Lost Canyon 2A and Sand Canyon Groundwater Treatment Improvements Project

Draft Initial Study – Mitigated Negative Declaration

prepared by

Santa Clarita Valley Water Agency
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RINCON CONSULTANTS, INC. SINCE 1994

Table of Contents

Tables

Figures

Appendices

Initial Study

1. Project Title

Lost Canyon 2A and Sand Canyon Groundwater Treatment Improvements Project

2. Lead Agency Name and Address

Santa Clarita Valley Water Agency (SCV Water)
26515 Summit Circle
Santa Clarita, California 91350

3. Contact Person and Phone Number

Mark Aumentado, PE, Engineer
661-714-0993

4. Project Location

The project site is comprised of an approximately 2.7-acre impact area spanning the following properties and public right-of-way in Santa Clarita, California:

- **Assessor's Parcel Number (APN) 2840-006-901:** This property is an approximately 10.0-acre parcel owned by SCV Water. Within this property are the existing Lost Canyon 2, Lost Canyon 2A, and Sand Canyon wells. The Santa Clara River also runs through the northern portion of this property. Approximately 1.5 acres of the project site are within the southern portion of this property. This property is approximately 250 feet west of the intersection of Sand Canyon Road and Lost Canyon Road and immediately north of Lost Canyon Road.
- **APN 2840-002-901:** This property is an approximately 1.1-acre parcel owned by SCV Water. Within this property is the existing Mitchell 5B well. Approximately 0.02 acre of the project site is within the southeastern portion of this property. This property is approximately 210 feet west of the northern terminus of Sawtooth Lane within the Vista Canyon Specific Plan development.
- **Public Right-of-Way of Lost Canyon Road:** The project site includes approximately 1,700 linear feet of the public right-of-way of Lost Canyon Road between La Veda Drive and a point approximately 390 feet northeast of the intersection of Humphreys Parkway and Lincoln Place. The portion of the project site within the public right-of-way of Lost Canyon Road totals approximately 1.2 acres.

See Figure 1 for a map of the regional project location and Figure 2 for a map of the project site location in a local context. Figure 3 shows site photographs of the existing site and facilities. Access to the project site is provided primarily via Lost Canyon Road.

Figure 1 Regional Project Location

Imagery provided by Esri and its licensors © 2024.

Figure 2 Project Site Location

Figure 3 Representative Site Photographs

Photograph 1. Lost Canyon Road, facing southwest.

Photograph 2. Existing Lost Canyon 2A well vertical turbine pump.

Photograph 3. View of Mitchell 5B well from Santa Clara River, facing south.

Photograph 4. View from Santa Clara River of Lost Canyon 2A well and proposed location of groundwater treatment facility, facing southwest.

5. Project Sponsor's Name and Address

Santa Clarita Valley Water Agency
26515 Summit Circle
Santa Clarita, California 91350

6. General Plan Designation

APN 2840-006-901 has a land use designation of Urban Residential 1 (UR1). APN 2840-002-901 has a land use designation of Specific Plan (Vista Canyon). The public right-of-way of Lost Canyon Road does not have a land use designation.

7. Zoning

APN 2840-006-901 is zoned Urban Residential 1 (UR1). APN 2840-002-901 is zoned as Specific Plan-Open Space (Vista Canyon). The public right-of-way of Lost Canyon Road does not have a zoning designation.

8. Description of Project

Background

Santa Clara River Valley East Groundwater Subbasin Groundwater Sustainability Plan

SCV Water operates numerous groundwater extraction wells in the Upper Santa Clara River Groundwater Basin (Basin). The Basin is roughly 100 square miles in size and contains a shallow alluvial aquifer and the deeper Saugus Formation with groundwater extracted from both aquifers. For decades, SCV Water's 2003 Groundwater Management Plan and Urban Water Management Plans described the planned approach to pump groundwater from the Basin to provide groundwater supply as part of an overall conjunctive use strategy that includes use of imported supplies. More recently, due to statewide regulatory efforts, state-required Groundwater Sustainability Agencies were formed to develop Groundwater Sustainability Plans.

The Santa Clarita Valley Groundwater Sustainability Agency (SCV GSA) is operated via a Joint Powers Agreement between the following member agencies: the City of Santa Clarita (City), Los Angeles County Regional Planning, Los Angeles County Waterworks District No. 36, and SCV Water. Its Board meets quarterly. After a robust public process, the SCV GSA adopted the Santa Clara River Valley East Groundwater Subbasin Groundwater Sustainability Plan (GSP) in 2022. The GSP adheres to the pumping plan approaches in the Urban Water Management Plan and determined the Basin can be operated sustainably over the long term in conjunction with specialized monitoring. The GSP concludes that, with the evaluated groundwater pumping plan, any changes to future non-storm surface water flows out of the Basin would not be substantially different from historical non-storm flows (SCV GSA 2022). Groundwater pumping conducted in a manner consistent with GSP modeling assumptions would not be expected to result in any significant direct or indirect changes to streamflow. In the event GSP sustainable management criteria (e.g., groundwater elevations) are not met due to groundwater extraction, the GPS contains management actions that must be implemented to address the issue. SCV Water provides administrative services to the SCV GSA,

which include the Basin monitoring called for in the GSP, preparation of regular reports on Basin conditions, and preparation of an annual report.

Project Background

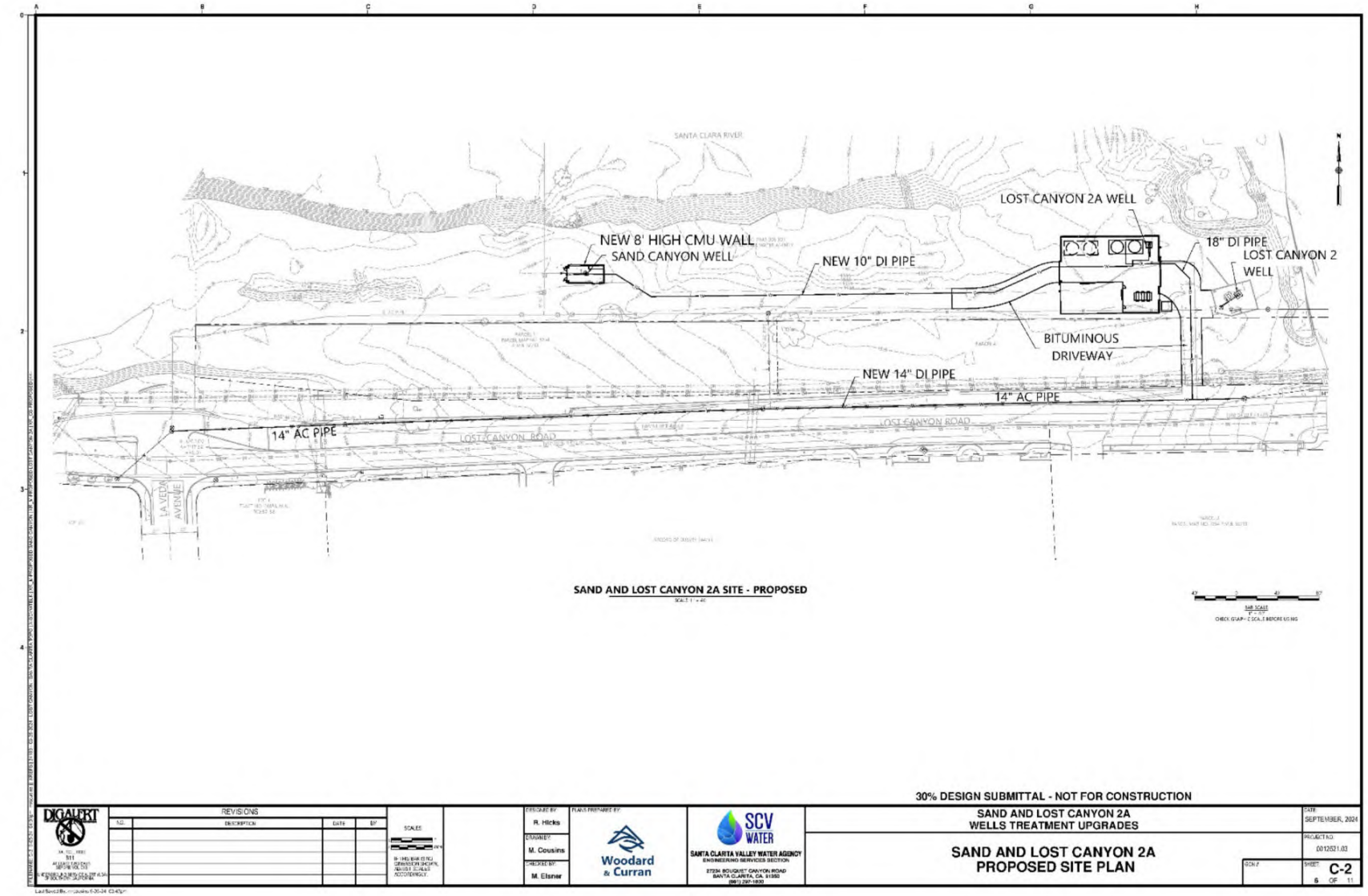
SCV Water currently provides water services to approximately 278,000 residents via approximately 75,000 service connections. On average, about 50 percent of SCV Water's water supply comes from the State Water Project, with the remainder sourced from groundwater wells tapping into the alluvial aquifer beneath the Santa Clara River and the Saugus Formation under the Upper Santa Clara River. On April 10, 2024, the United States Environmental Protection Agency (USEPA) issued the final National Primary Drinking Water Regulation for six per- and polyfluorinated alkyl substances (PFAS) compounds. These include perfluorooctanoic acid, perfluorooctanesulfonic acid, perfluorohexanesulfonic acid, perfluorononanoic acid, and hexafluoropropylene oxide dimer acid, each assigned specific Maximum Contaminant Levels. In addition, a hazard index Maximum Contaminant Level was established for mixtures containing two or more of perfluorohexanesulfonic acid, perfluorononanoic acid, hexafluoropropylene oxide dimer acid, and perfluorobutanesulfonic acid to address their combined presence in drinking water (Woodard and Curran 2024).

SCV Water operates four existing wells (Sand Canyon, Mitchell 5B, Lost Canyon 2, and Lost Canyon 2A), located along the south side of the Santa Clara River between Sand Canyon Road and State Route (SR) 14 in the Sand Canyon and Vista Canyon communities in the city of Santa Clarita. The four wells can generate up to a total of 4,000 gallons per minute (gpm) of potable water that is distributed to the North Oaks Zone in the East Valley water service area. Out of an abundance of caution due to elevated PFAS concentrations, the Mitchell 5B and Lost Canyon 2 wells were voluntarily taken offline in 2019, and the Lost Canyon 2A and Sand Canyon wells were voluntarily taken offline in 2023. To make up for the loss of groundwater production, SCV Water has relied on the purchase of additional imported water supplies to meet local demand.

