH4	N2O	R	CO2e

Daily, Summer (Max)	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Avoided	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Subtotal	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Sequestered	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Subtotal	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Removed	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Subtotal	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Daily, Winter (Max)	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Avoided	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Subtotal	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Sequestered	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Subtotal	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Removed	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Subtotal	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Annual	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Avoided	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Subtotal	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Sequestered	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Subtotal	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Removed	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—

Subtotal	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—

5. Activity Data

5.1. Construction Schedule

Phase Name	Phase Type	Start Date	End Date	Days Per Week	Work Days per Phase	Phase Description
Monitoring Well Construction	Building Construction	4/1/2025	10/1/2025	5.00	50.0	—
Well Equipping	Building Construction	6/2/2025	7/1/2026	5.00	84.0	—
TW-3 Construction	Building Construction	8/4/2025	2/2/2026	5.00	50.0	—
TW-4 Drilling	Trenching	8/4/2025	2/2/2026	5.00	36.0	—

5.2. Off-Road Equipment

5.2.1. Unmitigated

Phase Name	Equipment Type	Fuel Type	Engine Tier	Number per Day	Hours Per Day	Horsepower	Load Factor
Monitoring Well Construction	Bore/Drill Rigs	Diesel	Average	1.00	8.00	83.0	0.50
Monitoring Well Construction	Cement and Mortar Mixers	Diesel	Average	1.00	8.00	10.0	0.56
Monitoring Well Construction	Off-Highway Trucks	Diesel	Average	2.00	8.00	376	0.38
Monitoring Well Construction	Cranes	Diesel	Average	1.00	8.00	367	0.29
Monitoring Well Construction	Rough Terrain Forklifts	Diesel	Average	1.00	8.00	96.0	0.40
Well Equipping	Cement and Mortar Mixers	Diesel	Average	1.00	8.00	10.0	0.56
Well Equipping	Off-Highway Trucks	Diesel	Average	2.00	8.00	376	0.38

Well Equipping	Cranes	Diesel	Average	1.00	8.00	367	0.29
Well Equipping	Rough Terrain Forklifts	Diesel	Average	1.00	8.00	96.0	0.40
Well Equipping	Bore/Drill Rigs	Diesel	Average	1.00	8.00	83.0	0.50
TW-3 Construction	Cement and Mortar Mixers	Diesel	Average	1.00	8.00	10.0	0.56
TW-3 Construction	Off-Highway Trucks	Diesel	Average	2.00	8.00	376	0.38
TW-3 Construction	Cranes	Diesel	Average	1.00	8.00	367	0.29
TW-3 Construction	Rough Terrain Forklifts	Diesel	Average	1.00	8.00	96.0	0.40
TW-3 Construction	Trenchers	Diesel	Average	1.00	8.00	40.0	0.50
TW-4 Drilling	Bore/Drill Rigs	Diesel	Average	1.00	8.00	83.0	0.50
TW-4 Drilling	Cement and Mortar Mixers	Diesel	Average	1.00	8.00	10.0	0.56
TW-4 Drilling	Off-Highway Trucks	Diesel	Average	2.00	8.00	376	0.38
TW-4 Drilling	Cranes	Diesel	Average	1.00	8.00	367	0.29
TW-4 Drilling	Rough Terrain Forklifts	Diesel	Average	1.00	8.00	96.0	0.40

5.3. Construction Vehicles

5.3.1. Unmitigated

Phase Name	Trip Type	One-Way Trips per Day	Miles per Trip	Vehicle Mix
TW-4 Drilling	—	—	—	—
TW-4 Drilling	Worker	15.0	8.10	LDA,LDT1,LDT2
TW-4 Drilling	Vendor	—	6.90	HHDT,MHDT
TW-4 Drilling	Hauling	0.17	20.0	HHDT
TW-4 Drilling	Onsite truck	—	—	HHDT
Monitoring Well Construction	—	—	—	—
Monitoring Well Construction	Worker	15.0	8.10	LDA,LDT1,LDT2
Monitoring Well Construction	Vendor	0.00	6.90	HHDT,MHDT
Monitoring Well Construction	Hauling	0.12	20.0	HHDT

Monitoring Well Construction	Onsite truck	—	—	HHDT
Well Equipping	—	—	—	—
Well Equipping	Worker	0.00	8.10	LDA,LDT1,LDT2
Well Equipping	Vendor	0.00	6.90	HHDT,MHDT
Well Equipping	Hauling	0.00	20.0	HHDT
Well Equipping	Onsite truck	—	—	HHDT
TW-3 Construction	—	—	—	—
TW-3 Construction	Worker	0.00	10.8	LDA,LDT1,LDT2
TW-3 Construction	Vendor	0.00	6.85	HHDT,MHDT
TW-3 Construction	Hauling	0.00	20.0	HHDT
TW-3 Construction	Onsite truck	—	—	HHDT

5.4. Vehicles

5.4.1. Construction Vehicle Control Strategies

Non-applicable. No control strategies activated by user.

5.5. Architectural Coatings

Phase Name	Residential Interior Area Coated (sq ft)	Residential Exterior Area Coated (sq ft)	Non-Residential Interior Area Coated (sq ft)	Non-Residential Exterior Area Coated (sq ft)	Parking Area Coated (sq ft)

5.6. Dust Mitigation

5.6.1. Construction Earthmoving Activities

Phase Name	Material Imported (Cubic Yards)	Material Exported (Cubic Yards)	Acres Graded (acres)	Material Demolished (sq. ft.)	Acres Paved (acres)
Monitoring Well Construction	0.00	48.0	8.40	0.00	—
TW-4 Drilling	0.00	45.0	22.0	0.00	—

5.6.2. Construction Earthmoving Control Strategies

Non-applicable. No control strategies activated by user.

5.7. Construction Paving

Land Use	Area Paved (acres)	% Asphalt
Other Non-Asphalt Surfaces	30.4	0%

5.8. Construction Electricity Consumption and Emissions Factors

kWh per Year and Emission Factor (lb/MWh)

Year	kWh per Year	CO2	CH4	N2O
2025	0.00	204	0.03	< 0.005
2026	0.00	204	0.03	< 0.005

5.18. Vegetation

5.18.1. Land Use Change

5.18.1.1. Unmitigated

Vegetation Land Use Type	Vegetation Soil Type	Initial Acres	Final Acres

5.18.1. Biomass Cover Type

5.18.1.1. Unmitigated

Biomass Cover Type	Initial Acres	Final Acres

5.18.2. Sequestration

5.18.2.1. Unmitigated

Tree Type	Number	Electricity Saved (kWh/year)	Natural Gas Saved (btu/year)

6. Climate Risk Detailed Report

6.1. Climate Risk Summary

Cal-Adapt midcentury 2040–2059 average projections for four hazards are reported below for your project location. These are under Representation Concentration Pathway (RCP) 8.5 which assumes GHG emissions will continue to rise strongly through 2050 and then plateau around 2100.

Climate Hazard	Result for Project Location	Unit
Temperature and Extreme Heat	8.08	annual days of extreme heat
Extreme Precipitation	5.60	annual days with precipitation above 20 mm
Sea Level Rise	—	meters of inundation depth
Wildfire	49.2	annual hectares burned

Temperature and Extreme Heat data are for grid cell in which your project are located. The projection is based on the 98th historical percentile of daily maximum/minimum temperatures from observed historical data (32 climate model ensemble from Cal-Adapt, 2040–2059 average under RCP 8.5). Each grid cell is 6 kilometers (km) by 6 km, or 3.7 miles (mi) by 3.7 mi.
Extreme Precipitation data are for the grid cell in which your project are located. The threshold of 20 mm is equivalent to about ¾ an inch of rain, which would be light to moderate rainfall if received over a full day or heavy rain if received over a period of 2 to 4 hours. Each grid cell is 6 kilometers (km) by 6 km, or 3.7 miles (mi) by 3.7 mi.
Sea Level Rise data are for the grid cell in which your project are located. The projections are from Radke et al. (2017), as reported in Cal-Adapt (Radke et al., 2017, CEC-500-2017-008), and consider inundation location and depth for the San Francisco Bay, the Sacramento-San Joaquin River Delta and California coast resulting different increments of sea level rise coupled with extreme storm events. Users may select from four scenarios to view the range in potential inundation depth for the grid cell. The four scenarios are: No rise, 0.5 meter, 1.0 meter, 1.41 meters
Wildfire data are for the grid cell in which your project are located. The projections are from UC Davis, as reported in Cal-Adapt (2040–2059 average under RCP 8.5), and consider historical data of climate, vegetation, population density, and large (> 400 ha) fire history. Users may select from four model simulations to view the range in potential wildfire probabilities for the grid cell. The four simulations make different assumptions about expected rainfall and temperature are: Warmer/drier (HadGEM2-ES), Cooler/wetter (CNRM-CM5), Average conditions (CanESM2), Range of different rainfall and temperature possibilities (MIROC5). Each grid cell is 6 kilometers (km) by 6 km, or 3.7 miles (mi) by 3.7 mi.

6.2. Initial Climate Risk Scores

Climate Hazard	Exposure Score	Sensitivity Score	Adaptive Capacity Score	Vulnerability Score
Temperature and Extreme Heat	N/A	N/A	N/A	N/A
Extreme Precipitation	N/A	N/A	N/A	N/A
Sea Level Rise	N/A	N/A	N/A	N/A
Wildfire	N/A	N/A	N/A	N/A
Flooding	N/A	N/A	N/A	N/A
Drought	N/A	N/A	N/A	N/A

Snowpack Reduction	N/A	N/A	N/A	N/A
Air Quality Degradation	N/A	N/A	N/A	N/A

The sensitivity score reflects the extent to which a project would be adversely affected by exposure to a climate hazard. Exposure is rated on a scale of 1 to 5, with a score of 5 representing the greatest exposure.
The adaptive capacity of a project refers to its ability to manage and reduce vulnerabilities from projected climate hazards. Adaptive capacity is rated on a scale of 1 to 5, with a score of 5 representing the greatest ability to adapt.
The overall vulnerability scores are calculated based on the potential impacts and adaptive capacity assessments for each hazard. Scores do not include implementation of climate risk reduction measures.

6.3. Adjusted Climate Risk Scores

Climate Hazard	Exposure Score	Sensitivity Score	Adaptive Capacity Score	Vulnerability Score
Temperature and Extreme Heat	N/A	N/A	N/A	N/A
Extreme Precipitation	N/A	N/A	N/A	N/A
Sea Level Rise	N/A	N/A	N/A	N/A
Wildfire	N/A	N/A	N/A	N/A
Flooding	N/A	N/A	N/A	N/A
Drought	N/A	N/A	N/A	N/A
Snowpack Reduction	N/A	N/A	N/A	N/A
Air Quality Degradation	N/A	N/A	N/A	N/A

The sensitivity score reflects the extent to which a project would be adversely affected by exposure to a climate hazard. Exposure is rated on a scale of 1 to 5, with a score of 5 representing the greatest exposure.
The adaptive capacity of a project refers to its ability to manage and reduce vulnerabilities from projected climate hazards. Adaptive capacity is rated on a scale of 1 to 5, with a score of 5 representing the greatest ability to adapt.
The overall vulnerability scores are calculated based on the potential impacts and adaptive capacity assessments for each hazard. Scores include implementation of climate risk reduction measures.