Project Description

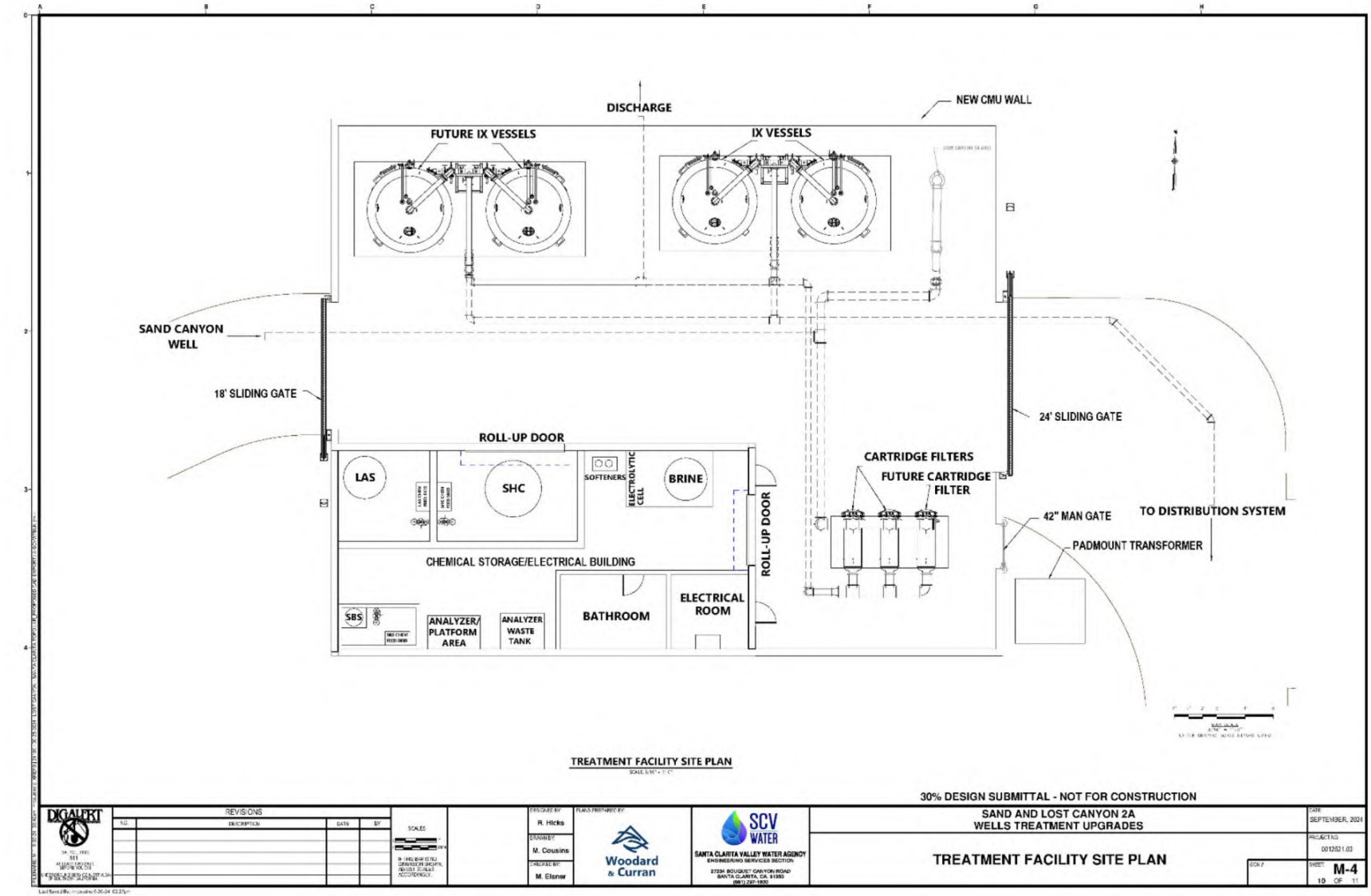
The Lost Canyon 2A and Sand Canyon Groundwater Treatment Improvements Project (herein referred to as "proposed project" or "project") involves the construction of a groundwater treatment facility and associated pipelines to treat PFAS to levels below the federal Maximum Contaminant Level, restore the use of the Lost Canyon 2A and Sand Canyon wells, and reduce SCV Water's dependency on imported water. The following sections describe the project components. See Figure 4 for an illustration of the conceptual layout of the proposed project. Figure 5 illustrates the site plan for the proposed groundwater treatment facility. Figure 6 illustrates a rendering of the proposed preliminary design. SCV Water would incorporate the recommendations outlined in a project-specific geotechnical engineering report into the project design and construction plans to reduce seismic hazards.

Figure 4 Conceptual Layout of Proposed Project



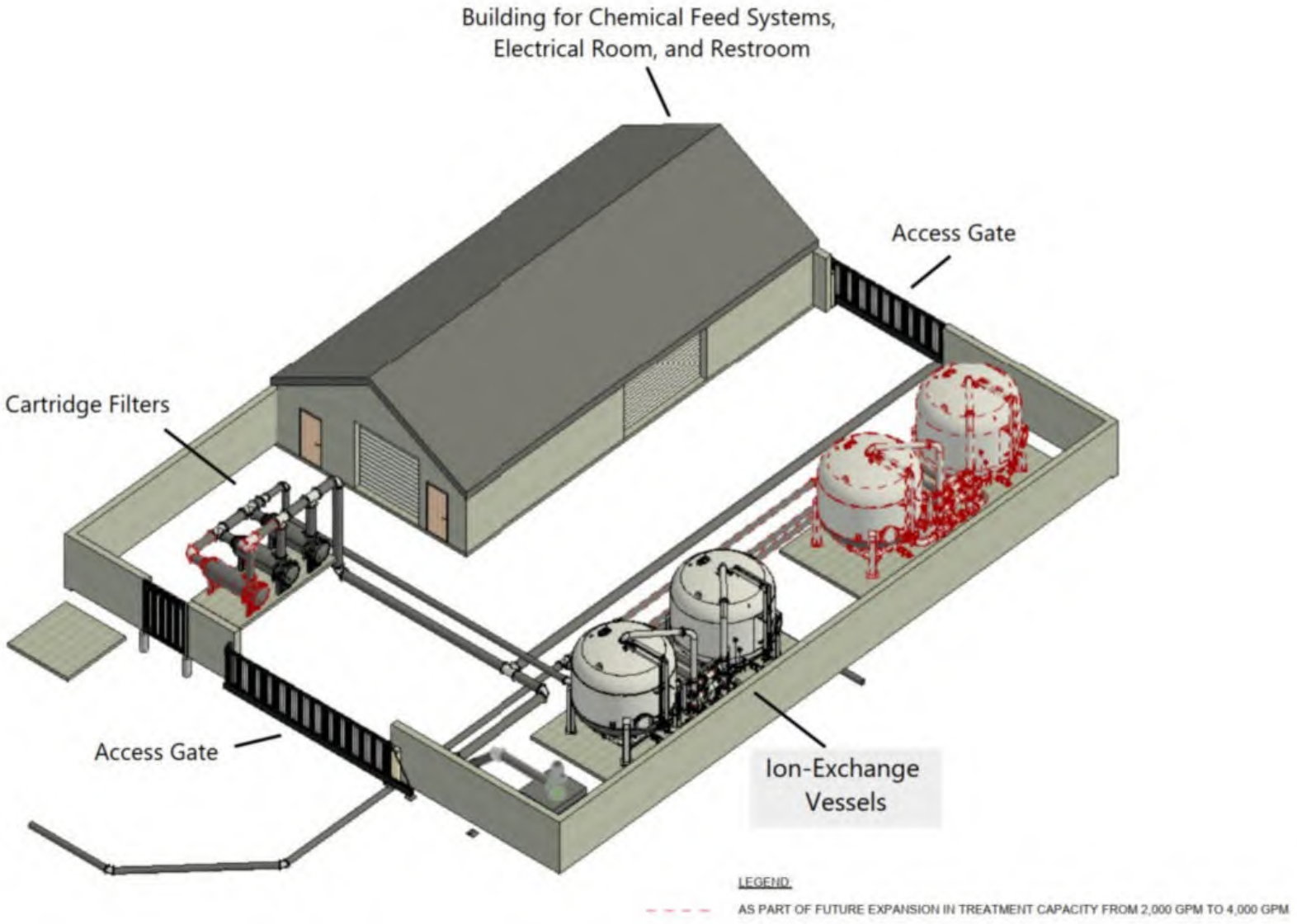
Source: Woodard and Curran 2024

Figure 5 Conceptual Site Plan for Proposed Groundwater Treatment Facility



Source: Woodard and Curran 2024

Figure 6 Conceptual Rendering of Proposed Groundwater Treatment Facility



Source: Woodard and Curran 2024

Existing Well Decommissioning

The project involves decommissioning the Mitchell 5B and Lost Canyon 2 wells. All equipment would be removed from each well site using a drill rig or crane and stored for future use at SCV Water's existing yards, and the wells would be sealed with a lockable well cover for potential future use.[1] In addition, the electrical service to the Mitchell 5B well would be disconnected and removed.

Centralized Groundwater Treatment Facility

The proposed project includes construction of a centralized groundwater treatment facility at the location of the existing Lost Canyon 2A well at APN 2840-006-901. The facility would include two cartridge filters, one set of ion-exchange vessels (or equivalent technology), yard piping, and a building to house chemical feed and storage, controls, and electrical equipment. Each of the cartridge filters (including aboveground piping) would be approximately 30 square feet and seven feet in height. The ion-exchange vessels (including appurtenances) would be approximately 12 feet in diameter and 14 feet in height. Together, the filters and vessels would handle a maximum flow rate of 2,000 gpm. The facility would also have space for future installation of additional cartridge filters and ion-exchange vessels to provide treatment for other sources, such as the Lost Canyon 2 well (if brought back online in the future); however, those future components are not part of the proposed project.

The proposed project also involves installation of several chemical feed systems. The project includes converting the existing tablet chlorination system at the Lost Canyon 2A and Sand Canyon wells to a chloramine-based distribution system residual consisting of disinfection with liquid sodium hypochlorite followed by chloramine formation utilizing liquid ammonium sulfate. This disinfection system would include water softeners, a brine tank, a skid-mounted electrolytic cell, a sodium hypochlorite storage tank, and two skid-mounted metering pumps, all situated on an equipment pad with a concrete containment curb and/or chemical containment trench with fiberglass-reinforced plastic grating. In addition, a bulk storage tank for liquid ammonium sulfate would be installed with a concrete containment curb and/or chemical containment trenches with fiberglass-reinforced plastic grating and two skid-mounted metering pumps. To dechlorinate water that may be used for rinsing each new set of resin media for the proposed ion-exchange vessels, sodium bisulfite would be used. The facility would include a sodium bisulfite bulk storage tank and an approximately 65-foot groundwater discharge pipeline between the facility and the Santa Clara River. Rip-rap or other energy-dissipating features would be installed at the terminus of the discharge pipeline, which would not exceed an area of 20 by 20 feet.

The proposed cartridge filters and ion-exchange vessels would be installed outside within the treatment facility complex. The chemical feed systems would be installed within a concrete masonry unit treatment building with steel roof trusses, a metal roof, and a 12-foot rollup door. The treatment building would also include a restroom and an electrical room with a five-ton heating, ventilation, and air conditioning (HVAC) unit to maintain the ambient temperature rating of the equipment. Emergency shower and eyewash stations would be installed outside the building. All elements of the treatment facility would be enclosed within a concrete masonry unit wall with two sliding gates for vehicle access and one gate for pedestrian access. New lighting would be installed around the treatment facility building and site ingress/egress, and lighting would be downcast to minimize glare. The facility would also include a new supervisory control and data acquisition

[1] The potential future use of the Mitchell 5B and Lost Canyon 2 wells is not part of the proposed project.

(SCADA) system. The treatment facility would result in the addition of approximately 5,000 square feet of impervious surfaces to the project site.

Electrical Upgrades

To accommodate increased load demand for the new well pumps and PFAS treatment equipment, existing pole-mounted transformers would be replaced with a pad-mounted transformer located adjacent to the treatment facility. In addition, new underground conduits and wires would be routed to the existing Lost Canyon 2A and Sand Canyon well pump sites.

Existing Well Improvements

The project involves upgrades to the Sand Canyon and Lost Canyon 2A wells to enhance their functionality and efficiency. For both wells, a new well pump and variable frequency drive would be installed to manage the increased pressure losses associated with the new PFAS treatment system. In addition, an additional well sounding tube would be installed, and the existing chemical feed equipment would be removed. To protect the equipment, a new sunshade would be installed at each well site, and each well's pump pedestal would be modified and elevated. A new concrete masonry unit wall would be constructed around the Sand Canyon well for additional security and stability, and an approximately 40-foot-long groundwater discharge pipeline would be installed between the Sand Canyon well and the Santa Clara River. Rip-rap or other energy-dissipating features would be installed at the terminus of the discharge pipeline, which would not exceed an area of 20 by 20 feet. The Lost Canyon 2A well would be enclosed within the groundwater treatment facility.

Pipelines

The proposed project includes replacement of approximately 1,700 linear feet of 14-inch asbestos cement pipeline within Lost Canyon Road with a new 14-inch ductile iron pipeline. The proposed groundwater treatment facility would connect to this replacement pipeline, and the existing pipeline would be abandoned in place. In addition, several portions of the existing pipelines that currently connect the Lost Canyon 2A and Sand Canyon wells to the distribution system would be abandoned in place. A new ductile iron pipeline would be installed between the Sand Canyon well and the proposed groundwater treatment facility to convey groundwater from the well to the facility.

Construction

Construction of the proposed project would generally occur between May 2026 and May 2028.[2] Construction of the proposed project would typically take place Monday to Friday between 7:00 a.m. to 4:00 p.m. Nighttime construction may be required for a period of approximately six weeks to install the proposed pipeline along Lost Canyon Road, which would occur between 8:30 p.m. and 4:30 a.m. on Mondays through Saturdays. Temporary lighting may be used during nighttime construction of the pipeline, and lighting would be directed downward towards the working area.

The maximum depth of excavation for construction of the proposed project would be 12 feet. Approximately 20 cubic yards of soil would be imported to the project site, and approximately 60 cubic yards of soil would be exported from the project site. Soil would be transported using haul

[2] The specific timing of decommissioning of the Mitchell 5B well would be contingent on conclusion of the three-year compliance window for the federal Maximum Contaminant Level for PFAS in April 2027. Until then, the well would remain in operational-ready status in case the well needs to be brought online during an emergency event.

trucks with a capacity of 16 cubic yards, and exported soil would be disposed of at the Sunshine Canyon Landfill or other local landfill. A temporary lane closure may be required during installation of the proposed pipeline along Lost Canyon Road. In this event, signage and traffic control measures would be implemented, including a flag person to direct two-way traffic flows along the single available lane.