6.4. Climate Risk Reduction Measures

7. Health and Equity Details

7.1. CalEnviroScreen 4.0 Scores

The maximum CalEnviroScreen score is 100. A high score (i.e., greater than 50) reflects a higher pollution burden compared to other census tracts in the state.

Indicator	Result for Project Census Tract
Exposure Indicators	—
AQ-Ozone	13.6
AQ-PM	12.8
AQ-DPM	66.6
Drinking Water	74.4
Lead Risk Housing	29.3
Pesticides	88.0
Toxic Releases	24.5
Traffic	92.0
Effect Indicators	—
CleanUp Sites	11.8
Groundwater	55.6
Haz Waste Facilities/Generators	80.2
Impaired Water Bodies	66.7
Solid Waste	0.00
Sensitive Population	—
Asthma	40.6
Cardio-vascular	16.8
Low Birth Weights	10.6
Socioeconomic Factor Indicators	—
Education	53.1
Housing	21.1
Linguistic	43.9
Poverty	63.8
Unemployment	35.0

7.2. Healthy Places Index Scores

The maximum Health Places Index score is 100. A high score (i.e., greater than 50) reflects healthier community conditions compared to other census tracts in the state.

Indicator	Result for Project Census Tract
Economic	—
Above Poverty	52.3675093
Employed	18.46528936
Median HI	43.83421019
Education	—
Bachelor's or higher	65.64865905
High school enrollment	100
Preschool enrollment	38.90671115
Transportation	—
Auto Access	73.42486847
Active commuting	68.02258437
Social	—
2-parent households	89.83703323
Voting	78.12139099
Neighborhood	—
Alcohol availability	58.37289876
Park access	81.35506224
Retail density	34.12036443
Supermarket access	79.9563711
Tree canopy	49.72411138
Housing	—
Homeownership	62.4534839
Housing habitability	80.1360195
Low-inc homeowner severe housing cost burden	27.39638137
Low-inc renter severe housing cost burden	91.45386886
Uncrowded housing	62.10701912
Health Outcomes	—

Insured adults	46.18247145
Arthritis	0.0
Asthma ER Admissions	78.8
High Blood Pressure	0.0
Cancer (excluding skin)	0.0
Asthma	0.0
Coronary Heart Disease	0.0
Chronic Obstructive Pulmonary Disease	0.0
Diagnosed Diabetes	0.0
Life Expectancy at Birth	14.9
Cognitively Disabled	6.9
Physically Disabled	13.7
Heart Attack ER Admissions	86.7
Mental Health Not Good	0.0
Chronic Kidney Disease	0.0
Obesity	0.0
Pedestrian Injuries	19.6
Physical Health Not Good	0.0
Stroke	0.0
Health Risk Behaviors	—
Binge Drinking	0.0
Current Smoker	0.0
No Leisure Time for Physical Activity	0.0
Climate Change Exposures	—
Wildfire Risk	0.0
SLR Inundation Area	0.0
Children	64.0
Elderly	23.5

English Speaking	69.5
Foreign-born	29.5
Outdoor Workers	48.7
Climate Change Adaptive Capacity	—
Impervious Surface Cover	60.0
Traffic Density	63.3
Traffic Access	0.0
Other Indices	—
Hardship	33.2
Other Decision Support	—
2016 Voting	80.2

7.3. Overall Health & Equity Scores

Metric	Result for Project Census Tract
CalEnviroScreen 4.0 Score for Project Location (a)	37.0
Healthy Places Index Score for Project Location (b)	60.0
Project Located in a Designated Disadvantaged Community (Senate Bill 535)	No
Project Located in a Low-Income Community (Assembly Bill 1550)	No
Project Located in a Community Air Protection Program Community (Assembly Bill 617)	No

a: The maximum CalEnviroScreen score is 100. A high score (i.e., greater than 50) reflects a higher pollution burden compared to other census tracts in the state.
b: The maximum Health Places Index score is 100. A high score (i.e., greater than 50) reflects healthier community conditions compared to other census tracts in the state.

7.4. Health & Equity Measures

No Health & Equity Measures selected.

7.5. Evaluation Scorecard

Health & Equity Evaluation Scorecard not completed.

7.6. Health & Equity Custom Measures

No Health & Equity Custom Measures created.

8. User Changes to Default Data

Screen	Justification
Construction: Construction Phases	City-provided schedule. Assumes 36 days of drilling for TW-4, and an estimated 50 days for monitoring wells and TW-3 construction, and 84 working days for well equipping.
Construction: Off-Road Equipment	City-provided equipment list. The bucket auger drill rig is modeled as a bore/drill rig. The cement truck and concrete pump is modeled as an off-highway truck and cement and mortar mixer. The hollow-stem auger or rotary sonic drill is modeled as a crane. The support/water and decontamination truck is modeled as an off-highway truck.
Construction: Dust From Material Movement	Each monitoring well site would generate approximately 4 cubic yards of drill cuttings. 4 cubic yards x 12 monitoring well sites = 48 cubic yards. TW-4 would require 45 cubic yards of drill cuttings. In total, 93 cubic yards of cut would occur.
Construction: Trips and VMT	Monitoring Well Construction workers increased to 15 to match CalEEMod defaults for the Well Equipping and TW-4 Drilling phases.

Appendix B

Botanical Memorandum

Rincon Consultants, Inc.
1530 Monterey Street, Suite D
San Luis Obispo, California 93401
805-547-0900

June 18, 2024
Project No: 24-15910

Shawna Scott
Special Projects Manager
City of San Luis Obispo
Public Utilities Department
879 Morro Street
San Luis Obispo, California 93401
Via email: sscott@slocity.org

Subject: Botanical Survey Memorandum for the PCE Plume Characterization Project, City of San Luis Obispo, California

Dear Ms. Scott,

Rincon Consultants, Inc. (Rincon) is pleased to submit this Botanical Survey Memorandum (memo) for the Tetrachloroethylene (PCE) Plume Characterization Project (Project) to the City of San Luis Obispo (City). Rincon biologist Frances McKechnie conducted protocol-level botanical surveys to determine presence or absence of federally and/or State-listed or other special-status plant species within the Project site. This memo summarizes the methodology and results of the botanical survey effort.

Project Location

The Project is located within the City of San Luis Obispo in San Luis Obispo County, California. The Project site is located in the southern portion of the City along U.S. Highway 101 (US 101) between Prado Road and Los Osos Valley Road within Assessor's Parcel Numbers 053-051-045, 053-052-045, 053-131-013, 053-141-012, 053-152-006, 053-152-008, 053-153-014, and 053-153-008 (Figure 1). The Project occurs within the *San Luis Obispo, California* and *Pismo Beach, California* United States Geological Survey (USGS) 7.5-minute topographic quadrangles and is associated with Township 31S, Range 12E, Sections 3 and 10, Mt. Diablo Meridian. The study area for this Project encompasses approximately 18.1 acres and includes the entirety of the Project site except for the California Department of Transportation right-of-way (Figure 1).

Methodology

Literature Review

Rincon conducted a literature review to determine the potential for federally and State-listed, as well as special-status plant species, to occur within the study area. Queries of the California Department of Fish and Wildlife (CDFW) California Natural Diversity Database (CNDDB; 2024) and California Native Plant Society (CNPS) Rare Plant Inventory (2024) were conducted to obtain comprehensive information regarding federally and State-listed species, and other special-status species, considered to have potential to occur within the *San Luis Obispo, California* and *Pismo Beach, California* USGS 7.5-minute topographic quadrangles and the surrounding eight quadrangles (*Port San Luis, Morro Bay South, Morro Bay North, Atascadero, Santa Margarita, Lopez Mountain, Arroyo Grande NE,* and *Oceano*). The final list of special-status plant species with potential to occur on-site was evaluated

based on presence of suitable habitat and documented occurrences within the eight-quadrangle search area. The evaluation results and justification were compiled into a table (Attachment 1).

Surveys

Rincon conducted protocol-level botanical surveys to determine presence or absence of any federally and/or State-listed or other special-status plant species in accordance with *Botanical Survey Guidelines* (CNPS 2001) and *Protocols for Surveying and Evaluating Impacts to Special Status Native Plant Populations and Natural Communities* (CDFW 2018). Rincon biologist Frances McKechnie conducted the botanical surveys on April 26 and June 5, 2024. The details regarding the weather conditions on-site during these surveys are provided in Table 1 below.

Table 1 Botanical Survey Conditions

Date	Time	Temperature Range (°Fahrenheit)	Average Wind Speed (miles per hour)	Average Cloud Cover (%)
April 26, 2024	0900-1330	60-64	1-15	50
June 5, 2024	0900-1200	64-78	2-8	0

The botanical surveys were floristic in nature; meaning that all vascular plant species encountered on-site were identified to the lowest possible taxonomic level required to determine the presence or absence and phenological stage (e.g., vegetative, flowering, fruiting) of special-status plant species. The botanical surveys were timed to capture the flowering periods of all special-status plant species determined to have a low, moderate, or high potential to occur on-site based on the literature review and regionally specific knowledge. The surveys were conducted using systematic field techniques by walking parallel transects through the entire study area. Special attention was given to areas with a high potential to support special-status species (e.g., north-facing slopes, vegetation community interfaces, areas with unique soils, and other attributes required of species that have been previously documented). Locations of special-status plant species, if encountered, were recorded using a Geode Global Positioning System unit with sub-meter accuracy. *The Jepson Manual: Vascular Plants of California, Second Edition* (Baldwin et al. 2012), *Vascular Plants of San Luis Obispo County, California, Second Edition* (Keil and Hoover 2022), and a 10x hand lens aided in confirmation of species identity in the field. Identification of collected specimens was confirmed in the laboratory with a dissecting microscope. The results of the botanical surveys are discussed below.

Results

No federally or State-listed or other special-status plant species were observed during the appropriately-timed botanical surveys. A floral compendium including all vascular plant species observed during the botanical surveys is provided in Attachment 2. Site photographs taken during the botanical surveys are included in Attachment 3.

Thank you for the continued opportunity to work with you on this Project. Please contact us if you have any questions or concerns regarding the information presented herein.

Sincerely,
Rincon Consultants, Inc.

Frances McKechnie
Biologist

Michael Tom, MS
Senior Biologist

Attachments

Figure 1 Project Site and Study Area
Attachment 1 Special-Status Plant Species Evaluation Table
Attachment 2 Floral Compendium
Attachment 3 Site Photographs

References

Baldwin, B.G., D.H. Goldman, D.J. Keil, R.W. Patterson, T.J. Rosatti, and D.H. Wilkin (eds). 2012. The Jepson Manual: Vascular Plants of California, Second Edition. University of California Press. Berkeley, California.

California Department of Fish and Wildlife (CDFW). 2018. Protocols for Surveying and Evaluating Impacts to Special Status Native Plant Populations and Natural Communities. Available at: https://nrm.dfg.ca.gov/FileHandler.ashx?DocumentID=18959&inline. Accessed April 2024.