Construction access to the portion of the project site on APN 2840-006-901 would be provided by Lost Canyon Road. Construction access to the portion of the project site on APN 2840-002-901 would be provided by existing unpaved roads leading from either the eastern terminus of Humphreys Parkway (south of the Mitchell 5B well) or from Vista Canyon Boulevard (north of the Mitchell 5B well).[3] Construction materials would be staged within the project site. Construction personnel would park along Lost Canyon Road, on disturbed areas adjacent to the Mitchell 5B well, or within the project site. Delivery and haul trucks would access the site via Lost Canyon Road. No trees would be removed during project construction.

Project construction is not anticipated to require groundwater dewatering. However, if groundwater is unexpectedly encountered during excavations, SCV Water would obtain coverage under the appropriate National Pollutant Discharge Elimination System (NPDES) Permit for discharge to surface water bodies (i.e., Santa Clara River) and would comply with the water quality requirements outlined in the permit, which may necessitate treatment prior to discharge to be protective of surface water quality.

Following completion of project construction, the Sand Canyon and Lost Canyon 2A wells would be flushed, and water produced during flushing would be discharged to the Santa Clara River. This discharge would be subject to compliance with SCV Water's existing coverage under Waste Discharge Requirements Order WQ 2014-0194-DWQ/General Order No. CAG140001 (ID: 4DW0430), which is the Statewide NPDES Permit for Drinking Water System Discharges to Waters of the United States.

Operation and Maintenance

Under the proposed project, the Lost Canyon 2A and Sand Canyon wells would be reactivated, and the proposed groundwater treatment facility would be brought online. The treatment facility would operate 24 hours a day, seven days a week, 365 days a year with flow rates varying from approximately 1,200 to 2,000 gpm. The two well pumps would be individually controlled and monitored through the SCADA system, allowing SCV Water to turn on one or both well pumps at a time. It is anticipated that up to approximately 3,226 acre-feet per year of groundwater would be pumped, depending on hydrologic year type and in consideration of GSP implementation constraints. Annual groundwater pumping rates under this project for the two wells would be consistent with historical pumping rates for the Lost Canyon 2A and Sand Canyon wells and would not exceed the pumping quantities provided in the groundwater level simulations used in the GSP. Routine flushing of the Lost Canyon 2A and Sand Canyon wells would be required with each event lasting approximately 30 minutes. Water used for routine flushing would be treated and discharged to the Santa Clara River and would be subject to compliance with SCV Water's existing coverage under Waste Discharge Requirements Order WQ 2014-0194-DWQ/General Order No. CAG140001 (ID: 4DW0430), which is the Statewide NPDES Permit for Drinking Water System Discharges to Waters of the United States. This activity would be generally consistent with raw water discharges from the Lost Canyon 2A and Sand Canyon wells to the Santa Clara River that previously occurred

[3] Construction access via Vista Canyon Boulevard would be conducted in coordination with the City of Santa Clarita's ongoing Vista Canyon Bridge and Road Improvements project, as necessary.

approximately twice a year for approximately 20 minutes per event when the wells were operational, resulting in a discharge of approximately 9,000 gallons per event.

Project operation would require daily site visits by SCV Water staff, which would be integrated into existing staff rounds, and weekly chemical deliveries, which would be integrated into existing routine chemical deliveries in SCV Water's service area. Resin change-outs would occur approximately every nine to 12 months. No new employees would be needed to operate the project.

The project would result in a net increase in electricity consumption due to the additional energy required to pump groundwater through the treatment facility, and Southern California Edison would be the electricity provider. Operation of the proposed project would require approximately 770 to 900 kilowatt-hours (kWh) of electricity daily, or approximately 280 to 330 megawatt-hours (MWh) annually.[4]

Sodium hypochlorite (chlorine) and liquid ammonium sulfate would be stored at the proposed facility in a completely enclosed structure with proper containment and venting. Sodium hypochlorite is a liquid disinfection agent added to the water and is commonly referred to as "bleach." Sodium hypochlorite is not the equivalent of chlorine gas, and chlorine gas would not be used or released during project operation. The chemicals stored on site would not be considered hazardous due to low concentrations of ammonia and chlorine. However, in accordance with standard operating practice, SCV Water would submit an emergency response/contingency plan as part of a Hazardous Materials Business Plan to the California Environmental Reporting System for the proposed facility.

9. Surrounding Land Uses and Setting

Surrounding land uses in the project site vicinity include the following:

- **APN 2840-006-901:** The portion of the project site within this property is surrounded by the Santa Clara River to the north, Sand Canyon Creek to the east, and Sulphur Springs Elementary School and Gorman Learning Center to the south (across Lost Canyon Road). The nearest residences are single-family residences approximately 195 feet to the southwest.
- **APN 2840-002-901:** The portion of the project site within this property is surrounded by open space in all directions, including the Santa Clara River to the north. The nearest residences are single-family residences approximately 330 feet to the southeast.
- **Public Right-of-Way of Lost Canyon Road:** The portion of the project site within the public right-of-way of Lost Canyon Road is surrounded by other portions of the project site to the north, Lost Canyon Road to the west and east, and Sulphur Springs Elementary School and Gorman Learning Center to the south. Sand Canyon Creek travels under Lost Canyon Road immediately east of this portion of the project site. The nearest residences are single-family residences adjacent to the western end of this portion of the project site, along La Veda Avenue.

[4] Electricity estimate based on 12-month billing period for a similar SCV Water groundwater treatment and disinfection facility for the N Wells (Moreno 2022). The energy estimate has been adjusted to reflect the project's treatment capacity, which is roughly one-third of the capacity of the N Wells project.

10. Other Public Agencies Whose Approval is Required

SCV Water is the lead agency for this project. According to Government Code Section 53091, building and zoning ordinances of a county or city shall not apply to the location or construction of facilities for the production, generation, storage, treatment, or transmission of water. As such, the project would not be subject to the City of Santa Clarita's building and zoning ordinances (Santa Clarita Municipal Code Titles 17 and 18).

Permits/approvals would be required for the proposed project from the following agencies:

- City of Santa Clarita Encroachment Permit
- City of Santa Clarita Vegetation Removal Permit (only if vegetation removal is necessary to complete decommissioning of the Mitchell 5B well on APN 2840-002-901)
- State Water Resources Control Board Division of Drinking Water Domestic Water Supply Permit
- Coverage under the State Water Resources Control Board NPDES Construction General Permit (Order No. 2022-0057-DWQ)
- California Occupational Safety and Health Administration Excavation Permit

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

On February 13, 2025, SCV Water distributed Assembly Bill (AB) 52 consultation letters for the proposed project, including project information, map, and contact information, to four Native American tribes locally and culturally affiliated with the project area. SCV Water received a request for consultation from the Fernandeño Tataviam Band of Mission Indians (FTBMI) on March 3, 2025. No other responses were received from other tribes, and the consultation window closed on March 17, 2025. Environmental Checklist Section 18, *Tribal Cultural Resources*, of the Environmental Checklist provides further information regarding the tribal consultation process.

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.

DocuSigned by:
2EA8ED1A09E34C4...

Signature

4/15/2025

Date

Mark Aumentado

Printed Name

Engineer

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?	☐	☐	■	☐

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

According to the City's General Plan Conservation and Open Space Element, scenic vistas (termed "viewsheds") are defined by physical features that frame the boundaries or context of one or more scenic resources and may include views of both natural and built environments. The City defines "scenic resources" as natural open spaces, topographic formations, and landscapes that contribute to a high level of visual quality, including lakes, rivers and streams, mountain meadows, oak woodlands, parks, trails, nature preserves, sculpture gardens, and similar features (City of Santa Clarita 2011). The project site is adjacent to the Santa Clara River, which may be considered a scenic vista under the City's General Plan. In addition, the surrounding area offers distant views of rolling hills to the north, northwest, and northeast; views of the Sierra Pelona Mountains to the northeast; and views of the San Gabriel Mountains to the southeast. Public views of Sierra Pelona Mountains, San Gabriel Mountains, and the rolling hills are primarily visible to motorists and pedestrians on Lost Canyon Road and Sand Canyon Road in the vicinity of the eastern portion of the project site and State Route 14 and Mitchell Drive in the vicinity of the western portion of the project site. However,

views of the Santa Clara River are limited and intermittent due to the topography and intervening vegetation.

The proposed project would introduce new visual elements into views of the distant rolling hills and the Sierra Pelona Mountains for motorists along Lost Canyon Road and views of the San Gabriel Mountains for motorists traveling southbound along Sand Canyon Road (see Figure 3: Photograph 4 under *Project Location*). The primary new visual element would be the proposed groundwater treatment facility building, which would be approximately 14 feet in height. The building would occupy only 0.1 acre of the 10-acre parcel, leaving the majority of the views available to motorists and pedestrians along Lost Canyon Road intact. In addition, for motorists traveling southbound on Sand Canyon Road, the proposed groundwater treatment facility building would result in minimal changes to views of the San Gabriel Mountains because the building would be similar in height to other buildings along Lost Canyon Road. Furthermore, views of the surrounding environment would remain available and accessible to the public along most of Lost Canyon Road and Sand Canyon Road. Therefore, the proposed groundwater treatment facility would result in minimal additional obstructions of views in the project area. Other project components, such as improvements to the existing Sand Canyon and Lost Canyon 2A wells, decommissioning of the Mitchell 5B and Lost Canyon 2 wells, and the installation of belowground pipelines, would have little to no potential to interfere with scenic vistas. Therefore, the project would not have a substantial adverse effect on a scenic vista, and impacts would be less than significant.

LESS-THAN-SIGNIFICANT IMPACT

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

According to the California Department of Transportation (Caltrans), there are no officially designated State scenic highways within the vicinity of the project site (Caltrans 2018). The nearest officially designated State scenic highway is SR 2 (Angeles Crest Highway), approximately 17.5 miles southeast of the project site. Due to the distance and intervening topography between SR 2 and the project site, the project site would not be visible from this highway. Therefore, no impact to scenic resources within a state scenic highway would occur.

NO IMPACT

c. Would the project, 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?

According to Public Resources Code Section 21071(a), Santa Clarita is classified as an urbanized area because its population is more than 100,000 persons (United States Census Bureau 2021). The project site is zoned Urban Residential 1 (UR1) and Specific Plan-Open Space (Vista Canyon). According to Government Code Section 53091, building and zoning ordinances of a county or city shall not apply to the location or construction of facilities for the production, generation, storage, treatment, or transmission of water. As such, the proposed project would not be subject to the City's building and zoning ordinances (Santa Clarita Municipal Code Titles 17 and 18). Although the project may be required to obtain a permit from the Santa Clarita City Manager should vegetation removal be necessary to complete decommissioning of the Mitchell 5B well on APN 2840-002-901 (Santa Clarita Municipal Code Section 14.10.060), this permit does not specifically relate to scenic

quality. Therefore, the primary regulations governing scenic quality applicable to the project site are contained in the City's General Plan Conservation and Open Space Element.

The proposed project would not substantially alter the scenic character of local topographic features, view corridors, major water bodies, oak woodlands, coastal sage, or views from designated routes, gateways, and vista points along roadways because none are present at or near the project site. Therefore, the project would be consistent with Objectives CO 6.1 through 6.5 in the City's General Plan Conservation and Open Space Element. Furthermore, pursuant to Objective CO 6.6 and its related policies in the City's General Plan Conservation and Open Space Element, the project would not result in significant adverse impacts to the scenic environment related to lighting (discussed under threshold 1[d] below), air pollution (discussed in Section 3, *Air Quality*), billboards, scenic viewpoints or viewsheds (discussed under threshold 1[a] above), and aboveground utility lines (City of Santa Clarita 2011). Therefore, the project would not conflict with applicable zoning and other regulations governing scenic quality. Impacts would be less than significant.

Although not required under CEQA due to the project's location in an urbanized area, the following discussion on project impacts to the existing visual character and quality of public views of the project site and its surroundings is provided for informational purposes and public disclosure. Public views of the eastern portion of the project site and its surroundings are primarily visible to pedestrians and motorists on Lost Canyon Road and Sand Canyon Road. Public views of the Mitchell 5B well are generally not available given the distance of the well from existing public roads and its low profile (see Figure 3: Photograph 3 under *Project Location*). Construction of the groundwater treatment facility would change a portion of the existing visual character of this property from landscaped open space to an enclosed treatment facility. As noted under threshold 1(a), this project component would result in minor obstructions to public views of the surrounding area from Lost Canyon Road, which include views of the Sierra Pelona Mountains, San Gabriel Mountains, and rolling hills. However, existing views of both are already limited by existing vegetation and topography. Furthermore, views of these features would remain available and accessible to the public along most of Lost Canyon Road and Sand Canyon Road. Other project components such as improvements to the existing Sand Canyon and Lost Canyon 2A wells, decommissioning of the Mitchell 5B and Lost Canyon 2 wells, and the installation of belowground pipelines would not alter the existing visual character and quality given the change in existing visual conditions would be minimal upon the completion of construction.

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?

Project construction would occur primarily during daytime hours and generally would not require the use of lighting. Lighting for nighttime construction may be required for a period of approximately six weeks during installation of the proposed pipeline along Lost Canyon Road, which could occur between 8:30 p.m. and 4:30 a.m. on Mondays through Saturdays in proximity to residences along La Veda Avenue. As described under *Description of Project*, nighttime construction lighting would be aimed downward and directed away from these residences. Consequently, temporary and short-term construction lighting would not constitute a substantial new light source with the potential to adversely affect nighttime views in the area. Therefore, construction activities would not create a new source of substantial light or glare that would adversely affect daytime or nighttime views in the vicinity of the project site. Impacts would be less than significant.

Upon completion of construction, new lighting would be installed around the treatment facility building and site ingress/egress, and lighting would be downcast to minimize glare. The facility would primarily be accessed during daytime hours and would rarely be accessed at night (typically only during emergency situations), at which time the lighting would be utilized. Therefore, project operation would not create a new source of substantial light or glare that would adversely affect daytime or nighttime views. Impacts would be less than significant.

LESS-THAN-SIGNIFICANT IMPACT

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?	☐	☐	☐	■

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?

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?

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?

The project site is comprised of two properties owned by SCV Water as well as the public right-of-way of Lost Canyon Road. The two properties are zoned Urban Residential 1 (UR1) and Specific Plan-Open Space (Vista Canyon). According to the California Department of Conservation's (DOC) Farmland Mapping and Monitoring Program, the project site is designated as Urban and Built-Up Land and Other Land (DOC 2022). As such, the project would not convert land designated as Prime Farmland, Unique Farmland, or Farmland of Statewide Importance to non-agricultural use. The project site is not zoned for agricultural use, timberland or forest land; is not enrolled in a Williamson Act Contract; and does not contain forest land (DOC 2022; DOC 2025a). The project site is not located adjacent to farmland or forestland; therefore, the project would not lead to the conversion of these types of land to non-agricultural or non-forest uses, respectively. Therefore, no impact to agriculture and forestry resources would occur.

NO 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?	☐	☐	■	☐

Overview of Air Pollution

The federal and State Clean Air Acts (CAA) mandate the control and reduction of certain air pollutants. Under these laws, the United States Environmental Protection Agency (USEPA) and the California Air Resources Board (CARB) have established the National Ambient Air Quality Standards (NAAQS) and the California Ambient Air Quality Standards (CAAQS) for "criteria pollutants" and other pollutants. Some pollutants are emitted directly from a source (e.g., vehicle tailpipe, an exhaust stack of a factory, etc.) into the atmosphere, including carbon monoxide, volatile organic compounds (VOC)/reactive organic gases (ROG),[5] nitrogen oxides (NO_X), particulate matter with diameters of ten microns or less (PM_{10}) and 2.5 microns or less ($PM_{2.5}$), sulfur dioxide, and lead. Other pollutants are created indirectly through chemical reactions in the atmosphere, such as ozone, which is created by atmospheric chemical and photochemical reactions primarily between VOC and NO_X. Air pollutants can also be generated by the natural environment, such as when high winds suspend fine dust particles. Secondary pollutants include oxidants, ozone, and sulfate and nitrate particulates (smog).

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

- Point sources occur at a specific location and are often identified by an exhaust vent or stack. Examples include boilers or combustion equipment that produce electricity or generate heat.

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

- Area sources are widely distributed and include such sources as residential and commercial water heaters, painting operations, lawn mowers, agricultural fields, landfills, and some consumer products.

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

- On-road sources that may be legally operated on roadways and highways.
- Off-road sources that include aircraft, ships, trains, and self-propelled construction equipment

Air Quality Standards and Attainment

The project site is located in the South Coast Air Basin (SCAB), which includes the non-desert portions of Los Angeles, Riverside, and San Bernardino Counties and all of Orange County. The SCAB is under the jurisdiction of the South Coast Air Quality Management District (SCAQMD). As the local air quality management agency, SCAQMD must monitor air pollutant levels to ensure the NAAQS and CAAQS are met, if they are not met, develop strategies to meet the standards.

Depending on whether the standards are met or exceeded, the SCAB is classified as being in "attainment" or "nonattainment." In areas designated as non-attainment for one or more air pollutants, a cumulative air quality impact exists for those air pollutants, and the human health impacts associated with these criteria pollutants, presented in Table 1, are already occurring in that area as part of the environmental baseline condition. Under state law, air districts are required to prepare a plan for air quality improvement for pollutants for which the district is in non-compliance. The SCAB is in nonattainment for the NAAQS for ozone and $PM_{2.5}$ and the CAAQS for ozone, PM_{10}, and $PM_{2.5}$ and is designated unclassifiable or in attainment for all other federal and state standards (CARB 2023). The nonattainment statuses result from several factors, including the combination of emissions from a large urban area, the regional meteorological conditions adverse to the dispersion of air pollution emissions, and the mountainous terrain surrounding the SCAB that traps pollutants (SCAQMD 2022).

Table 1 Health Effects Associated with Non-Attainment Criteria Pollutants

Pollutant	Adverse Effects
Ozone	(1) Short-term exposures: (a) pulmonary function decrements and localized lung edema in humans and animals and (b) risk to public health implied by alterations in pulmonary morphology and host defense in animals; (2) long-term exposures: risk to public health implied by altered connective tissue metabolism and altered pulmonary morphology in animals after long-term exposures and pulmonary function decrements in chronically exposed humans; (3) vegetation damage; and (4) property damage.
Suspended particulate matter (PM_{10} and $PM_{2.5}$)	(1) Excess deaths from short- and long-term exposures; (2) excess seasonal declines in pulmonary function, especially in children; (3) asthma exacerbation and possibly induction; (4) adverse birth outcomes, including low birth weight; (5) increased infant mortality; (6) increased respiratory symptoms in children such as cough and bronchitis; and (7) increased hospitalization for both cardiovascular and respiratory disease, including asthma).

Source: USEPA 2024

Air Quality Management

Because the SCAB is currently in non-attainment for the ozone and $PM_{2.5}$ NAAQS and non-attainment for the ozone, PM_{10}, and $PM_{2.5}$ CAAQS, the SCAQMD is required to implement strategies to reduce pollutant levels to achieve attainment of the NAAQS and CAAQS. To meet the NAAQS and

CAAQS, the SCAQMD has adopted a series of air quality management plans (AQMPs) that serve as a regional blueprint to develop and implement an emission reduction strategy that will bring the area into attainment with the standards in a timely manner. The most significant air quality challenge in the SCAB is to reduce NO_X emissions to meet the 2037 ozone standard deadline for the non-Coachella Valley portion of the South Coast Air Basin because NO_X plays a critical role in the creation of ozone. The 2022 AQMP includes strategies to ensure the SCAQMD does its part to further its ability to meet the 2015 federal ozone standards (SCAQMD 2022). The 2022 AQMP builds on the measures already in place from the previous AQMPs and includes a variety of additional strategies such as regulation, accelerated deployment of available cleaner technology, best management practices, co-benefits from existing programs, incentives, and other CAA measures to meet the eight-hour ozone standard.

Air Emission Thresholds

The SCAQMD approved the CEQA Air Quality Handbook in 1993. Since then, the SCAQMD has provided supplemental guidance on their website to address changes to the methodology and nature of CEQA. Some of these changes include recommended thresholds for emissions associated with both construction and operation of a project, which are used to evaluate a project's potential regional and localized air quality impacts (SCAQMD 2023).

Regional Thresholds

The SCAQMD recommends the use of quantitative regional significance thresholds for temporary project construction activities and long-term project operation in the SCAB, which are shown in Table 2.

Table 2 SCAQMD Regional Air Quality Thresholds of Significance

Pollutant	Construction (pounds per day)	Operation (pounds per day)
NO_x	100	55
VOC	75	55
PM_{10}	150	150
$PM_{2.5}$	55	55
SO_x	150	150
CO	550	550

NO_x = nitrogen oxides; VOC = volatile organic compounds; PM_{10} = particulate matter with a diameter no more than 10 microns; $PM_{2.5}$ = particulate matter with a diameter no more than 2.5 microns; SO_x = sulfur oxides; CO = carbon monoxide

Source: SCAQMD 2023

Localized Significance Thresholds

In addition to the regional thresholds, the SCAQMD has developed Localized Significance Thresholds (LSTs) in response to concern regarding exposure of individuals to criteria pollutants in local communities. LSTs have been developed for NO_X, carbon monoxide, PM_{10}, and $PM_{2.5}$ and represent the maximum emissions from a project that would not cause or contribute to an air quality exceedance of the most stringent applicable federal or state ambient air quality standard at the nearest sensitive receptor. LSTs take into consideration ambient concentrations in each source receptor area (SRA), distance to the nearest sensitive receptor, and project size. LSTs have been developed for emissions within site areas that measure one, two, or five acres. LSTs only apply to

emissions in a fixed stationary location (such as fugitive dust, equipment exhaust, and operational energy and area sources) and are not applicable to mobile sources, such as cars on a roadway (SCAQMD 2009).

The project site is within SRA 13 (Santa Clarita Valley). SCAQMD provides LST lookup tables for project sites that measure one, two, or five acres. The project site area is approximately 2.7 acre; therefore, the LST analysis uses the two-acre LSTs. This approach is more conservative because it uses lower emission thresholds compared to those for a five-acre site. LSTs are provided for sensitive receptors at distances of 82 feet (25 meters) 164 feet (50 meters), 328 feet (100 meters), 656 feet (200 meters), and 1,640 feet (500 meters) between the project disturbance boundary to the sensitive receptors. The nearest sensitive receptors to the project site are Sulphur Springs Elementary School and single-family residences along La Veda Avenue, located adjacent to the project site and immediately south of the proposed pipeline alignment along Lost Canyon Road. Therefore, the analysis uses LST values for 25 meters, consistent with SCAQMD methodology (SCAQMD 2009). LSTs for projects in SRA 13 on a two-acre site with a receptor 25 meters away are shown in Table 3.

Table 3 SCAQMD LSTs for Construction and Operation

	Allowable Emissions for a Two-Acre Site in SRA 13 for a Receptor 25 Meters Away (pounds per day)	
Pollutant	**Construction**	**Operation**
Gradual conversion of NO_X to NO_2	163	163
CO	877	877
PM_{10}	6	2
$PM_{2.5}$	4	1

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

Source: SCAQMD 2009

Toxic Air Containments Thresholds

SCAQMD has developed significance thresholds for emissions of toxic air contaminants (TACs) based on health risks associated with elevated exposure to such compounds. For carcinogenic compounds, cancer risk is assessed in terms of incremental excess cancer risk. A project would result in a potentially significant impact if it would generate an incremental excess cancer risk of 10 in 1 million (1×10^{-6}). In addition, non-carcinogenic health risks are assessed in terms of a hazard index. A project would result in a potentially significant impact if it would result in a chronic and acute hazard index greater than 1.0 (SCAQMD 2023).

Methodology

Air pollutant emissions generated by project construction and operation were estimated using the California Emissions Estimator Model (CalEEMod), version 2022.1. CalEEMod uses project-specific information, including the project's land uses, square footage for different uses (e.g., general light industry), and location, to model a project's construction and operational emissions. The analysis reflects construction and operation of the project as described under Initial Study Section 8, *Description of the Project.*

Construction emissions modeled include emissions generated by on-site construction equipment and vehicle trips associated with construction, such as worker, vendor, and water truck trips. Construction of the proposed project was analyzed based on information provided by the project engineer. Project construction was modeled to start in May 2026 and end in May 2028. Daytime construction equipment was modeled using the equipment list provided by the project engineer, while nighttime construction equipment for installation of the proposed pipeline along Lost Canyon Road was assumed to be similar to that of the infrastructure installation phase. Nighttime construction was assumed to occur six days a week during the infrastructure installation phase, which produces a conservative estimate. Decommissioning of the Mitchell 5B and Lost Canyon 2 wells was assumed to have the same duration as the site preparation phase provided by the project engineer. Equipment used during the decommissioning phase would consist of a drill rig and crane. Project construction would involve export of approximately 60 cubic yards of soil and import of approximately 20 cubic yards of soil. It was assumed that construction equipment would be diesel-powered and that the project would be required to comply with applicable regulatory standards, such as SCAQMD Rule 403 for dust control measures.

Operational emissions modeled include mobile source emissions and area source emissions. Mobile source emissions would be generated by daily site visits, weekly chemical deliveries, and resin change-outs, which would occur approximately every nine to 12 months. The trip generation rates in CalEEMod were adjusted to account for the worst-case daily mobile emissions from vehicle trips, assuming up to three roundtrips (i.e., one daily site visit, one chemical delivery, one resin change-out) would occur on the same day. In addition, the mobile fleet mix in CalEEMod was adjusted to 75 percent heavy-heavy duty truck and 25 percent passenger car vehicle mix, with chemical and resin changeouts designated as heavy-heavy duty trucks, which is a conservative assumption. Area source emissions would be generated by landscape maintenance equipment, consumer products, and architectural coatings. The project would not consume natural gas; therefore, the project would not generate on-site air quality emissions associated with energy use.