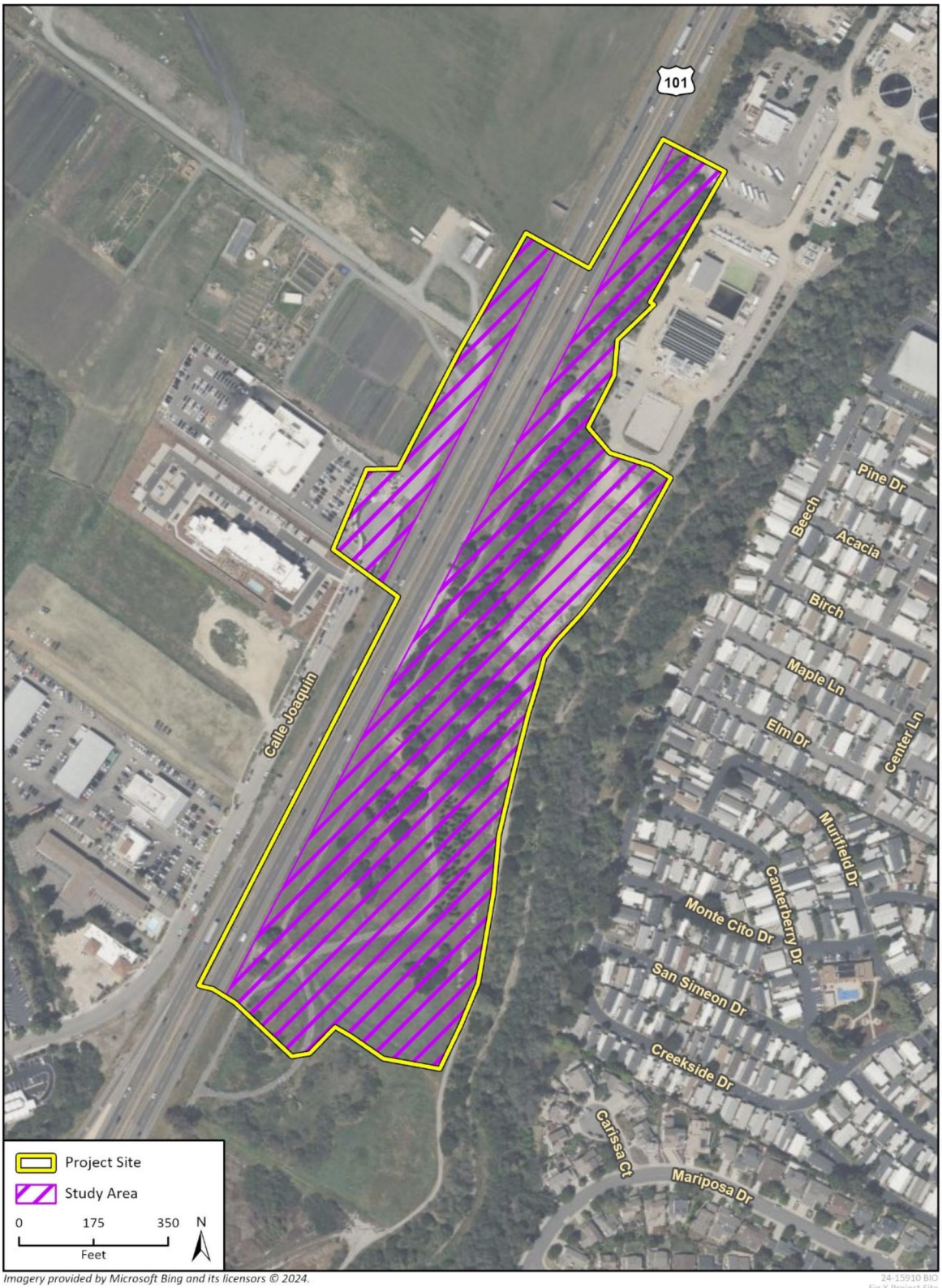
_____. 2024. California Natural Diversity Database (CNDDB), Rarefind V. Accessed April 2024.

California Native Plant Society (CNPS). 2001. Botanical Survey Guidelines. Available at: http://www.cnps.org/cnps/rareplants/pdf/cnps_survey_guidelines.pdf. Accessed April 2024.

_____. 2024. Rare Plant Inventory (v9.5). Available at: https://www.rareplants.cnps.org. Accessed April 2024.

Keil, D.J., and R.F Hoover. 2022. Vascular Plants of San Luis Obispo County, California, Second Edition. Pacific Street Publishing. San Luis Obispo, California.

Figure 1 Project Site and Study Area



Imagery provided by Microsoft Bing and its licensors © 2024.

24-15910 BIO
Fig X Project Site

Attachment 1

Special-Status Plant Species Evaluation Table

Scientific Name Common Name	Status	Habitat Requirements	Potential to Occur in Project Site	Habitat Suitability/Observations
Abronia maritima red sand-verbena	None/None G4/S3? 4.2	Perennial herb. Coastal dunes. Dune plant. Elevations: 0-330ft. (0-100m.) Blooms Feb-Nov.	Does Not Occur	No suitable habitat is present within the study area.
Agrostis hooveri Hoover's bent grass	None/None G2/S2 1B.2	Perennial herb. Chaparral, cismontane woodland, closed-cone coniferous forest, valley and foothill grassland. Sandy (usually). Elevations: 20-2000ft. (6-610m.) Blooms Apr-Jul.	Low Potential	Potentially suitable valley and foothill grassland habitat is present within the study area. The closest CNDDB record is from 1980 and is located approximately 3.5 miles south of the study area. This species was not observed within the study area during April or June botanical surveys. This species is not expected to occur on site.
Amsinckia douglasiana Douglas' fiddleneck	None/None G4/S4 4.2	Annual herb. Cismontane woodland, valley and foothill grassland. Dry. Elevations: 0-6400ft. (0-1950m.) Blooms Mar-May.	Low Potential	Potentially suitable valley and foothill grassland habitat is present within the study area. No CNDDB or CNPS records occur within 5 miles of the study area. This species was not observed within the study area during April or June botanical surveys. This species is not expected to occur on site.
Arctostaphylos luciana Santa Lucia manzanita	None/None G2/S2 1B.2	Perennial evergreen shrub. Chaparral, cismontane woodland. Shale. Elevations: 1150-2790ft. (350-850m.) Blooms Dec-Mar.	Does Not Occur	The study area is located outside the known elevation range of this species.
Arctostaphylos morroensis Morro manzanita	FT/None G1/S1 1B.1	Perennial evergreen shrub. Chaparral, cismontane woodland, coastal dunes, coastal scrub. On baywood sands, usually with chaparral associates. Elevations: 15-675ft. (5-205m.) Blooms Dec-Mar.	Does Not Occur	The study area is located outside the known range of this species.
Arctostaphylos obispoensis Bishop manzanita	None/None G3/S3 4.3	Perennial evergreen shrub. Chaparral, cismontane woodland, closed-cone coniferous forest. Rocky, serpentinite. Elevations: 490-3295ft. (150-1005m.) Blooms Feb-Jun.	Does Not Occur	The study area is located outside the known elevation range of this species.
Arctostaphylos osoensis Oso manzanita	None/None G1/S1 1B.2	Perennial evergreen shrub. Chaparral, cismontane woodland. Usually occurs in openings w/in oak woodland on dacite porphyry buttes. Elevations: 310-1640ft. (95-500m.) Blooms Feb-Mar.	Does Not Occur	The study area is located outside the known elevation range of this species.
Arctostaphylos pechoensis Pecho manzanita	None/None G2/S2 1B.2	Perennial evergreen shrub. Chaparral, closed-cone coniferous forest, coastal scrub. Grows on siliceous shale with other chaparral associates. Elevations: 410-2790ft. (125-850m.) Blooms Nov-Mar.	Does Not Occur	The study area is located outside the known elevation range of this species.
Arctostaphylos pilosula Santa Margarita manzanita	None/None G2?/S2? 1B.2	Perennial evergreen shrub. Broadleafed upland forest, chaparral, cismontane woodland, closed-cone coniferous forest. Sandstone (sometimes). Elevations: 245-3610ft. (75-1100m.) Blooms Dec-May.	Does Not Occur	The study area is located outside the known elevation range of this species.
Arctostaphylos rudis sand mesa manzanita	None/None G2/S2 1B.2	Perennial evergreen shrub. Chaparral, coastal scrub. Sandy. Elevations: 80-1055ft. (25-322m.) Blooms Nov-Feb.	Low Potential	Marginally suitable coastal scrub habitat is present within the study area. No CNDDB or CNPS records occur within 5 miles of the study area. This species was not observed within the study area during April or June botanical surveys. This species is not expected to occur on site.
Arctostaphylos tomentosa ssp. *daciticola* dacite manzanita	None/None G4T1/S1 1B.1	Perennial evergreen shrub. Chaparral, cismontane woodland. Only known from one site in SLO County on dacite porphyry buttes. About 120m. Elevations: 330-985ft. (100-300m.) Blooms Mar-May.	Does Not Occur	The study area is located outside the known elevation range of this species.
Arenaria paludicola marsh sandwort	FE/SE G1/S1 1B.1	Perennial stoloniferous herb. Marshes and swamps. Openings, sandy. Elevations: 10-560ft. (3-170m.) Blooms May-Aug.	Does Not Occur	No suitable habitat is present within the study area.
Aspidotis carlotta-halliae Carlotta Hall's lace fern	None/None G3/S3 4.2	Perennial rhizomatous herb. Chaparral, cismontane woodland. Serpentinite (usually). Elevations: 330-4595ft. (100-1400m.) Blooms Jan-Dec.	Does Not Occur	The study area is located outside the known elevation range of this species.
Astragalus didymocarpus var. *milesianus* Miles' milk-vetch	None/None G5T2/S2 1B.2	Annual herb. Coastal scrub. Clay soils. Elevations: 65-295ft. (20-90m.) Blooms Mar-Jun.	Low Potential	Marginally suitable coastal scrub habitat is present within the study area. The closest CNDDB record is from 2016 and is located approximately 1.1 miles northeast of the study area. This species was not observed within the study area during April or June botanical surveys. This species is not expected to occur on site.
Astragalus nuttallii var. *nuttallii* ocean bluff milk-vetch	None/None G4T4/S4 4.2	Perennial herb. Coastal bluff scrub, coastal dunes. Elevations: 10-395ft. (3-120m.) Blooms Jan-Nov.	Does Not Occur	No suitable habitat is present within the study area.