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

To determine if a project is consistent with the 2022 AQMP, the SCAQMD has established consistency criteria that are defined in the SCAQMD's *CEQA Air Quality Handbook* (1993) and are discussed below.

> Consistency Criterion No. 1: The proposed project would not result in an increase in the frequency or severity of existing air quality violations or cause or contribute to new violations or delay the timely attainment of air quality standards or the interim emissions reductions specified in the Air Quality Management Plan.

Consistency Criterion No. 1 refers to violations of the CAAQS and NAAQS. The 2022 AQMP provides strategies and measures to reach attainment with the CAAQS and NAAQS for ozone, PM_{10}, and $PM_{2.5}$. As shown in Table 4 through Table 6 under thresholds 3(b) and 3(c), the proposed project would not generate criteria air pollutant emissions that would exceed applicable SCAQMD regional or localized thresholds. Therefore, the project would not result in an increase in the frequency or severity of existing air quality violations or cause or contribute to new violations or delay the timely attainment of air quality standards or the interim emissions reductions specified in the 2022 AQMP.

Consistency Criterion No. 2: The proposed project does not exceed the growth assumptions in the AQMP.

A project may be inconsistent with the AQMP if it would generate population, housing, or employment growth exceeding forecasts used in the development of the AQMP. The 2022 AQMP, the most recent AQMP adopted by the SCAQMD, incorporates local city general plans and the Southern California Association of Governments' Connect SoCal socioeconomic forecast projections of regional population, housing, and employment growth, which are integrated in the AQMP emissions forecasts (SCAQMD 2022; Southern California Association of Governments 2020).[6]

The proposed project has no residential component and would not directly induce population growth. Given the small-scale nature of project construction activities, it is likely construction workers would be drawn from the existing, regional workforce and would not indirectly result in the relocation of people to Los Angeles County. The project entails constructing a groundwater treatment facility and associated pipelines to reduce PFAS levels below the federal Maximum Contaminant Level, restore the use of the Lost Canyon 2A and Sand Canyon wells, and decrease SCV Water's reliance on imported water. The proposed project would not result in an increase in SCV Water's basin-wide groundwater pumping as compared to baseline conditions when the Sand Canyon and Lost Canyon 2A wells were operational; thus, the project would not provide an additional source of water supplies to serve new population growth. Rather, the project would enable SCV Water to continue providing its existing customers with a safe, reliable water supply. In addition, upon completion of construction, existing SCV Water staff would operate and maintain the project. Therefore, the proposed project would not exceed the 2022 AQMP growth assumptions.

In light of the above discussion, because the project would meet both SCAQMD criteria for determining consistency with the 2022 AQMP, the project would not conflict with or obstruct implementation of the 2022 AQMP. 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?

Construction Emissions

Project construction would generate temporary air pollutant emissions associated with fugitive dust (PM_{10} and $PM_{2.5}$) and exhaust emissions from heavy construction equipment and construction vehicles. In addition, construction equipment would release VOC emissions during the drying of paving. Table 4 summarizes the estimated maximum daily emissions of criteria air pollutants during project construction. As shown therein, construction-related emissions would not exceed SCAQMD thresholds. Therefore, project construction would not result in a cumulatively considerable net increase of any criteria pollutant for which the project region is in non-attainment under an applicable federal or state ambient air quality standard, and impacts would be less than significant.

[6] On April 4, 2024, SCAG's Regional Council formally adopted the 2024-2050 Regional Transportation Plan/Sustainable Communities Strategy (titled Connect SoCal 2024). However, the 2022 AQMP was adopted prior to this date and relies on the demographic and growth forecasts of the 2020-2045 Regional Transportation Plan/Sustainable Communities Strategy; therefore, these forecasts are utilized in the analysis of the project's consistency with the AQMP.

Table 4 Estimated Maximum Daily Regional Construction Emissions

	Maximum Daily Pollutant Emissions (pounds per day)					
Construction	**VOC**	**NO_x**	**CO**	**SO_2**	**PM_{10}**	**$PM_{2.5}$**
2026	1	12	13	<1	1	<1
2027	1	11	13	<1	<1	<1
2028	1	10	13	<1	<1	<1
SCAQMD Regional Threshold	75	100	550	150	150	55
Threshold Exceeded?	**No**	**No**	**No**	**No**	**No**	**No**

VOC = volatile organic compounds NO_X = nitrogen oxides; CO = carbon monoxide; SO_2 = sulfur dioxide; PM_{10} = particulate matter with a diameter no more than 10 microns; $PM_{2.5}$ = particulate matter with a diameter no more than 2.5 microns.

Notes: Some numbers may not add up precisely due to rounding considerations.

Source: CalEEMod worksheets in Appendix A. See Table 2.2 "Construction Emissions by Year, Unmitigated" emissions. Highest of Summer and Winter emissions results are shown for all emissions. The Unmitigated emissions account for compliance with specific regulatory standards (e.g., SCAQMD Rules 403 and 1113).

Operational Emissions

Operation of the proposed project would generate criteria air pollutant emissions associated with mobile sources (e.g., vehicle emissions from maintenance trips, chemical deliveries, and resin-change-outs) and area sources (e.g., architectural coatings).[7] Table 5 summarizes the project's maximum daily operational emissions by emission source. As shown therein, operational emissions would not exceed SCAQMD regional thresholds for criteria air pollutants. Therefore, project operation would not result in a cumulatively considerable net increase of any criteria pollutant for which the project region is in non-attainment under an applicable federal or state ambient air quality standard, and impacts would be less than significant.

Table 5 Proposed Project Operational Emissions

	Maximum Daily Pollutant Emissions (pounds per day)					
Operations	**VOC**	**NO_x**	**CO**	**SO_2**	**PM_{10}**	**$PM_{2.5}$**
Mobile	<1	<1	<1	<1	<1	<1
Area	<1	<1	<1	<1	<1	<1
Project Emissions	<1	<1	<1	<1	<1	<1
SCAQMD Regional Threshold	75	100	550	150	150	55
Threshold Exceeded?	**No**	**No**	**No**	**No**	**No**	**No**

VOC = volatile organic compounds NO_X = nitrogen oxides; CO = carbon monoxide; SO_2 = sulfur dioxide; PM_{10} = particulate matter with a diameter no more than 10 microns; $PM_{2.5}$ = particulate matter with a diameter no more than 2.5 microns.

Notes: Some numbers may not add up precisely due to rounding considerations.

Source: CalEEMod worksheets in Appendix A. See Table 2.5 "Operational Emissions by Sector, Unmitigated" emissions. Highest of Summer and Winter emissions results are shown for all emissions.

LESS-THAN-SIGNIFICANT IMPACT

[7] CalEEMod only calculates direct emissions of criteria pollutants from energy sources that combust on site, such as natural gas used in a building (California Air Pollution Control Officers Association 2021). The project would not include natural gas usage. In addition, CalEEMod does not calculate or attribute emissions of criteria pollutants from electricity generation to individual projects because fossil fuel power plants are existing stationary sources permitted by air districts and/or the USEPA, and they are subject to local, state and federal control measures. Criteria pollutant emissions from power plants are associated with the power plants themselves, and not individual projects or electricity users. Therefore, air pollutant emissions from energy usage were not quantified (California Air Pollution Control Officers Association 2021).

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

Sensitive receptors are facilities or land uses where members of the population who are particularly sensitive to the effects of air pollutants, such as children, the elderly, and people with illnesses, spend considerable time. According to SCAQMD, sensitive receptors include schools and schoolyards, parks and playgrounds, childcare centers, long-term health care facilities, rehabilitation centers, hospitals, retirement homes, and residential communities (SCAQMD 2005). The nearest sensitive receptors to the project site are Sulphur Springs Elementary School and single-family residences along La Veda Avenue, located immediately south of the proposed pipeline alignment along Lost Canyon Road.

Localized Carbon Monoxide Hotspots

A carbon monoxide hotspot is a localized concentration of carbon monoxide that is above a carbon monoxide ambient air quality standard. The SCAB has been in attainment of federal carbon monoxide standards since 2007, and most air quality monitoring stations no longer report carbon monoxide levels (SCAQMD 2017). The maximum carbon monoxide concentrations in the Santa Clarita Valley SRA in 2023 were 1.1 parts per million for the one-hour and 0.6 pp parts per million m for eight-hour periods (SCAQMD 2024). These concentrations are well below the respective 1-hour and 8-hour standards of 20 parts per million and 9 parts per million.

Typical infrastructure projects, such as the proposed project, do not emit the levels of carbon monoxide necessary to result in a localized hotspot. As an example, a detailed carbon monoxide analysis was conducted during the preparation of the SCAQMD's 2003 AQMP. The locations selected for microscale modeling in the 2003 AQMP included high average daily traffic intersections in the SCAB that are expected to experience the highest carbon monoxide concentrations. The highest carbon monoxide concentration observed was at the intersection of Wilshire Boulevard and Veteran Avenue on the west side of Los Angeles near Interstate 405, approximately 25 miles south of the project site. The concentration of carbon monoxide at this intersection was 4.6 parts per million, which is well below the state and federal standards. The Wilshire Boulevard/Veteran Avenue intersection had an average daily traffic of approximately 100,000 vehicles per day at the time of the study (SCAQMD 2003). The proposed project would require daily site visits by SCV Water staff, which would be integrated into existing staff rounds. In addition, weekly chemical deliveries would occur along with resin change-outs every nine to twelve months. Therefore, the project would not generate additional vehicle trips that would expose sensitive receptors to substantial carbon monoxide concentrations, and impacts would be less than significant.

Localized Criteria Air Pollutant Emissions

Table 6 summarizes maximum daily localized construction and operational emissions from the proposed project. As shown therein, localized construction and operational emissions would not exceed SCAQMD LSTs. Therefore, the proposed project would not expose sensitive receptors to substantial localized criteria air pollutant concentrations, and impacts would be less than significant.

Table 6 Estimated Maximum Daily Localized Construction and Operational Emissions

	Maximum Daily Emissions (pounds per day)			
Year	**NO_X**	**CO**	**PM_{10}**	**$PM_{2.5}$**
Maximum Construction On-site Emissions	12	13	1	<1
SCAQMD LST	163	877	6	4
Threshold Exceeded?	**No**	**No**	**No**	**No**
Maximum Operational On-site Emissions	<1	<1	<1	<1
SCAQMD LST	163	877	2	1
Threshold Exceeded?	**No**	**No**	**No**	**No**

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

Notes: Some numbers may not add up precisely due to rounding considerations. Maximum on-site emissions are the highest emissions that would occur on the project site from on-site sources, such as heavy construction equipment, and excludes off-site emissions from sources such as construction worker vehicle trips and haul truck trips.

Source: CalEEMod worksheets in Appendix A. See Table 3.1 – 3.19 "Construction Emission Details" emissions. Highest of Summer and Winter emissions results are shown for all emissions. The Unmitigated emissions account for compliance with specific regulatory standards (e.g., SCAQMD Rule 403).

Toxic Air Contaminants

Construction Impacts

Construction-related activities would result in temporary project-generated diesel particulate matter exhaust emissions from off-road, heavy-duty diesel equipment used for site preparation, grading, infrastructure installation, and other construction activities. Generation of diesel particulate matter, which was identified as a TAC by CARB in 1998, from construction projects typically occurs in a single area for a short period. The proposed project's construction would occur in phases over approximately two years with sensitive receptors adjacent to the project site. The dose to which the receptors are exposed is the primary factor used to determine health risk. Dose is a function of the concentration of a substance or substances in the environment and the extent of exposure that person has to the substance. Dose is positively correlated with time, and a more extended exposure period would result in a higher exposure level for the maximally exposed individual. The risks estimated for a Maximally Exposed Individual are higher if a fixed exposure occurs over a more extended period.

PM_{10} is composed of diesel particulate matter and other air toxics; therefore, PM_{10} is a conservative estimate for diesel particulate matter emissions estimates. As shown in Table 6 under threshold 3(b), construction-phase emissions are well below SCAQMD's LST for $PM_{10,}$ which is designed to protect sensitive receptors from localized impacts. In addition, the proposed project would be consistent with the applicable AQMP requirements and control strategies intended to reduce emissions from construction equipment and activities. The proposed project would be required to comply with the CARB Air Toxics Control Measure that limits diesel powered equipment and vehicle idling to no more than five minutes at a location, and the CARB In-Use Off-Road Diesel Vehicle Regulation; compliance with these regulations would minimize emissions of TACs during construction. Furthermore, the closest construction activity to sensitive receptors, which would consist of pipeline construction along Lost Canyon Road, would be short-term, lasting approximately six weeks. Therefore, the project site would not emit or expose substantial construction TAC emissions to sensitive receptors and impacts would be less than significant.

Operation

CARB's *Air Quality and Land Use Handbook: A Community Health Perspective* (2005) provides recommendations regarding the siting of new sensitive land uses near potential sources of air toxic emissions (e.g., freeways, distribution centers, rail yards, ports, refineries, chrome plating facilities, dry cleaners, and gasoline dispensing facilities). CARB guidelines recommend siting distances both for the development of sensitive land uses in proximity to TAC sources and for the addition of new TAC sources in proximity to existing sensitive land uses. The water treatment chemicals stored on site would not generate air emissions due to the proposed secondary containment structures. In addition, the chemicals stored on site would not be considered hazardous due to low concentrations of ammonia and chlorine and the dilution of the sodium bisulfite solution. Therefore, project operation would not expose sensitive receptors to substantial TAC concentrations, and impacts would be less than significant.

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?

During construction activities, heavy equipment and vehicles would emit odors associated with vehicle and engine exhaust. However, these odors would be intermittent and temporary, would cease upon completion, and would disperse with distance. In addition, project construction would be required to comply with SCAQMD Rule 402, which specifies that a person shall not discharge from any source whatsoever such quantities of air contaminants or other material which cause injury, detriment, nuisance, or annoyance to any considerable number of persons or to the public. Therefore, project construction would not result in other emissions (such as those leading to odors) adversely affecting a substantial number of people, and impacts would be less than significant.

CARB's *Air Quality and Land Use Handbook: A Community Health Perspective* (2005) provides recommendations regarding the siting of new sensitive land uses near potential sources of odors (e.g., sewage treatment plants, landfills, recycling facilities, biomass operations, autobody shops, fiberglass manufacturing, and livestock operations). Groundwater treatment facilities are not identified on this list, and no new or increased odor generation beyond existing conditions would occur as a result of the proposed project. Thus, project operation would not result in other emissions (such as those leading to odors) adversely affecting a substantial number of people, and no impact would occur.

LESS-THAN-SIGNIFICANT IMPACT

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?	☐	☐	☐	■

Regulatory authority over biological resources is shared by federal, State, and local authorities under a variety of statutes and guidelines. Primary authority for general biological resources lies within the land use control and planning authority of local jurisdictions (in this instance, the City of Santa Clarita). The California Department of Fish and Wildlife (CDFW) is a trustee agency for biological resources throughout the State under CEQA and also has direct jurisdiction under the California Fish and Game Code (CFGC). Under the California and federal Endangered Species Acts, CDFW and the United States Fish and Wildlife Service also have direct regulatory authority over species formally listed as threatened or endangered and species protected by the Migratory Bird Treaty Act.

The following analysis is based primarily on the Biological Resources Assessment (BRA) prepared for the project by Rincon, which is included as Appendix B. For the purposes of this analysis, the Biological Study Area (BSA) is comprised of project site as well as a 100-foot buffer around those features in order to capture potential direct and indirect impacts to biological resources. As part of the BRA, Rincon conducted a field reconnaissance survey of the BSA in January 2025.

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?

Special-status species are defined as those plants and animals that are:

- Species listed as threatened or endangered under the Federal Endangered Species Act; species that are under review may be included if there is a reasonable expectation of listing within the life of the project;
- Species listed as candidate, rare, threatened, or endangered under the California Endangered Species Act or Native Plant Protection Act;
- Species designated as Fully Protected, Species of Special Concern, or Watch List by the CFGC or CDFW;
- Species designated as locally important by the City and/or otherwise protected through ordinance or local policy; and/or
- Plants occurring on lists 1 through 4 of the California Native Plant Society California Rare Plant Rank system.

Special-Status Plant Species

Forty-three special-status plant species were identified within a nine-quadrangle database search of the project site and were evaluated for their potential to occur. The assessment is based on the presence of suitable habitat as identified during the reconnaissance survey and existing knowledge of species occurrences and distributions in the region. Of the 43 special-status plant species evaluated, none identified in the California Natural Diversity Database or California Native Plant Society database queries for the project have a moderate or high potential to occur within the BSA based on incompatible habitat conditions (e.g., vegetation assemblage, soils, topography, hydrology, and prior disturbances) or the absence of observations of readily-identifiable species (e.g., perennial herbs, shrubs, and/or trees) during the field reconnaissance survey.

The BSA largely occurs within the developed/disturbed land cover type, but is also located within the big sagebrush scrub, thick-leaved yerba santa scrub, and upland mustards vegetation communities. The big sagebrush scrub and thick-leaved yerba santa scrub vegetation communities

occur along the southern terrace of the Santa Clara River and do not have the potential to support special-status plant species identified as part of the literature review. Moreover, the upland mustards vegetation community is dominated by non-native plant species and occurs in a disturbed setting adjacent to the parking lot to the north of Lost Canyon Road (Appendix B). Therefore, no impacts to special-status plant species would occur.

Special-Status Wildlife Species

Rincon evaluated 43 special-status wildlife species tracked by California Natural Diversity Database and the California Native Plant Society for their potential to occur. The assessment is based on the presence of suitable habitat as identified during the field surveys and existing knowledge of species occurrences and distributions in the region. Of the 43 special-status wildlife species evaluated, three species were identified to have a high potential to occur within the BSA: California legless lizard (*Anniella* spp.; CDFW Species of Special Concern [SSC]), coastal whiptail (*Aspidoscelis tigris stejnegeri*; CDFW SSC) and coast horned lizard (*Rhyrnosoma blainvillii*; CDFW SSC). The remaining 40 special-status species either have a low potential to occur or are not expected to occur in the BSA due to limited habitat components meeting the species' requirements and/or because the majority of the habitat on and adjacent to the project site is deemed unsuitable to meet the species requirements.

The project would temporarily disturb 0.73-acre of big sagebrush scrub and 0.01-acre of thick-leaved yerba santa scrub and would permanently disturb 0.19-acre of big sagebrush scrub and 0.01-acre of thick-leaved yerba santa scrub. These vegetation communities provide suitable habitat for California legless lizard, coastal whiptail, and coast horned lizard, and impacts to these species could occur as a result of the project. If California legless lizard, coastal whiptail, and/or coast horned lizard are present in these areas during project construction, direct impacts could occur via direct strikes to individuals by construction equipment, or entrapment of individuals in excavation trenches. In addition, indirect impacts could occur through vibrations and dust, which could alter behavioral patterns of these wildlife species and cause them to become exposed to predators. Based on the abundance of California Natural Diversity Database occurrence records of California legless lizard (29 occurrences), coastal whiptail (14 occurrences), and coast horned lizard (31 occurrences) within a nine-quadrangle search area of the project site, the proposed project is not expected to result in population-level impacts to these species. However, the proximity of the closest occurrences of these species to the project site (0.14 mile for California legless lizard, 0.04 mile for coastal whiptail, four miles for coast horned lizard within the Santa Clara River) indicate that potential direct impacts to individuals could occur as a result of construction (Appendix B). Therefore, impacts to California legless lizard, coastal whiptail, and coast horned lizard are conservatively considered potentially significant, and implementation of Mitigation Measures BIO-1 through BIO-3 would be required.

Nesting Birds

While common birds are not designated as special-status species, destruction of their eggs, nests, and nestlings is prohibited by federal and state law. Section 3503.5 of the CFGC specifically protects birds of prey, and their nests and eggs against take, possession, or destruction. Section 3513 of the CFGC also incorporates restrictions imposed by the federal Migratory Bird Treaty Act with respect to migratory birds (which consist of most native bird species). Migratory or other common nesting birds have the potential to nest within the BSA. All vegetation communities (excluding upland mustards) as well as ornamental trees and shrubs in the developed/disturbed land cover type have

the potential to support nesting birds and raptors. Therefore, construction of the project has the potential to directly (by destroying a nest) or indirectly (through construction noise, dust, and other human disturbances that may cause a nest to fail) impact nesting birds protected under the CFGC and Migratory Bird Treaty Act. Impacts would be potentially significant, and implementation of Mitigation Measure BIO-4 would be required.

Mitigation Measure

BIO-1 Worker Environmental Awareness Program Training

Prior to initiation of construction activities (including staging and mobilization), all personnel associated with project construction shall attend a Worker Environmental Awareness Program training, conducted by a qualified biologist, to aid workers in recognizing special-status biological resources potentially occurring in the project footprint. This training shall include information about the three special-status species with potential to occur (California legless lizard, coastal whiptail, and coast horned lizard) and focus on the identification of special-status species and habitats, a description of the regulatory status and general ecological characteristics of special-status resources, and a review of the limits of construction, regulatory compliance measures, best management practices, and avoidance and minimization measures pertaining to biological resources within the work area. A fact sheet conveying this information shall also be prepared for distribution to all contractors, their employees, and other personnel involved with construction of the project. All employees working at the project site shall sign a form provided by the trainer documenting they have attended the Worker Environmental Awareness Program training and understand the information presented to them. The crew foreman shall be responsible for ensuring crew members adhere to the guidelines and restrictions designed to avoid impacts to special-status species.

BIO-2 Construction Site Best Management Practices

The following general construction site best management practices shall be implemented during project construction:

- The contractor shall clearly delineate the construction limits and prohibit any construction-related traffic outside those boundaries.
- All open trenches or excavations shall be fenced and/or sloped to prevent entrapment of wildlife species.
- Materials shall be stored on impervious surfaces or plastic ground covers to prevent any spills or leakage and shall be at least 50 feet from drainage features. Construction materials and spoils shall be protected from stormwater runoff using temporary perimeter sediment barriers such as berms, silt fences, fiber rolls, covers, sand/gravel bags, and straw bale barriers, as appropriate.
- All food-related trash items such as wrappers, cans, bottles, and food scraps generated during project construction shall be disposed of in closed containers only and removed daily from the project site.
- No deliberate feeding of wildlife shall be allowed.
- No pets shall be allowed on the project site.
- All lighting shall be shielded and directed downward to minimize the potential for glare or spillover onto adjacent properties and to reduce impacts on local wildlife.

- All vehicles and equipment shall be in good working condition and free of leaks. The contractor shall prevent oil, petroleum products, or any other pollutants from contaminating the soil or entering a watercourse (dry or otherwise). When vehicles or equipment are stationary, mats or drip pans shall be placed below vehicles to contain fluid leaks.
- All re-fueling, cleaning, and maintenance of equipment shall occur in designated areas at least 50 feet from potentially jurisdictional waters.
- Adequate spill prevention and response equipment shall be maintained on-site and readily available to implement to ensure minimal impacts to the aquatic and marine environments.
- While encounters with special-status species are not anticipated, any worker who inadvertently injures or kills a special-status species or finds one dead, injured, or entrapped shall immediately report the incident to the construction foreman or qualified biologist. The construction foreman or qualified biologist shall immediately notify SCV Water. SCV Water shall follow up with written notification to United States Fish and Wildlife Service and/or CDFW (depending on the species' special-status designation) within five working days of the incident. A qualified biologist with necessary permits to handle the special-status species shall relocate the individual(s) to suitable undisturbed habitat outside the areas directly and indirectly affected by project-related ground disturbance activities. All observations of special-status species shall be recorded on California Natural Diversity Database field sheets and sent to CDFW by SCV Water or the qualified biologist.

BIO-3 Pre-Activity Surveys

Prior to commencement of ground or vegetation disturbing activities within the delineated work area, a qualified biologist shall conduct two surveys for special-status wildlife species. The first survey shall be conducted no more than 14 days prior to commencement of project activities, and the second survey shall be conducted no more than three days prior to the commencement of project activities. The surveys shall incorporate methods to detect the special-status wildlife species that could potentially occur at the site, including California legless lizard, coastal whiptail, and coast horned lizard.

If the aforementioned special-status species are encountered, a qualified biologist shall capture and transfer the individual(s) to a suitable habitat location outside of the delineated work area where it would not be harmed by project activities. The biologist shall hold the requisite permits for the capture and handling of the species, if applicable. Prior to commencement of ground or vegetation disturbing activities, a letter report documenting the methods and results of the surveys and any measures to be employed to avoid impacts to special-status species, if observed, shall be submitted to SCV Water.

BIO-4 Nesting Bird Surveys

Project-related activities shall occur outside of the bird breeding season (generally February 1 to August 31) to the extent practicable. If construction must occur within the bird breeding season, then no more than three days prior to initiation of ground disturbance and/or vegetation removal, a nesting bird pre-construction survey shall be conducted by a qualified biologist within the disturbance footprint plus a 100-foot buffer (300-foot buffer for raptors), where feasible. If the proposed project is phased or construction activities stop for more than one week, a subsequent pre-construction nesting bird survey shall be required prior to each phase of construction during the nesting season.

Pre-construction nesting bird surveys shall be conducted during the time of day when birds are active. A report of the nesting bird survey results, if applicable, shall be submitted to SCV Water for review and approval prior to ground and/or vegetation disturbance activities.