Scientific Name Common Name	Status	Habitat Requirements	Potential to Occur in Project Site	Habitat Suitability/Observations
Atriplex coulteri Coulter's saltbush	None/None G3/S1S2 1B.2	Perennial herb. Coastal bluff scrub, coastal dunes, coastal scrub, valley and foothill grassland. Alkaline (sometimes), clay (sometimes). Elevations: 10-1510ft. (3-460m.) Blooms Mar-Oct.	Does Not Occur	The study area is located outside the known range of this species.
Calandrinia breweri Brewer's calandrinia	None/None G4/S4 4.2	Annual herb. Chaparral, coastal scrub. Burned areas, disturbed areas, loam (sometimes), sandy (sometimes). Elevations: 35-4005ft. (10-1220m.) Blooms (Jan)Mar-Jun.	Low Potential	Marginally suitable coastal scrub habitat is present within the study area. The closest CNPS record is from 1995 and is located approximately 4.6 miles northeast of the study area. This species was not observed within the study area during April or June botanical surveys. This species is not expected to occur on site.
Calochortus clavatus var. *clavatus* club-haired mariposa-lily	None/None G4T3/S3 4.3	Perennial bulbiferous herb. Chaparral, cismontane woodland, coastal scrub, valley and foothill grassland. Clay, Rocky, serpentinite (usually). Elevations: 100-4265ft. (30-1300m.) Blooms (Mar)May-Jun.	Low Potential	Potentially suitable valley and foothill grassland habitat is present within the study area. Several CNPS records are known from the vicinity of the study area, the nearest of which is from 2023 and is located approximately 0.7-mile west of the study area. This species was not observed within the study area during April or June botanical surveys. This species is not expected to occur on site.
Calochortus obispoensis San Luis mariposa-lily	None/None G2/S2 1B.2	Perennial bulbiferous herb. Chaparral, cismontane woodland, coastal scrub, valley and foothill grassland. Serpentinite (often). Elevations: 165-2395ft. (50-730m.) Blooms May-Jul.	Does Not Occur	The study area is located outside the known elevation range of this species.
Calochortus simulans La Panza mariposa-lily	None/None G2/S2 1B.3	Perennial bulbiferous herb. Chaparral, cismontane woodland, lower montane coniferous forest, valley and foothill grassland. Granitic (often), sandy, serpentinite (sometimes). Elevations: 1065-3775ft. (325-1150m.) Blooms Apr-Jun.	Does Not Occur	The study area is located outside the known elevation range of this species.
Calystegia subacaulis ssp. *episcopalis* Cambria morning-glory	None/None G3T2?/S2? 4.2	Perennial rhizomatous herb. Chaparral, cismontane woodland, coastal prairie, valley and foothill grassland. Clay (usually). Elevations: 100-1640ft. (30-500m.) Blooms (Mar)Apr-Jun(Jul).	Low Potential	Potentially suitable valley and foothill grassland habitat is present within the study area. The closest CNDDB record is from 2003 and is located approximately 1.3 miles east of the study area. This species was not observed within the study area during April or June botanical surveys. This species is not expected to occur on site. .
Camissoniopsis hardhamiae Hardham's evening-primrose	None/None G2/S2 1B.2	Annual herb. Chaparral, cismontane woodland. Burned areas (sometimes), carbonate, disturbed areas (sometimes), sandy. Elevations: 460-3100ft. (140-945m.) Blooms Mar-May.	Does Not Occur	The study area is located outside the known elevation range of this species.
Carex obispoensis San Luis Obispo sedge	None/None G3?/S3? 1B.2	Perennial cespitose herb. Chaparral, closed-cone coniferous forest, coastal prairie, coastal scrub, valley and foothill grassland. Usually in transition zone on sand, clay, serpentine, or gabbro. In seeps. Elevations: 35-2690ft. (10-820m.) Blooms Apr-Jun.	Low Potential	Potentially suitable closed-cone coniferous forest, coastal scrub, and valley and foothill grassland habitats are present within the study area. The closest CNDDB record is from 2011 and is located approximately 1.2 miles west of the study area. This species was not observed within the study area during April or June botanical surveys. This species is not expected to occur on site.
Castilleja densiflora var. *obispoensis* San Luis Obispo owl's-clover	None/None G5T2/S2 1B.2	Annual herb (hemiparasitic). Meadows and seeps, valley and foothill grassland. Serpentinite (sometimes). Elevations: 35-1410ft. (10-430m.) Blooms Mar-May.	Low Potential	Potentially suitable valley and foothill grassland habitat is present within the study area. Several CNDDB records are known from the vicinity of the study area, the nearest of which is from 2008 and is located approximately 1.1 mile east of the study area. This species was not observed within the study area during April or June botanical surveys. This species is not expected to occur on site.
Ceanothus cuneatus var. *fascicularis* Lompoc ceanothus	None/None G5T4/S4 4.2	Perennial evergreen shrub. Chaparral. Sandy soils. Elevations: 15-1310ft. (5-400m.) Blooms Feb-Apr.	Does Not Occur	No suitable habitat is present within the study area.
Ceanothus impressus var. *nipomensis* Nipomo Mesa ceanothus	None/None G3T2/S2 1B.2	Perennial shrub. Chaparral. Sandy. Elevations: 100-805ft. (30-245m.) Blooms Feb-Apr.	Does Not Occur	No suitable habitat is present within the study area.
Ceanothus thyrsiflorus var. *obispoensis* San Luis Obispo ceanothus	None/None G5T1/S1 1B.1	Perennial shrub. Chaparral, cismontane woodland. Dacite. Elevations: 460-740ft. (140-225m.) Blooms Jun.	Does Not Occur	The study area is located outside the known elevation range of this species.
Centromadia parryi ssp. *congdonii* Congdon's tarplant	None/None G3T2/S2 1B.1	Annual herb. Valley and foothill grassland. Alkaline soils, sometimes described as heavy white clay. Elevations: 0-755ft. (0-230m.) Blooms May-Oct(Nov).	Low Potential	Potentially suitable valley and foothill grassland habitat is present within the study area. The closest CNDDB record is from 2002 and is located approximately 0.6 mile east of the study area. This species was not observed within the study area during April or June botanical surveys. This species is not expected to occur on site.
Cercocarpus betuloides var. *blancheae* island mountain-mahogany	None/None G5T4/S4 4.3	Perennial evergreen shrub. Chaparral, closed-cone coniferous forest. Elevations: 100-1970ft. (30-600m.) Blooms Feb-May.	Low Potential	Marginally suitable closed-cone coniferous forest habitat is present within the study area. The closest CNPS record is from 1975 and is located approximately 2.2 miles northwest of the study area. This species was not observed within the study area during April or June botanical surveys. This species is not expected to occur on site.

Scientific Name Common Name	Status	Habitat Requirements	Potential to Occur in Project Site	Habitat Suitability/Observations
Chenopodium littoreum coastal goosefoot	None/None G1/S1 1B.2	Annual herb. Coastal dunes. Generally on sandy soils, and on dunes. Elevations: 35-100ft. (10-30m.) Blooms Apr-Aug.	Does Not Occur	No suitable habitat is present within the study area.
Chlorogalum pomeridianum var. *minus* dwarf soaproot	None/None G5T3/S3 1B.2	Perennial bulbiferous herb. Chaparral. Serpentine. Elevations: 1000-3280ft. (305-1000m.) Blooms May-Aug.	Does Not Occur	The study area is located outside the known elevation range of this species.
Chloropyron maritimum ssp. *maritimum* salt marsh bird's-beak	FE/SE G4?T1/S1 1B.2	Annual herb (hemiparasitic). Coastal dunes, marshes and swamps. Limited to the higher zones of salt marsh habitat. Elevations: 0-100ft. (0-30m.) Blooms May-Oct(Nov).	Does Not Occur	The study area is located outside the known elevation range of this species.
Chloropyron maritimum ssp. *palustre* Point Reyes salty bird's-beak	None/None G4?T2/S2 1B.2	Annual herb (hemiparasitic). Marshes and swamps. Usually in coastal salt marsh with Salicornia, Distichlis, Jaumea, Spartina, etc. Elevations: 0-35ft. (0-10m.) Blooms Jun-Oct.	Does Not Occur	The study area is located outside the known elevation range of this species.
Chorizanthe aphanantha Irish Hills spineflower	None/None G1/S1 1B.1	Annual herb. Chaparral, coastal scrub. Gravelly, rocky, serpentinite. Elevations: 330-1215ft. (100-370m.) Blooms Apr-Jun.	Does Not Occur	The study area is located outside the known elevation range of this species.
Chorizanthe breweri Brewer's spineflower	None/None G3/S3 1B.3	Annual herb. Chaparral, cismontane woodland, closed-cone coniferous forest, coastal scrub. Gravelly (sometimes), rocky (sometimes), serpentinite. Elevations: 150-2625ft. (45-800m.) Blooms Apr-Aug.	Does Not Occur	The study area is located outside the known elevation range of this species.
Chorizanthe douglasii Douglas' spineflower	None/None G4/S4 4.3	Annual herb. Chaparral, cismontane woodland, coastal scrub, lower montane coniferous forest, valley and foothill grassland. Gravelly (sometimes), sandy (sometimes). Elevations: 180-5250ft. (55-1600m.) Blooms Apr-Jul.	Does Not Occur	The study area is located outside the known elevation range of this species.
Chorizanthe palmeri Palmer's spineflower	None/None G4/S4 4.2	Annual herb. Chaparral, cismontane woodland, valley and foothill grassland. Rocky, serpentinite. Elevations: 180-3100ft. (55-945m.) Blooms Apr-Aug.	Does Not Occur	The study area is located outside the known elevation range of this species.
Chorizanthe rectispina straight-awned spineflower	None/None G2/S2 1B.2	Annual herb. Chaparral, cismontane woodland, coastal scrub. Often on granite in chaparral. Elevations: 280-3395ft. (85-1035m.) Blooms Apr-Jul.	Does Not Occur	The study area is located outside the known elevation range of this species.
Chorizanthe ventricosa potbellied spineflower	None/None G3/S3 4.3	Annual herb. Cismontane woodland, valley and foothill grassland. Serpentinite. Elevations: 215-4050ft. (65-1235m.) Blooms May-Sep.	Does Not Occur	The study area is located outside the known elevation range of this species.
Cirsium fontinale var. *obispoense* Chorro Creek bog thistle	FE/SE G2T2/S2 1B.2	Perennial herb. Chaparral, cismontane woodland, coastal scrub, valley and foothill grassland. Drainages, seeps, serpentinite. Elevations: 115-1265ft. (35-385m.) Blooms Feb-Jul(Aug-Sep).	Low Potential	Potentially suitable coastal scrub, cismontane woodland, and valley and foothill grassland habitats are present within the study area. The closest CNDDB record is from 2015 and is located approximately 1.1 mile northeast of the study area. This species was not observed within the study area during April or June botanical surveys. This species is not expected to occur on site.
Cirsium occidentale var. *lucianum* Cuesta Ridge thistle	None/None G3G4T2/S2 1B.2	Perennial herb. Chaparral. Disturbed areas, roadsides, rocky (often), serpentinite, slopes (often). Elevations: 1640-2460ft. (500-750m.) Blooms Apr-Jun.	Does Not Occur	The study area is located outside the known elevation range of this species.
Cirsium rhothophilum surf thistle	None/ST G1/S1 1B.2	Perennial herb. Coastal bluff scrub, coastal dunes. Open areas in central dune scrub; usually in coastal dunes. Elevations: 10-195ft. (3-60m.) Blooms Apr-Jun.	Does Not Occur	No suitable habitat is present within the study area.
Cirsium scariosum var. *loncholepis* La Graciosa thistle	FE/ST G5T1/S1 1B.1	Perennial herb. Cismontane woodland, coastal dunes, coastal scrub, marshes and swamps, valley and foothill grassland. Mesic, sandy. Elevations: 15-720ft. (4-220m.) Blooms May-Aug.	Does Not Occur	The study area is located outside the known range of this species.
Cladium californicum California saw-grass	None/None G4/S2 2B.2	Perennial rhizomatous herb. Marshes and swamps, meadows and seeps. Freshwater or alkaline moist habitats. Elevations: 195-5250ft. (60-1600m.) Blooms Jun-Sep.	Does Not Occur	The study area is located outside the known elevation range of this species.
Cladonia firma popcorn lichen	None/None G4/S1 2B.1	Squamulose lichen (terricolous). Coastal dunes, coastal scrub. On soil and detritus on stabilized sand dunes, in pure stands or intermixed with other lichens and mosses forming biotic soil crusts, covering areas up to several meters. Elevations: 100-245ft. (30-75m.)	Does Not Occur	No suitable habitat is present within the study area.