If no nesting birds are observed during pre-construction surveys, no further action is necessary. If nests are found, their locations shall be flagged. An appropriate avoidance buffer ranging in size from 25 to 100 feet for passerines and up to 300 feet for raptors, depending on the species and the proposed work activity, shall be determined and demarcated by a qualified biologist with bright orange construction fencing or other suitable flagging. If work activities within the established avoidance buffer is unavoidable, the active nests shall be monitored by the qualified biologist at a minimum of once per week until it has been determined the nest is no longer being used by either the young or adults. No ground or vegetation disturbance shall occur within this buffer until the qualified biologist confirms the breeding/nesting is completed and all the young have fledged. The nesting bird buffer zones may also be extended at the discretion of the qualified biologist based on field observations of nesting bird behavior.

Significance After Mitigation

Implementation of Mitigation Measure BIO-1 would require training all construction personnel in identifying special-status wildlife species, and Mitigation Measure BIO-2 would involve implementation of general best management practices (BMPs) that are protective of special-status wildlife species. Mitigation Measure BIO-3 would minimize the potential for project construction activities to impact special-status wildlife species by conducting pre-activity surveys and re-locating any species detected outside the disturbance footprint. In addition, Mitigation Measure BIO-4 would reduce the potential for project construction activities to directly or indirectly impact active bird nests through a pre-construction nesting bird survey and establishment of avoidance buffers around active nests, if present. Implementation of these measures would reduce project impacts to special-status wildlife species 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?

CDFW-designated sensitive vegetation communities found within the BSA include Fremont cottonwood forest and woodland (*Populus fremontii – Fraxinus velutina – Salix gooddingii* Forest and Woodland Alliance) as well as scale broom – California buckwheat scrub (*Lepidospartum squamatum* Shrubland Alliance) (Appendix B). A small stand of Fremont cottonwood forest and woodland is located adjacent to the Sand Canyon Creek on the south side of Lost Canyon Road, and scale broom scrub-California buckwheat occupies much of the BSA associated with the Mitchell 5B well but is not within the project footprint. No other sensitive natural communities or designated critical habitat occur for federally listed plant or wildlife species are present within the BSA (Appendix B). However, as detailed further under threshold 4(c), project construction would result in temporary and permanent impacts to approximately 0.03 acre of riparian habitat, and implementation of Mitigation Measures BIO-5 and BIO-6 would be required to reduce impacts to a less-than significant level.

LESS THAN SIGNIFICANT WITH MITIGATION INCORPORATED

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?

Portions of the Santa Clara River and Sand Canyon Creek overlap with the BSA and are potentially under the jurisdiction of both CDFW and the Los Angeles Regional Water Quality Control Board (RWQCB). Within the BSA, approximately 2.68 acres (1,333 linear feet) of the Santa Clara River and Sand Canyon Creek are potentially under RWQCB jurisdiction, and approximately 2.53 acres (1,328 linear feet) of the Santa Clara River and Sand Canyon Creek are under CDFW jurisdiction (Appendix B).

The project would result in both temporary and permanent impacts to the Santa Clara River. Work in areas potentially subject to CDFW and RWQCB jurisdiction would be associated with installation of two new well discharge pipelines with an approximately 40-square-foot area of rip-rap or other energy-dissipating features at the terminus of each discharge pipeline as well as decommissioning of the Mitchell 5B well. Temporary project impacts would result from the temporary use of construction equipment to accomplish these construction activities. Permanent impacts would result from the two new areas of rip-rap or other energy-dissipating features in the upper terrace and bank of the Santa Clara River. In total, the project would result in approximately 0.03 acre (33 linear feet) of temporary impacts and 0.03 acre (21 linear feet) of permanent impacts to CDFW-jurisdictional streambed areas and Non-Wetland Waters of the State (Appendix B). Implementation of BMPs required under the NPDES Construction General Permit (including installation of temporary perimeter sediment barriers such as berms, silt fences, fiber rolls, covers, sand/gravel bags, and straw bale barriers, as appropriate) would reduce temporary impacts to the Santa Clara River and Sand Canyon Creek. Nevertheless, temporary and permanent impacts to the Santa Clara River would be potentially significant, and implementation of Mitigation Measures BIO-1 and BIO-2 (outlined under threshold 4[a]) as well as Mitigation Measures BIO-5 and BIO-6 would be required. Furthermore, the project would likely require a Lake and Streambed Alteration Agreement from CDFW and a Water Quality Certification from the Los Angeles RWQCB, and compliance with permit conditions issued for the project, including mitigation for permanent impacts to jurisdictional resources, would be required.

Following the completion of project construction, the Lost Canyon 2A and Sand Canyon wells would be flushed, and water produced during flush would be discharged into the Santa Clara River. This discharge would be subject to compliance with SCV Water's existing coverage under Waste Discharge Requirements Order WQ 2014-0194-DWQ/General Order No. CAG140001 (ID: 4DW0430), which is the Statewide National Pollutant Elimination System Permit for Drinking Water System Discharges to Waters of the United States that establishes water quality standards for such discharges. In addition, the proposed rip-rap or other energy-dissipating features would minimize erosion at the discharge points. As required under the NPDES permit, SCV Water may also implement additional BMPs to minimize sediment discharge via use of erosion control measures such as use of flow diffusers or the construction of check dams to slow flows. The proposed energy-dissipating features as well as any additional BMPs required by this NPDES permit would thus minimize long-term impacts associated with well flushing discharges during project operation (Appendix B). Therefore, operation of these discharge lines would not have a substantial adverse effect on state or federally protected wetlands, and impacts would be less than significant.

Upon project completion, the Lost Canyon 2A and Sand Canyon wells, which were taken offline in 2023, would be reactivated and resume groundwater pumping. The Lost Canyon 2A well extends to a depth of 126 feet and extracts groundwater from depths of 95 to 125 feet below ground surface. The Sand Canyon well extends to a depth of 140 feet below ground surface and extracts groundwater

from depths of 60 to 140 feet below ground surface. Historical groundwater levels (1990-2020) at these locations have ranged from approximately 5 to 110 feet below ground surface with groundwater levels since 2010 ranging from 40 to 110 feet below ground surface (SCV GSA 2022). Annual groundwater pumping rates under this project for the two wells would be consistent with historical pumping rates for the Lost Canyon 2A and Sand Canyon wells and would not result in an increase in SCV Water's groundwater pumping at this location as compared to baseline conditions when the wells were operational in 2023. In addition, groundwater extraction would not exceed the pumping quantities provided in the groundwater level simulations used in the GSP. Moreover, groundwater extraction would be subject to the monitoring and management actions of the GSP to ensure operation of the wells would not lower groundwater levels beyond minimum thresholds for interconnected surface waters and groundwater-dependent ecosystems (Appendix B). Therefore, groundwater extraction under the proposed project would not have a substantial adverse effect on state or federally protected wetlands, and impacts would be less than significant.

Mitigation Measures

BIO-5 Restoration and Revegetation for Temporary Impacts to Jurisdictional Waters

All jurisdictional areas temporarily impacted by project activities shall be restored to pre-project conditions. If native vegetation communities in jurisdictional areas of the Santa Clara River are temporarily impacted, a Habitat Revegetation, Restoration, and Monitoring Program shall be developed and implemented for those areas. The program shall include the following measures:

- **Invasive Species Control.** Where appropriate, the area to be disturbed shall be treated to kill invasive exotic species and limit their seed production prior to initiating any earth-moving activity with the objectives of (1) preventing invasive species from spreading from the disturbance area and (2) removing weed sources from the salvaged topsoil. Herbicides shall be used only by a licensed herbicide applicator and may require notification to property owners or resource agencies. The treatment shall be completed in advance of the earth-moving in order for this activity to have its intended effect (i.e., the treatment would need to occur prior to target species setting seed).
- **Topsoil Salvage and Replacement.** In areas where vegetation and soil are to be removed, the topsoil shall be salvaged and replaced. This may be accomplished using two lifts, the first to salvage the seed bank, and the second to salvage soil along with soil biota in the root zone. Soil shall be stockpiled in two areas near the project site, with the seed bank labeled to identify it. Topsoil shall be replaced in the proper layers after final reconfiguration of disturbed areas. Stockpiles shall be covered if the soil is to be left for an extended period of time to prevent losses due to erosion and invasion of weeds.
- **Habitat Rehabilitation and Revegetation.** Plans and specifications for replanting areas disturbed by the project shall be developed with native species propagated from locally-collected seed or cuttings, and, if applicable, shall include seed of special-status species that would be impacted during construction activities. Monitoring procedures and performance criteria shall be developed to address revegetation and erosion control. The performance criteria shall consider the level of disturbance and the condition of adjacent habitats. Monitoring shall continue for three to five years, or until performance criteria have been met, specifically the restoration/revegetation of disturbed native habitat at a 1:1 ratio. Appropriate remedial measures, such as replanting, erosion control, or weed control, shall be identified and implemented if it is determined that performance criteria are not being met.

BIO-6 Compensatory Mitigation for Permanent Impacts to Jurisdictional Waters

Compensatory mitigation for permanent impacts to the Santa Clara River shall be accomplished either through purchase of credits through an approved mitigation bank or through the completion of on-site restoration or off-site restoration by SCV Water. Compensatory mitigation shall be completed at a minimum ratio of 1:1, unless a higher ratio is required by the Los Angeles RWQCB and/or CDFW.

If on-site or off-site mitigation is proposed, a Compensatory Mitigation Plan shall be prepared that outlines the compensatory mitigation in coordination with the Los Angeles RWQCB and/or CDFW. If on-site mitigation is proposed, the Compensatory Mitigation Plan can be integrated with the Habitat Revegetation, Restoration, and Monitoring Program described in Mitigation Measure BIO-5 and shall identify those portions of the site that contain suitable characteristics (e.g., hydrology) for restoration. Determination of mitigation adequacy shall be based on comparison of the restored habitat with similar, undisturbed habitat in the site vicinity. The Compensatory Mitigation Plan shall include remedial measures if performance criteria are not met. If the Compensatory Mitigation Plan is not integrated with the Habitat Revegetation, Restoration, and Monitoring Program described in Mitigation Measure BIO-5, the same reporting requirements shall apply for monitoring and evaluation of Compensatory Mitigation Plan implementation as detailed in Mitigation Measure BIO-5.

If off-site mitigation is proposed, off-site land shall be preserved through a deed restriction or conservation easement and the Compensatory Mitigation Plan shall identify an approach for funding assurance for the long-term management of the conserved land.

Significance After Mitigation

Implementation of Mitigation Measure BIO-5 would involve implementation of a Habitat Revegetation, Restoration, and Monitoring Program to restore temporarily-impacted jurisdictional areas to pre-project conditions. Implementation of Mitigation Measure BIO-6 would involve compensatory mitigation for permanent impacts to the Santa Clara River either through purchase of credits through an approved mitigation bank or through the completion of on-site restoration or off-site restoration by SCV Water. Together, Mitigation Measures BIO-5 and BIO-6 would reduce temporary and permanent impacts to the Santa Clara River to a less-than-significant level.

LESS THAN SIGNIFICANT WITH MITIGATION INCORPORATED

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?

Wildlife movement corridors can be both large- and small-scale. At the regional/landscape-level scale, the BSA is included as a relatively less permeable Essential Connectivity Area in the California Essential Habitat Connectivity Project: A Strategy for Conserving a Connected California. Habitat corridors are present within the BSA, notably including the Santa Clara River. The Santa Clara River has headwaters in the San Gabriel Mountains and flows westward approximately 84 miles to the Oxnard Plain, where it discharges into the Pacific Ocean. The Santa Clara River is the largest river system in southern California that remains in a relatively natural state, and it connects highly diverse habitat types (Appendix B).

The Santa Clara River provides a valuable movement and migration corridor for many types of wildlife, including terrestrial, semi-aquatic, and aquatic species. Project components would largely occur within existing developed/disturbed areas. Project components occurring within the big

sagebrush scrub and thick-leaved yerba santa scrub vegetation communities are relatively small in size, and occur along the southern margin of the Santa Clara River wildlife movement corridor. Therefore, impacts to these vegetation communities are not expected to result in a decrease in the function of the corridor for wildlife movement, as the optimal path for wildlife movement (i.e., the river) would remain intact. Migrating wildlife would have the ability to traverse around the work area throughout the entirety of the Santa Clara River during construction and would continue to migrate through the Santa Clara River. Therefore, project construction would not interfere substantially with the movement of any native resident or migratory fish or wildlife species or with established native resident or migratory wildlife corridors. Impacts would be less than significant, and avoidance and minimization measures are not recommended.

Project operation would not include activities that could impact wildlife movement beyond existing conditions. Therefore, project operation would not 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, and impacts would be less than significant.

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?

City of Santa Clarita General Plan

Natural resources within Santa Clarita city limits are regulated according to the City's (2011) General Plan, which includes policies regarding conservation of biological resources and ecosystems as well as protection of sensitive habitat (including wildlife corridors) and endangered species. Objectives CO 3.1, 3.2, and 3.6 and several of their respective policies are applicable to the proposed project based on its location and proposed activities, as detailed further in Appendix B. The project proposes new development, including upgrades to existing groundwater wells and construction of a new groundwater treatment facility, and has the potential to result in significant impacts to special-status wildlife species, riparian habitat, and state protected wetlands/waters (Appendix B). Therefore, the project would potentially conflict with the biological resources protection policies of the City's General Plan, and impacts would be potentially significant. Implementation of Mitigation Measures BIO-1 through BIO-6 (outlined under thresholds 4[a] and 4[c]) would be required to reduce impacts to a less-than-significant level.