Scientific Name Common Name	Status	Habitat Requirements	Potential to Occur in Project Site	Habitat Suitability/Observations
Clarkia speciosa ssp. *immaculata* Pismo clarkia	FE/SR G4T1/S1 1B.1	Annual herb. Chaparral, cismontane woodland, valley and foothill grassland. Sandy. Elevations: 80-605ft. (25-185m.) Blooms May-Jul.	Low Potential	Potentially suitable cismontane woodland and valley and foothill grassland habitats are present within the study area. The closest CNDDB record is from 2015 and is located approximately 3.1 miles southeast of the study area. This species was not observed within the study area during April or June botanical surveys. This species is not expected to occur on site.
Clinopodium mimuloides monkey-flower savory	None/None G3/S3 4.2	Perennial herb. Chaparral, north coast coniferous forest. Mesic, streambanks. Elevations: 1000-5905ft. (305-1800m.) Blooms Jun-Oct.	Does Not Occur	The study area is located outside the known elevation range of this species.
Deinandra paniculata paniculate tarplant	None/None G4/S4 4.2	Annual herb. Coastal scrub, valley and foothill grassland, vernal pools. Usually in vernally mesic sites. Sometimes in vernal pools or on mima mounds near them. Elevations: 80-3085ft. (25-940m.) Blooms (Mar)Apr-Nov.	Low Potential	Potentially suitable coastal scrub and valley and foothill grassland habitats are present within the study area. The closest CNDDB record is from 1969 and is located approximately 3.8 miles northwest of the study area. This species was not observed within the study area during April or June botanical surveys. This species is not expected to occur on site.
Delphinium hutchinsoniae Hutchinson's larkspur	None/None G2/S2 1B.2	Perennial herb. Broadleafed upland forest, chaparral, coastal prairie, coastal scrub. On semi-shaded, slightly moist slopes, usually west-facing. Elevations: 0-1400ft. (0-427m.) Blooms Mar-Jun.	Does Not Occur	The study area is located outside the known range of this species.
Delphinium parryi ssp. *blochmaniae* dune larkspur	None/None G4T2/S2 1B.2	Perennial herb. Chaparral, coastal dunes. On rocky areas and dunes. Elevations: 0-655ft. (0-200m.) Blooms Apr-Jun.	Does Not Occur	No suitable habitat is present within the study area.
Delphinium parryi ssp. *eastwoodiae* Eastwood's larkspur	None/None G4T2/S2 1B.2	Perennial herb. Chaparral, valley and foothill grassland. Serpentine. Openings. Elevations: 245-1640ft. (75-500m.) Blooms (Feb)Mar-Apr.	Does Not Occur	The study area is located outside the known elevation range of this species.
Delphinium umbraculorum umbrella larkspur	None/None G3/S3 1B.3	Perennial herb. Chaparral, cismontane woodland. Mesic sites. Elevations: 1310-5250ft. (400-1600m.) Blooms Apr-Jun.	Does Not Occur	The study area is located outside the known elevation range of this species.
Dithyrea maritima beach spectaclepod	None/ST G1/S1 1B.1	Perennial rhizomatous herb. Coastal dunes, coastal scrub. Sea shores, on sand dunes, and sandy places near the shore. Elevations: 10-165ft. (3-50m.) Blooms Mar-May.	Does Not Occur	No suitable habitat is present within the study area.
Dudleya abramsii ssp. *bettinae* Betty's dudleya	None/None G4T2/S2 1B.2	Perennial herb. Chaparral, coastal scrub, valley and foothill grassland. On rocky, barren exposures of serpentine within scrub vegetation. Elevations: 65-590ft. (20-180m.) Blooms May-Jul.	Low Potential	Marginally suitable coastal scrub and valley and foothill grassland habitats are present within the study area. The closest CNDDB record is from 2008 and is located approximately 1.6 mile east of the study area. This species was not observed within the study area during April or June botanical surveys. This species is not expected to occur on site.
Dudleya abramsii ssp. *murina* mouse-gray dudleya	None/None G4T2/S2 1B.1	Perennial leaf. Chaparral, cismontane woodland, valley and foothill grassland. Serpentine outcrops. Elevations: 295-1725ft. (90-525m.) Blooms May-Jun.	Does Not Occur	The study area is located outside the known elevation range of this species.
Dudleya blochmaniae ssp. *blochmaniae* Blochman's dudleya	None/None G3T2/S2 1B.1	Perennial herb. Chaparral, coastal bluff scrub, coastal scrub, valley and foothill grassland. Open, rocky slopes; often in shallow clays over serpentine or in rocky areas with little soil. Elevations: 15-1475ft. (5-450m.) Blooms Apr-Jun.	Low Potential	Marginally suitable coastal scrub and valley and foothill grassland habitats are present within the study area. The closest CNDDB record is from 1987 and is located approximately 0.75 mile southwest of the study area. This species was not observed within the study area during April or June botanical surveys. This species is not expected to occur on site.
Eleocharis parvula small spikerush	None/None G5/S3 4.3	Perennial herb. Marshes and swamps. In coastal salt marshes. Elevations: 5-9910ft. (1-3020m.) Blooms (Apr)Jun-Aug(Sep).	Does Not Occur	No suitable habitat is present within the study area.
Eriastrum luteum yellow-flowered eriastrum	None/None G2/S2 1B.2	Annual herb. Broadleafed upland forest, chaparral, cismontane woodland. On bare sandy decomposed granite slopes. Elevations: 950-3280ft. (290-1000m.) Blooms May-Jun.	Does Not Occur	The study area is located outside the known elevation range of this species.
Erigeron blochmaniae Blochman's leafy daisy	None/None G2/S2 1B.2	Perennial rhizomatous herb. Coastal dunes, coastal scrub. Sand dunes and hills. Elevations: 10-150ft. (3-45m.) Blooms Jun-Aug.	Does Not Occur	No suitable habitat is present within the study area.
Erigeron sanctarum saints' daisy	None/None G3/S3 4.2	Perennial rhizomatous herb. Chaparral, cismontane woodland, coastal scrub. Elevations: 245-1150ft. (75-350m.) Blooms Mar-Jul.	Does Not Occur	The study area is located outside the known elevation range of this species.

Scientific Name Common Name	Status	Habitat Requirements	Potential to Occur in Project Site	Habitat Suitability/Observations
Eriodictyon altissimum Indian Knob mountainbalm	FE/SE G1/S1 1B.1	Perennial evergreen shrub. Chaparral, cismontane woodland, coastal scrub. Ridges in open, disturbed areas within chaparral on Pismo sandstone. Elevations: 260-885ft. (80-270m.) Blooms Mar-Jun.	Does Not Occur	The study area is located outside the known elevation range of this species.
Eryngium aristulatum var. *hooveri* Hoover's button-celery	None/None G5T1/S1 1B.1	Annual/perennial herb. Vernal pools. Alkaline depressions, vernal pools, roadside ditches and other wet places near the coast. Elevations: 10-150ft. (3-45m.) Blooms (Jun)Jul(Aug).	Does Not Occur	No suitable habitat is present within the study area.
Erysimum capitatum var. *lompocense* San Luis Obispo wallflower	None/None G5T3/S3 4.2	Perennial herb. Chaparral, coastal scrub. Sandy hillsides and mesas. Elevations: 195-1640ft. (60-500m.) Blooms Feb-May.	Does Not Occur	The study area is located outside the known elevation range of this species.
Erysimum suffrutescens suffrutescent wallflower	None/None G3/S3 4.2	Perennial herb. Chaparral, coastal bluff scrub, coastal dunes, coastal scrub. Coastal dunes and bluffs. Elevations: 0-490ft. (0-150m.) Blooms Jan-Jul(Aug).	Does Not Occur	No suitable habitat is present within the study area.
Erythranthe serpentinicola Irish Hills monkeyflower	None/None G1/S1 1B.1	Annual herb. Chaparral (openings), meadows and seeps (edges). Serpentine, rocky, openings, mesic. 60-360m. Blooms Feb-May.	Does Not Occur	No suitable habitat is present within the study area.
Eschscholzia hypecoides San Benito poppy	None/None G4/S4 4.3	Annual herb. Chaparral, cismontane woodland, valley and foothill grassland. Serpentine clay. Elevations: 655-4920ft. (200-1500m.) Blooms Mar-Jun.	Does Not Occur	The study area is located outside the known elevation range of this species.
Extriplex joaquinana San Joaquin spearscale	None/None G2/S2 1B.2	Annual herb. Chenopod scrub, meadows and seeps, playas, valley and foothill grassland. In seasonal alkali wetlands or alkali sink scrub with Distichlis spicata, Frankenia, etc. Elevations: 5-2740ft. (1-835m.) Blooms Apr-Oct.	Does Not Occur	The study area is located outside the known range of this species.
Fritillaria agrestis stinkbells	None/None G3/S3 4.2	Perennial bulbiferous herb. Chaparral, cismontane woodland, pinyon and juniper woodland, valley and foothill grassland. Sometimes on serpentine; mostly found in nonnative grassland or in grassy openings in clay soil. Elevations: 35-5100ft. (10-1555m.) Blooms Mar-Jun.	Low Potential	Potentially suitable cismontane woodland and valley and foothill grassland habitats are present within the study area. No CNDDB or CNPS records occur within 5 miles of the study area. This species was not observed within the study area during April or June botanical surveys. This species is not expected to occur on site.
Fritillaria ojaiensis Ojai fritillary	None/None G3/S3 1B.2	Perennial bulbiferous herb. Broadleafed upland forest, chaparral, cismontane woodland, lower montane coniferous forest. Rocky sites. Sometimes on serpentine; sometimes along roadsides. Elevations: 740-3275ft. (225-998m.) Blooms Feb-May.	Does Not Occur	The study area is located outside the known elevation range of this species.
Galium cliftonsmithii Santa Barbara bedstraw	None/None G4/S4 4.3	Perennial herb. Cismontane woodland. Light shade, coastal canyons, dry banks. Elevations: 655-4005ft. (200-1220m.) Blooms May-Jul.	Does Not Occur	The study area is located outside the known elevation range of this species.
Gilia tenuiflora ssp. *amplifaucalis* trumpet-throated gilia	None/None G3G4T3/S3 4.3	Annual herb. Cismontane woodland, valley and foothill grassland. Sandy soils. Elevations: 1280-2955ft. (390-900m.) Blooms Mar-Apr.	Does Not Occur	The study area is located outside the known elevation range of this species.
Grindelia hirsutula var. *maritima* San Francisco gumplant	None/None G5T1Q/S1 3.2	Perennial herb. Coastal bluff scrub, coastal scrub, valley and foothill grassland. Sandy or serpentine slopes, sea bluffs. Elevations: 50-1310ft. (15-400m.) Blooms Jun-Sep.	Low Potential	Marginally suitable coastal scrub and valley and foothill grassland habitats are present within the study area. No CNDDB or CNPS records occur within 5 miles of the study area. This species was not observed within the study area during April or June botanical surveys. This species is not expected to occur on site.
Horkelia cuneata var. *puberula* mesa horkelia	None/None G4T1/S1 1B.1	Perennial herb. Chaparral, cismontane woodland, coastal scrub. Sandy or gravelly sites. Elevations: 230-2660ft. (70-810m.) Blooms Feb-Jul(Sep).	Does Not Occur	The study area is located outside the known elevation range of this species.
Horkelia cuneata var. *sericea* Kellogg's horkelia	None/None G4T1?/S1? 1B.1	Perennial herb. Chaparral, closed-cone coniferous forest, coastal dunes, coastal scrub. Old dunes, coastal sandhills; openings. Sandy or gravelly soils. Elevations: 35-655ft. (10-200m.) Blooms Apr-Sep.	Does Not Occur	The study area is located outside the known range of this species.
Horkelia yadonii Santa Lucia horkelia	None/None G3/S3 4.2	Perennial rhizomatous herb. Broadleafed upland forest, chaparral, cismontane woodland, meadows and seeps, riparian woodland. Sandy meadow edges, seasonal streambeds. Granitic soils. Elevations: 985-6235ft. (300-1900m.) Blooms Apr-Jul.	Does Not Occur	The study area is located outside the known elevation range of this species.
Juncus acutus ssp. *leopoldii* southwestern spiny rush	None/None G5T5/S4 4.2	Perennial rhizomatous herb. Coastal dunes, marshes and swamps, meadows and seeps. Moist saline places. Elevations: 10-2955ft. (3-900m.) Blooms (Mar)May-Jun.	Does Not Occur	No suitable habitat is present within the study area.

Scientific Name Common Name	Status	Habitat Requirements	Potential to Occur in Project Site	Habitat Suitability/Observations
Lasthenia californica ssp. *macrantha* perennial goldfields	None/None G3T2/S2 1B.2	Perennial herb. Coastal bluff scrub, coastal dunes, coastal scrub. Elevations: 15-1705ft. (5-520m.) Blooms Jan-Nov.	Does Not Occur	The study area is located outside the known range of this species.
Lasthenia glabrata ssp. *coulteri* Coulter's goldfields	None/None G4T2/S2 1B.1	Annual herb. Marshes and swamps, playas, vernal pools. Usually found on alkaline soils in playas, sinks, and grasslands. 1-. Elevations: 5-4005ft. (1-1220m.) Blooms Feb-Jun.	Does Not Occur	The study area is located outside the known range of this species.
Lasthenia leptalea Salinas Valley goldfields	None/None G3/S3 4.3	Annual herb. Cismontane woodland, valley and foothill grassland. Elevations: 195-3495ft. (60-1065m.) Blooms Feb-Apr.	Does Not Occur	The study area is located outside the known elevation range of this species.
Layia erubescens blushing layia	None/None G2/S2 1B.2	Coastal dunes, coastal scrub. Prefers loose, fine sand of stabilized dunes and sandhills. 10-245m. Blooms (Feb)Mar-May(Jun).	Does Not Occur	No suitable habitat is present within the study area.
Layia jonesii Jones' layia	None/None G2/S2 1B.2	Annual herb. Chaparral, valley and foothill grassland. Clay soils and serpentine outcrops. Elevations: 15-1310ft. (5-400m.) Blooms Mar-May.	Low Potential	Potentially suitable valley and foothill grassland habitat is present within the study area. The closest CNPS record is from 1988 and is located approximately 0.5 mile west of the study area. This species was not observed within the study area during April or June botanical surveys. This species is not expected to occur on site.
Leptosiphon grandiflorus large-flowered leptosiphon	None/None G3G4/S3S4 4.2	Annual herb. Cismontane woodland, closed-cone coniferous forest, coastal bluff scrub, coastal dunes, coastal prairie, coastal scrub, valley and foothill grassland. Open, grassy flats, generally sandy soil. 5-. Elevations: 15-4005ft. (5-1220m.) Blooms Apr-Aug.	Low Potential	Potentially suitable closed-cone coniferous forest, cismontane woodland, coastal scrub, and valley and foothill grassland habitats are present within the study area. The closest CNPS record is from 1982 and is located approximately 1.6 miles northwest of the study area. This species was not observed within the study area during April or June botanical surveys. This species is not expected to occur on site.
Lessingia tenuis spring lessingia	None/None G4/S4 4.3	Annual herb. Chaparral, cismontane woodland, lower montane coniferous forest. Openings. Elevations: 985-7055ft. (300-2150m.) Blooms May-Jul.	Does Not Occur	The study area is located outside the known elevation range of this species.
Linanthus californicus ssp. *tomentosus* fuzzy prickly-phlox	None/None G5T3/S3 4.2	Perennial deciduous shrub. Coastal dunes. Elevations: 5-605ft. (1-185m.) Blooms Mar-Aug.	Does Not Occur	No suitable habitat is present within the study area.
Lomatium parvifolium small-leaved lomatium	None/None G3/S3 4.2	Perennial herb. Chaparral, closed-cone coniferous forest, coastal scrub, riparian woodland. On serpentine. Elevations: 65-2295ft. (20-700m.) Blooms Jan-Jun.	Low Potential	Marginally suitable closed-cone coniferous forest habitat is present within the study area. The closest CNPS record is from 1988 and is located approximately 0.5 mile southwest of the study area. This species was not observed within the study area during April or June botanical surveys. This species is not expected to occur on site.
Lupinus ludovicianus San Luis Obispo County lupine	None/None G1/S1 1B.2	Perennial herb. Chaparral, cismontane woodland. Open areas in sandy soil, Santa Margarita formation. Elevations: 165-1725ft. (50-525m.) Blooms Apr-Jul.	Does Not Occur	The study area is located outside the known elevation range of this species.
Lupinus nipomensis Nipomo Mesa lupine	FE/SE G1/S1 1B.1	Annual herb. Coastal dunes. Dry sandy flats, restricted to back dunes, associated with central dune scrub habitat - a rare community type. Elevations: 35-165ft. (10-50m.) Blooms Dec-May.	Does Not Occur	No suitable habitat is present within the study area.
Malacothamnus gracilis slender bush-mallow	None/None G1Q/S1 1B.1	Perennial deciduous shrub. Chaparral. Dry, rocky slopes. Elevations: 625-1885ft. (190-575m.) Blooms May-Oct.	Does Not Occur	The study area is located outside the known elevation range of this species.
Malacothamnus jonesii Jones' bush-mallow	None/None G4/S4 4.3	Perennial deciduous shrub. Chaparral, cismontane woodland. Elevations: 525-3525ft. (160-1075m.) Blooms (Mar)Apr-Oct.	Does Not Occur	The study area is located outside the known elevation range of this species.
Malacothamnus palmeri var. *palmeri* Santa Lucia bush-mallow	None/None G3T2Q/S2 1B.2	Perennial deciduous shrub. Chaparral. Dry rocky slopes, mostly near summits, but occasionally extending down canyons to the sea. Elevations: 195-1180ft. (60-360m.) Blooms May-Jul.	Does Not Occur	The study area is located outside the known elevation range of this species.
Malacothrix incana dunedelion	None/None G3G4/S3S4 4.3	Perennial herb. Coastal dunes, coastal scrub. On flats and slopes, as well as unstabilized dunes near the ocean. Elevations: 5-115ft. (2-35m.) Blooms (Jan)Apr-Oct.	Does Not Occur	The study area is located outside the known range of this species.

Scientific Name Common Name	Status	Habitat Requirements	Potential to Occur in Project Site	Habitat Suitability/Observations
Mielichhoferia elongata elongate copper moss	None/None G5/S3S4 4.3	Moss. Broadleafed upland forest, chaparral, cismontane woodland, coastal scrub, lower montane coniferous forest, meadows and seeps, subalpine coniferous forest. Moss growing on very acidic, metamorphic rock or substrate; usually in higher portions in fens. Often on substrates naturally enriched with heavy metals (e.g. copper) such as mine tailings. 5-. Elevations: 0-6430ft. (0-1960m.)	Does Not Occur	The study area is located outside the known range of this species.
Monardella palmeri Palmer's monardella	None/None G2/S2 1B.2	Perennial rhizomatous herb. Chaparral, cismontane woodland. On serpentine, often found associated with Sargent cypress forests. Elevations: 655-2625ft. (200-800m.) Blooms Jun-Aug.	Does Not Occur	The study area is located outside the known elevation range of this species.
Monardella sinuata ssp. *sinuata* southern curly-leaved monardella	None/None G3T2/S2 1B.2	Annual herb. Chaparral, cismontane woodland, coastal dunes, coastal scrub. Sandy soils. Elevations: 0-985ft. (0-300m.) Blooms Apr-Sep.	Does Not Occur	No suitable habitat is present within the study area.
Monardella undulata ssp. *crispa* crisp monardella	None/None G3T2/S2 1B.2	Perennial rhizomatous herb. Coastal dunes, coastal scrub. Often on the borders of open, sand areas, usually adjacent to typical backdune scrub vegetation. Elevations: 35-395ft. (10-120m.) Blooms Apr-Aug(Dec).	Does Not Occur	No suitable habitat is present within the study area.
Monardella undulata ssp. *undulata* San Luis Obispo monardella	None/None G2/S2 1B.2	Perennial rhizomatous herb. Coastal dunes, coastal scrub. Stabilized sand of the immediate coast. Elevations: 35-655ft. (10-200m.) Blooms May-Sep.	Does Not Occur	No suitable habitat is present within the study area.
Monolopia gracilens woodland woollythreads	None/None G3/S3 1B.2	Annual herb. Broadleafed upland forest, chaparral, cismontane woodland, north coast coniferous forest, valley and foothill grassland. Grassy sites, in openings; sandy to rocky soils. Often seen on serpentine after burns, but may have only weak affinity to serpentine. Elevations: 330-3935ft. (100-1200m.) Blooms (Feb)Mar-Jul.	Does Not Occur	The study area is located outside the known elevation range of this species.
Mucronea californica California spineflower	None/None G3/S3 4.2	Annual herb. Chaparral, cismontane woodland, coastal dunes, coastal scrub, valley and foothill grassland. Sandy soil. Elevations: 0-4595ft. (0-1400m.) Blooms Mar-Jul(Aug).	Low Potential	Potentially suitable cismontane woodland, coastal scrub, and valley and foothill grassland habitats are present within the study area. The closest CNPS record is from 1885 and is located approximately 1.6 miles northwest of the study area. This species was not observed within the study area during April or June botanical surveys. This species is not expected to occur on site.
Muhlenbergia utilis aparejo grass	None/None G4/S2S3 2B.2	Perennial rhizomatous herb. Chaparral, cismontane woodland, coastal scrub, marshes and swamps, meadows and seeps. Alkaline (sometimes), Serpentinite (sometimes).Elevations: 80-7630ft. (25-2325m.) Blooms Mar-Oct.	Low Potential	Marginally suitable coastal scrub, cismontane woodland, and valley and foothill grassland habitat is present within the study area. The closest CNPS record is from 2021 and is located approximately 2.2 miles west of the study area. This species was not observed within the study area during April or June botanical surveys. This species is not expected to occur on site.
Nasturtium gambelii Gambel's water cress	FE/ST G1/S1 1B.1	Perennial rhizomatous herb. Marshes and swamps. Freshwater and brackish marshes at the margins of lakes and along streams, in or just above the water level. Elevations: 15-1085ft. (5-330m.) Blooms Apr-Oct.	Does Not Occur	The study area is located outside the known range of this species.
Navarretia nigelliformis ssp. *radians* shining navarretia	None/None G4T2/S2 1B.2	Annual herb. Cismontane woodland, valley and foothill grassland, vernal pools. Apparently in grassland, and not necessarily in vernal pools. Elevations: 215-3280ft. (65-1000m.) Blooms (Mar)Apr-Jul.	Does Not Occur	The study area is located outside the known elevation range of this species.
Nemacaulis denudata var. *denudata* coast woolly-heads	None/None G3G4T2/S2 1B.2	Annual herb. Coastal dunes. Elevations: 0-330ft. (0-100m.) Blooms Apr-Sep.	Does Not Occur	No suitable habitat is present within the study area.
Perideridia pringlei adobe yampah	None/None G4/S4 4.3	Perennial herb. Chaparral, cismontane woodland, coastal scrub, pinyon and juniper woodland. Serpentine, clay soils. Grassland hillsides; seasonally wet sites. Elevations: 985-5905ft. (300-1800m.) Blooms Apr-Jun(Jul).	Does Not Occur	The study area is located outside the known elevation range of this species.
Piperia michaelii Michael's rein orchid	None/None G3/S3 4.2	Perennial herb. Chaparral, cismontane woodland, closed-cone coniferous forest, coastal bluff scrub, coastal scrub, lower montane coniferous forest. Mudstone and humus, generally dry sites. Elevations: 10-3000ft. (3-915m.) Blooms Apr-Aug.	Low Potential	Marginally suitable cismontane woodland, closed-cone coniferous forest, and coastal scrub habitats are present within the study area. The closest CNPS record is from 1886 and is located approximately 2.5 miles northeast of the study area. This species was not observed within the study area during April or June botanical surveys. This species is not expected to occur on site.
Plagiobothrys uncinatus hooked popcornflower	None/None G2/S2 1B.2	Annual herb. Chaparral, cismontane woodland, valley and foothill grassland. Sandstone outcrops and canyon sides; often in burned or disturbed areas. Elevations: 985-2495ft. (300-760m.) Blooms Apr-May.	Does Not Occur	The study area is located outside the known elevation range of this species.

Scientific Name Common Name	Status	Habitat Requirements	Potential to Occur in Project Site	Habitat Suitability/Observations
Poa diaboli Diablo Canyon blue grass	None/None G2/S2 1B.2	Perennial rhizomatous herb. Chaparral, cismontane woodland, closed-cone coniferous forest, coastal scrub. Shale, sometimes burned areas. Elevations: 395-1310ft. (120-400m.) Blooms Mar-Apr.	Does Not Occur	The study area is located outside the known elevation range of this species.
Prunus fasciculata var. *punctata* sand almond	None/None G5T4/S4 4.3	Perennial deciduous shrub. Chaparral, cismontane woodland, coastal dunes, coastal scrub. Sandy flats. Elevations: 50-655ft. (15-200m.) Blooms Mar-Apr.	Does Not Occur	The study area is located outside the known range of this species.
Ribes sericeum Santa Lucia gooseberry	None/None G4/S4 4.3	Perennial deciduous shrub. Broadleafed upland forest, cismontane woodland, coastal bluff scrub, north coast coniferous forest. Along streams in redwood forests and on the coastal slopes of the Santa Lucia Mtns. Elevations: 1000-4005ft. (305-1220m.) Blooms Feb-Apr.	Does Not Occur	The study area is located outside the known elevation range of this species.
Sanicula hoffmannii Hoffmann's sanicle	None/None G3/S3 4.3	Perennial herb. Broadleafed upland forest, chaparral, cismontane woodland, coastal bluff scrub, coastal scrub, lower montane coniferous forest. Cool slopes in deep soil, often in moist shaded serpentine soils, or in clay soils. Elevations: 100-985ft. (30-300m.) Blooms Mar-May.	Low Potential	Marginally suitable cismontane woodland and coastal scrub habitats are present within the study area. The closest CNPS record is from 2015 and is located approximately 0.6 mile southwest of the study area. This species was not observed within the study area during April or June botanical surveys. This species is not expected to occur on site.
Sanicula maritima adobe sanicle	None/SR G2/S2 1B.1	Perennial herb. Chaparral, coastal prairie, meadows and seeps, valley and foothill grassland. Moist clay or ultramafic soils. Elevations: 100-785ft. (30-240m.) Blooms Feb-May.	Low Potential	Potentially suitable valley and foothill grassland habitat is present within the study area. The closest CNPS record is from 2016 and is located approximately 1 mile northeast of the study area. This species was not observed within the study area during April or June botanical surveys. This species is not expected to occur on site.
Scrophularia atrata black-flowered figwort	None/None G2?/S2? 1B.2	Perennial herb. Chaparral, closed-cone coniferous forest, coastal dunes, coastal scrub, riparian scrub. Sand, diatomaceous shales, and soils derived from other parent material; around swales and in sand dunes. Elevations: 35-1640ft. (10-500m.) Blooms Mar-Jul.	Low Potential	Marginally suitable closed-cone coniferous forest and coastal scrub habitats are present within the study area. The closest CNDDB record is from 2012 and is located approximately 3.5 miles southeast of the study area. This species was not observed within the study area during April or June botanical surveys. This species is not expected to occur on site.
Senecio aphanactis chaparral ragwort	None/None G3/S2 2B.2	Annual herb. Chaparral, cismontane woodland, coastal scrub. Drying alkaline flats. Elevations: 50-2625ft. (15-800m.) Blooms Jan-Apr(May).	Low Potential	Marginally suitable cismontane woodland and coastal scrub habitats are present within the study area. The closest CNDDB record is from 1927 and is located approximately 1.1 miles northeast of the study area. This species was not observed within the study area during April or June botanical surveys. This species is not expected to occur on site.
Senecio astephanus San Gabriel ragwort	None/None G3/S3 4.3	Perennial herb. Chaparral, coastal bluff scrub. Rocky slopes. Elevations: 1310-4920ft. (400-1500m.) Blooms May-Jul.	Does Not Occur	The study area is located outside the known elevation range of this species.
Senecio blochmaniae Blochman's ragwort	None/None G3/S3 4.2	Perennial herb. Coastal dunes. Elevations: 0-330ft. (0-100m.) Blooms May-Oct.	Does Not Occur	No suitable habitat is present within the study area.
Sidalcea hickmanii ssp. *anomala* Cuesta Pass checkerbloom	None/SR G3T1/S1 1B.2	Perennial herb. Chaparral, closed-cone coniferous forest. Rocky serpentine soil; associated with Sargent cypress forest. Elevations: 1970-2625ft. (600-800m.) Blooms May-Jun.	Does Not Occur	The study area is located outside the known elevation range of this species.
Streptanthus albidus ssp. *peramoenus* most beautiful jewelflower	None/None G2T2/S2 1B.2	Annual herb. Chaparral, cismontane woodland, valley and foothill grassland. Serpentine outcrops, on ridges and slopes. Elevations: 310-3280ft. (95-1000m.) Blooms (Mar)Apr-Sep(Oct).	Does Not Occur	The study area is located outside the known elevation range of this species.
Suaeda californica California seablite	FE/None G1/S1 1B.1	Perennial evergreen shrub. Marshes and swamps. Margins of coastal salt marshes. Elevations: 0-50ft. (0-15m.) Blooms Jul-Oct.	Does Not Occur	The study area is located outside the known elevation range of this species.
Sulcaria isidiifera splitting yarn lichen	None/None G1/S1 1B.1	Fruticose lichen (epiphytic). Coastal scrub. On branches of oaks and shrubs in old growth coastal scrub. Elevations: 65-100ft. (20-30m.)	Does Not Occur	No suitable habitat is present within the study area.
Sulcaria spiralifera twisted horsehair lichen	None/None G3G4/S2 1B.2	Fruticose lichen (epiphytic). Coastal dunes, north coast coniferous forest. Usually on conifers. Elevations: 0-295ft. (0-90m.)	Does Not Occur	No suitable habitat is present within the study area.
Symphyotrichum defoliatum San Bernardino aster	None/None G2/S2 1B.2	Perennial rhizomatous herb. Cismontane woodland, coastal scrub, lower montane coniferous forest, marshes and swamps, meadows and seeps, valley and foothill grassland. Vernally mesic grassland or near ditches, streams and springs; disturbed areas. Elevations: 5-6695ft. (2-2040m.) Blooms Jul-Nov.	Does Not Occur	The study area is located outside the known range of this species.

Scientific Name Common Name	Status	Habitat Requirements	Potential to Occur in Project Site	Habitat Suitability/Observations
Trifolium hydrophilum saline clover	None/None G2/S2 1B.2	Annual herb. Marshes and swamps, valley and foothill grassland, vernal pools. Mesic, alkaline sites. Elevations: 0-985ft. (0-300m.) Blooms Apr-Jun.	Low Potential	Potentially suitable valley and foothill grassland habitat is present within the study area. The closest CNDDB record is from 1998 and is located approximately 1.1 miles northwest of the study area. This species was not observed within the study area during April or June botanical surveys. This species is not expected to occur on site.
Tropidocarpum capparideum caper-fruited tropidocarpum	None/None G1/S1 1B.1	Annual herb. Valley and foothill grassland. Alkaline clay. Elevations: 5-1495ft. (1-455m.) Blooms Mar-Apr.	Low Potential	Potentially suitable valley and foothill grassland habitat is present within the study area. No CNDDB or CNPS records occur within 5 miles of the study area. This species was not observed within the study area during April or June botanical surveys. This species is not expected to occur on site.

Status (Federal/State)

FE = Federal Endangered
FT = Federal Threatened
SE = State Endangered
ST = State Threatened
SR = State Rare

CRPR (California Native Plant Society California Rare Plant Rank)

1B = Rare, Threatened, or Endangered in California and elsewhere
2B= Rare, Threatened, or Endangered in California, but more common elsewhere

CRPR Threat Code Extension

.1 = Seriously endangered in California (>80% of occurrences threatened/high degree and immediacy of threat)
.2 = Moderately threatened in California (20-80% of occurrences threatened/moderate degree and immediacy of threat)
.3 = Not very endangered in California (<20% of occurrences threatened/low degree and immediacy of threat)

Other Statuses

G1 or S1 Critically Imperiled Globally or Subnationally (state)
G2 or S2 Imperiled Globally or Subnationally (state)
G3 or S3 Vulnerable to extirpation or extinction Globally or Subnationally (state)
G4/5 or S4/5 Apparently secure, common and abundant

Additional notations may be provided as follows

T – Intraspecific Taxon (subspecies, varieties, and other designations below the level of species)
Q – Questionable taxonomy that may reduce conservation priority
? – Inexact numeric rank

Attachment 2

Floral Compendium

Common Name[1]	Scientific Name	Native/Non-native	Status
Wattle	*Acacia* sp.	Non-native	--
Box elder	*Acer negundo*	Native	--
American bird's foot trefoil	*Acmispon americanus*	Native	--
Buckeye	*Aesculus californica*	Native	--
Ragweed	*Ambrosia psilostachya*	Native	--
Narrow leaf milkweed	*Asclepias fascicularis*	Native	--
Slender oat	*Avena barbata*	Non-native; Cal-IPC moderate	--
Wild oat	*Avena fatua*	Non-native; Cal-IPC moderate	--
Coyote brush	*Baccharis pilularis*	Native	
Black mustard	*Brassica nigra*	Non-native; Cal-IPC moderate	--
Rescue grass	*Bromus catharticus*	Non-native	--
Ripgut brome	*Bromus diandrus*	Non-native; Cal-IPC moderate	--
Soft brome	*Bromus hordeaceus*	Non-native; Cal-IPC limited	--
California brome	*Bromus stichensis* var. *carinatus*	Native	--
Incense cedar	*Calocedrus decurrens*	Native	--
Italian thistle	*Carduus pycnocephalus*	Non-native; Cal-IPC moderate	--
Yellow star thistle	*Centaurea solstitialis*	Non-native; Cal-IPC high	--
Bull thistle	*Cirsium vulgare*	Non-native; Cal-IPC moderate	--
Poison hemlock	*Conium maculatum*	Non-native; Cal-IPC moderate	--
Field bindweed	*Convulvulus arvensis*	Non-native	--
Bermuda grass	*Cynodon dactylon*	Non-native; Cal-IPC moderate	--
Tall flatsedge	*Cyperus eragrostis*	Native	--
Creeping wildrye	*Elymus triticoides*	Native	--
Perennial veldt grass	*Ehrharta calycina*	Non-native; Cal-IPC high	--
Canada horseweed	*Erigeron canadensis*	Native	--
Coastal heron's bill	*Erodium cicutarium*	Non-native; Cal-IPC limited	--
California poppy	*Eschscholzia californica*	Native	--
Fringed willowherb	*Epilobium ciliatum*	Native	--
Blue gum	*Eucalyptus globulus*	Non-native; Cal-IPC limited	--
Petty spurge	*Euphorbia peplus*	Non-native	--
Italian rye grass	*Festuca perennis*	Non-native; Cal-IPC moderate	--
Sweet fennel	*Foeniculum vulgare*	Non-native; Cal-IPC moderate	--
Coffeeberry	*Frangula californica*	Native	--
White ramping fumitory	*Fumaria capreolata*	Non-native	--
Common bedstraw	*Galium aparine*	Native	--
French broom	*Genista monspessulana*	Non-native; Cal-IPC high	--
Cutleaf geranum	*Geranium dissectum*	Non-native; Cal-IPC limited	--
Bristly ox-tongue	*Helminthotheca echioides*	Non-native; Cal-IPC limited	--
Monterey cypress	*Hesperocyparis macrocarpa*	Native	1B.2[3]
Toyon	*Heteromeles arbutifolia*	Native	--
Foxtail barley	*Hordeum murinum*	Non-native; Cal-IPC moderate	--

Common Name[1]	Scientific Name	Native/Non-native	Status
Common barley	*Hordeum vulgare*	Non-native	--
Northern California black walnut	*Juglans hindsii*	Native	--
Prickly lettuce	*Lactuca serriola*	Non-native	--
Glossy privet	*Ligustrum lucidum*	Non-native; Cal-IPC limited	--
Santa Cruz Island ironwood	*Lyonothamnus floribundus* ssp. *aspleniifolius*	Native	1B.2[3]
Cheeseweed mallow	*Malva parviflora*	Non-native	--
Bur clover	*Medicago polymorpha*	Non-native; Cal-IPC limited	--
Annual yellow sweetclover	*Melilotus indicus*	Non-native	--
California wax myrtle	*Morella californica*	Native	--
Mexican evening primrose	*Oenothera speciosa*	Non-native	--
Olive	*Olea europaea*	Non-native; Cal-IPC limited	--
Kikuyu grass	*Pennisetum clanedestinum*	Non-native; Cal-IPC limited	--
Avocado	*Persea americana*	Non-native	--
Harding grass	*Phalaris aquatica*	Non-native; Cal-IPC moderate	--
Monterey pine	*Pinus radiata*	Native	--
English plantain	*Plantago lanceolata*	Non-native; Cal-IPC limited	--
Prostrate knotweed	*Polygonum aviculare*	Non-native	--
Rabbitsfoot grass	*Polypogon monspeliensis*	Non-native; Cal-IPC limited	--
Fremont cottonwood	*Populus fremontii*	Native	--
Apricot	*Prunus armeniaca*	Non-native	--
Jersey cudweed	*Pseudognaphalium luteoalbum*	Non-native	--
Wild radish	*Raphanus sativus*	Non-native; Cal-IPC limited	--
Coast live oak	*Quercus agrifolia*	Native	--
Valley oak	*Quercus lobata*	Native	--
Wild radish	*Raphanus sativus*	Non-native; Cal-IPC limited	--
Lemonade berry	*Rhus integrifolia*	Native	--
Castor bean	*Ricinus communis*	Non-native; Cal-IPC limited	--
California rose	*Rosa californica*	Native	--
Himalayan blackberry	*Rubus armeniacus*	Non-native; Cal-IPC high	--
California blackberry	*Rubus ursinus*	Native	--
Curly dock	*Rumex crispus*	Non-native; Cal-IPC limited	--
Red willow	*Salix laevigata*	Native	--
Arroyo willow	*Salix lasiolepis*	Native	--
Blue elderberry	*Sambucas nexicana*	Native	--
Peruvian pepper tree	*Schinus molle*	Non-native; Cal-IPC limited	--
Coast redwood	*Sequoia sempervirens*	Native	--
Milk thistle	*Silybum marianum*	Non-native; Cal-IPC limited	--
Common nightshade	*Solanum americanum*	Native	--
Spiny sowthistle	*Sonchus asper*	Non-native	--

Common Name[1]	Scientific Name	Native/Non-native	Status
Smilo grass	*Stipa miliacea*	Non-native	--
Purple needlegrass	*Stipa pulchra*	Native	--
Purple salsify	*Tragopogon porrifolius*	Non-native	--
Rose clover	*Trifolium hirtum*	Non-native; Cal-IPC limited	--
Common wheat	*Triticum aestivum*	Non-native	--
Garden nasturtium	*Tropaeolum majus*	Non-native	--
Spring vetch	*Vicia sativa*	Non-native	--
Mexican fan palm	*Washingtonia robusta*	Non-native; Cal-IPC moderate	--

Cal-IPC = California Invasive Plant Council

[1]Calflora 2024

[2]California Invasive Plant Council 2006. California Invasive Plant Inventory. Cal-IPC Publication 2006-02. California Invasive Plant Council: Berkeley, CA. www.cal-ipc.org. Accessed June 2024.

[3]Not naturally occurring within the study area (i.e., ornamentally planted stands); as such, these individuals are not considered special-status.

Attachment 3

Site Photographs

Photograph 1. View of the study area east of Highway 101, facing west. Taken April 26, 2024.

Photograph 2. View of the study area east of Highway 101, facing northeast. Taken April 26, 2024.

Photograph 3. View of the study area east of Highway 101, facing northeast. Taken April 26, 2024.

Photograph 4. View of the study area east of Highway 101, facing northwest. Taken April 26, 2024.

Photograph 5. View of the study area east of Highway 101, facing east. Taken April 26, 2024.

Photograph 6. View of the study area east of Highway 101, facing north. Taken April 26, 2024.

Photograph 7. View of the study area west of Highway 101, facing northeast. Taken April 26, 2024.

Photograph 8. View of the study area east of Highway 101, facing northeast. Taken June 5, 2024.

Photograph 9. View of the study area east of Highway 101, facing south. Taken June 5, 2024.

Photograph 10. View of the study area east of Highway 101, facing southwest. Taken June 5, 2024.

Appendix C

Noise and Vibration Calculations

Roadway Construction Noise Model (RCNM),Version 1.1

Report date 8/13/2024
Case Descr Treatment Wells

---- Receptor #1 ----

Description	Land Use	Baselines (dBA) Daytime	Evening	Night
Residences	Residential	65	60	55

Description	Impact Device	Usage(%)	Equipment Spec Lmax (dBA)	Actual Lmax (dBA)	Receptor Distance (feet)	Estimated Shielding (dBA)
Backhoe	No	40	80		245	0
Concrete Pump Truck	No	20	82		245	0
Crane	No	16	85		245	0
Rock Drill	No	20	85		245	0

Equipment	Calculated (dBA) *Lmax	Leq	Results Noise Limits (dBA) Day Lmax	Day Leq	Evening Lmax	Evening Leq	Night Lmax
Backhoe	66.2	62.2	N/A	N/A	N/A	N/A	N/A
Concrete Pump Truck	68.2	61.2	N/A	N/A	N/A	N/A	N/A
Crane	71.2	63.2	N/A	N/A	N/A	N/A	N/A
Rock Drill	71.2	64.2	N/A	N/A	N/A	N/A	N/A
Total	71.2	68.9	N/A	N/A	N/A	N/A	N/A

*Calculated Lmax is the Loudest value.

Noise Limit Exceedance (dBA)						
	Day		Evening		Night	
Leq	Lmax	Leq	Lmax	Leq	Lmax	Leq
N/A	N/A	N/A	N/A	N/A	N/A	N/A
N/A	N/A	N/A	N/A	N/A	N/A	N/A
N/A	N/A	N/A	N/A	N/A	N/A	N/A
N/A	N/A	N/A	N/A	N/A	N/A	N/A
N/A	N/A	N/A	N/A	N/A	N/A	N/A

Roadway Construction Noise Model (RCNM),Version 1.1

Report date 8/13/2024
Case Description:

---- Receptor #1 ----

		Baselines (dBA)		
Description	Land Use	Daytime	Evening	Night
Residence	Residential	65	60	55

Description	Impact Device	Usage(%)	Equipment Spec Lmax (dBA)	Actual Lmax (dBA)	Receptor Distance (feet)	Estimated Shielding (dBA)
Backhoe	No	40	80		150	0
Concrete Pump Truck	No	20	82		150	0
Crane	No	16	85		150	0
Rock Drill	No	20	85		150	0

	Calculated (dBA)		Results	Noise Limits (dBA)			
			Day		Evening		Night
Equipment	*Lmax	Leq	Lmax	Leq	Lmax	Leq	Lmax
Backhoe	70.5	66.5	N/A	N/A	N/A	N/A	N/A
Concrete Pump Truck	72.5	65.5	N/A	N/A	N/A	N/A	N/A
Crane	75.5	67.5	N/A	N/A	N/A	N/A	N/A
Rock Drill	75.5	68.5	N/A	N/A	N/A	N/A	N/A
Total	75.5	73.1	N/A	N/A	N/A	N/A	N/A

*Calculated Lmax is the Loudest value.

Noise Limit Exceedance (dBA)						
	Day		Evening		Night	
Leq	Lmax	Leq	Lmax	Leq	Lmax	Leq
N/A	N/A	N/A	N/A	N/A	N/A	N/A
N/A	N/A	N/A	N/A	N/A	N/A	N/A
N/A	N/A	N/A	N/A	N/A	N/A	N/A
N/A	N/A	N/A	N/A	N/A	N/A	N/A
N/A	N/A	N/A	N/A	N/A	N/A	N/A

MTSJ-02 Phase 1	Vibration @ 25 ft	Residential Area (15 feet) 15	Residential Area (45 feet) 45
Cassion Drilling	**0.089**	**0.191**	**0.037**