Vista Canyon Specific Plan

According to Government Code Section 53091, building and zoning ordinances of a county or city shall not apply to the location or construction of facilities for the production, generation, storage, treatment, or transmission of water. As such, the project would not be subject to the Vista Canyon Specific Plan, which establishes additional zoning regulations for the project area.

Parkway Trees Ordinance

Native trees within the City's public right-of-way, easement, or other public property and within 14 feet of those areas are protected under the City's Parkway Trees Ordinance (Santa Clarita Municipal Code Section 13.76). Two mature Fremont cottonwood trees (*Populus fremontii*), two coast live oaks (*Quercus agrifolia*), one golden wattle (*Acacia longifolia*), a blue elderberry (*Sambucus mexicana*) and one Peruvian pepper tree (*Schinus molle)* are within the BSA (Appendix B). However,

these trees are not located within the City's public right-of-way, easement, or other public property nor within 14 feet of those areas; therefore, the City's Parkway Trees Ordinance does not apply to these trees. The two oak trees within the BSA are located within the City right-of-way associated with Lost Canyon Road; however, these trees are located outside the project site, and no impacts are proposed. Therefore, the project would not conflict with the City's Parkway Trees Ordinance, and no impacts would occur.

Oak Tree Preservation Ordinance

The City of Santa Clarita Oak Tree Preservation Ordinance (Santa Clarita Municipal Code Section 17.51.040) protects and preserves oak trees in the city and provides regulatory measures to accomplish this purpose. This policy applies to the removal, pruning, cutting, and/or encroachment into the protected zone of oak trees. The two coast live oaks within the BSA would not be impacted during project construction. In addition, according to Government Code Section 53091, building and zoning ordinances of a county or city shall not apply to the location or construction of facilities for the production, generation, storage, treatment, or transmission of water. As such, the project would not be subject to the City's building and zoning ordinances (Santa Clarita Municipal Code Titles 17 and 18), which include the City of Santa Clarita Oak Tree Preservation Ordinance. Therefore, no impacts related to the Oak Tree Preservation Ordinance would occur.

Significant Ecological Areas

The City's General Plan and Municipal Code (Section 17.38.080) require treatment of the Significant Ecological Area Overlay Zone as among the habitat types within the city. Significant Ecological Areas are "defined as ecologically important land and water systems that are valuable as plant or animal communities, often important to the preservation of threatened and endangered species, and conversation of biological diversity in the County" (City of Santa Clarita 2011). Santa Clarita Municipal Code Section 17.38.080 requires a conformance review for development within the Significant Ecological Area Overlay Zone. However, as mentioned previously, the project would not be subject to the City's building and zoning ordinances (Santa Clarita Municipal Code Titles 17 and 18) pursuant Government Code Section 53091, which include Santa Clarita Municipal Code Section 17.38.080 (Appendix B). Therefore, SCV Water would not be required to comply with its requirements.

LESS THAN SIGNIFICANT WITH MITIGATION INCORPORATED

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 within any Habitat Conservation Plans, Natural Community Conservation Plans, or other approved local, regional, or state habitat conservation plan area (Appendix B). Therefore, no impact would occur.

NO IMPACT

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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?	☐	☐	■	☐

This section provides an analysis of the project's impacts on cultural resources, including historical and archaeological resources as well as human remains. CEQA requires a lead agency to determine whether a project may have a significant effect on historical resources (Public Resources Code [PRC] Section 21084.1). A historical resource is a resource listed in, or determined to be eligible for listing in, the California Register of Historical Resources (CRHR); a resource included in a local register of historical resources; or any object, building, structure, site, area, place, record, or manuscript a lead agency determines to be historically significant (CEQA Guidelines Section 15064.5[a][1-3]).

A resource shall be considered historically significant if it:

1. Is associated with events that have made a significant contribution to the broad patterns of California's history and cultural heritage;
2. Is associated with the lives of persons important in our past;
3. Embodies the distinctive characteristics of a type, period, region, or method of construction, or represents the work of an important creative individual, or possesses high artistic values; or
4. Has yielded, or may be likely to yield, information important in prehistory or history.

In addition, if it can be demonstrated that a project would cause damage to a unique archaeological resource, the lead agency may require reasonable efforts be made to permit any or all of these resources to be preserved in place or left in an undisturbed state. To the extent that resources cannot be left undisturbed, mitigation measures are required (PRC Section 21083.2[a-b]). PRC Section 21083.2(g) defines a unique archaeological resource as an archaeological artifact, object, or site about which it can be clearly demonstrated that, without merely adding to the current body of knowledge, there is a high probability that it:

1. Contains information needed to answer important scientific research questions and that there is a demonstrable public interest in that information;
2. Has a special and particular quality such as being the oldest of its type or the best available example of its type; or

3. Is directly associated with a scientifically recognized important prehistoric or historic event or person.

Methodology and Results of Cultural Resources Assessment Report

In 2025, Rincon conducted a cultural resources investigation and analysis of the project site, which is included as Appendix C. This analysis included a cultural resources records search of the California Historical Resources Information System at the South Central Coast Information Center (SCCIC), located at California State University, Fullerton, and a Native American Heritage Commission (NAHC) Sacred Lands File (SLF) search. Rincon also conducted a pedestrian survey of the project footprint for all locations as part of the study (Appendix C).

The SCCIC records search was performed to identify previously conducted cultural resources studies as well as previously recorded cultural resources within the project site and a 0.5-mile radius surrounding it. The records search included a review of available records at the SCCIC as well as the National Register of Historic Places, the CRHR, the California Historical Landmarks list, the Built Environment Resources Directory, the California State Historic Property Data File, and the Archaeological Determinations of Eligibility list. The SCCIC records search identified 20 cultural resources studies conducted within a 0.5-mile radius of the project site, three of which included portions of the project site. The SCCIC search identified four previously recorded cultural resources within 0.5 mile of the project site, including one prehistoric archaeological resource (P-19-001077), one multicomponent resource (P-19-004355), and two historic-period archaeological resources (P-19-004356 and P-19-004605). No cultural resources were identified within or immediately adjacent to the project site (Appendix C).

Rincon requested a search of the SLF from the NAHC to identify the potential for cultural resources within the project site and to obtain contact information for Native Americans groups or individuals who may have knowledge of resources within the project site. The SLF search was returned with negative results, which indicates no sacred lands have been reported in the vicinity of the project site.

As part of its AB 52 consultation process, which is further detailed in Section 18, *Tribal Cultural Resources*, SCV Water prepared and sent letters to the Gabrieleño Band of Mission Indians-Kizh Nation, the Torres Martinez Desert Cahuilla Indians, the FTBMI, and the San Gabriel Band of Mission Indians to request information on potential tribal cultural resources in the project vicinity that may be impacted by project development. SCV Water received one response via email from the FTBMI on March 3, 2025, requesting consultation. The results of consultation are summarized in Section 18, *Tribal Cultural Resources*. No known sacred sites or tribal cultural resources have been specifically identified within the project site.

The impact analysis included here is organized based on the cultural resources thresholds included in CEQA Guidelines Appendix G: Environmental Checklist Form. Threshold 5(a) broadly refers to historical resources. To more clearly differentiate between archaeological and built environment resources, the analysis under threshold 5(a) is limited to built environment resources. Archaeological resources, including those that may be considered historical resources pursuant to CEQA Guidelines Section 15064.5 and those that may be considered unique archaeological resources pursuant to PRC Section 21083.2, are considered under threshold 5(b).

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

No built environment resources were identified within or immediately adjacent to the project site as a result of the SCCIC records search and field survey. The existing Mitchell 5B Well, Sand Canyon Well, and Lost Canyon 2 and 2A wells were constructed during the 1990s; therefore, the project site does not contain buildings or structures that are 45 years of age or older (Appendix C). Therefore, the project would not cause a substantial adverse change in the significance of a historical resource, and no impact would occur.

NO IMPACT

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

No prehistoric or historic-period archaeological resources were identified within the project site as a result of the SCCIC records search, NAHC SLF search, or pedestrian survey. Based on the existing conditions of the project site and the findings of the Cultural Resources Assessment, the project site has low potential to support intact archaeological deposits due to previous disturbances associated with road development and construction of the existing wells. As such, the potential for encountering intact archaeological deposits that may qualify as historical resources pursuant to CEQA is low (Appendix C)**.** However, unanticipated discoveries during project implementation remain a possibility. If a previously unknown archaeological resource is encountered during construction, the project would potentially cause a substantial adverse change in the significance of an archaeological resource pursuant to CEQA Guidelines Section 15064.5. Implementation of Mitigation Measure CR-1 would be required to reduce impacts to a less-than-significant level.

Mitigation Measure

CR-1 Unexpected Discovery of Archaeological Resources

In the event an archaeological resource is unexpectedly encountered during ground-disturbing activities, work within 60 feet of the find shall halt, and an archaeologist meeting the Secretary of the Interior's Professional Qualifications Standards for Archaeology (National Park Service 1983) shall be contacted immediately to evaluate the resource. If the resource is determined by the qualified archaeologist to be prehistoric, then a Native American representative (e.g., FTBMI) shall also be contacted to participate in the evaluation of the resource. If the resource cannot be avoided by project redesign and if the qualified archaeologist and/or Native American representative determines it to be appropriate, archaeological testing for CRHR eligibility shall be completed. If the resource proves to be eligible for the CRHR and significant impacts to the resource cannot be avoided via project redesign, a qualified archaeologist shall prepare a data recovery plan tailored to the physical nature and characteristics of the resource, pursuant to the requirements of the CEQA Guidelines Section 15126.4(b)(3)(C). The data recovery plan shall identify data recovery excavation methods, measurable objectives, and data thresholds to reduce any significant impacts to the cultural resource. Pursuant to the data recovery plan, the qualified archaeologist and Native American representative (e.g., FTBMI), as appropriate, shall recover and document the scientifically consequential information that justifies the resource's significance. SCV Water shall review and approve the treatment plan and archaeological testing as appropriate, and the resulting documentation shall be submitted to the SCCIC, pursuant to CEQA Guidelines Section 15126.4(b)(3)(C).

Significance after Mitigation

Mitigation Measure CR-1 would minimize the potential for impacts related to unexpected discoveries of archaeological resources to occur through the implementation of appropriate procedures for evaluation and treatment, should any discoveries be made during construction. Therefore, implementation of Mitigation Measure CR-1 would reduce impacts to 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?

No known human remains have been documented within the project site or the immediate vicinity (Appendix C). While the project site is unlikely to contain human remains, the potential for the recovery of human remains during ground-disturbing activities is always a possibility. If human remains are found, existing regulations outlined in California Health and Safety Code Section 7050.5 state no further disturbance shall occur until the County Coroner has made a determination of origin and disposition pursuant to PRC Section 5097.98. In the event of an unanticipated discovery of human remains, the County Coroner must be notified immediately. If the human remains are determined to be prehistoric or Native American in origin, the Coroner will notify the NAHC, which will determine and notify a most likely descendant. The most likely descendant shall complete the inspection of the site within 48 hours of being granted access and provide recommendations as to the treatment of the remains to the landowner. Therefore, with adherence to existing regulations, impacts to human remains would be less than significant.

LESS-THAN-SIGNIFICANT IMPACT

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?	☐	☐	☐	■

As a state, California is one of the lowest per capita energy users in the United States, ranked 49th in the nation, due to its energy efficiency programs and mild climate (United States Energy Information Administration 2024). Electricity and natural gas are primarily consumed by the built environment for lighting, appliances, heating and cooling systems, fireplaces, and other uses such as industrial processes in addition to being consumed by alternative fuel vehicles. Most of California's electricity is generated in state with approximately 23 percent imported from the Northwest and Southwest in 2023; however, the state relies on out-of-state natural gas imports for nearly 90 percent of its supply (California Energy Commission [CEC] 2024a and 2024b). In addition, approximately 58 percent of California's electricity supply in 2023 came from renewable energy sources, such as wind, solar photovoltaic, geothermal, and biomass (CEC 2024a). In 2022, Senate Bill 1020 established clean electricity targets for eligible renewable energy resources and zero-carbon resources to supply 90 percent of retail sale electricity by 2035, 95 percent by 2040, 100 percent by 2045, and 100 percent of electricity procured to serve all state agencies by 2035. Electricity would be supplied to the project site by Southern California Edison, and no natural gas connection would be required.

Petroleum fuels are primarily consumed by on-road and off-road equipment in addition to some industrial processes, with California being the seventh largest petroleum-producing states in the nation in 2023 (United States Energy Information Administration 2024). Gasoline, which is used by light-duty cars, pickup trucks, and other vehicles, is the most used transportation fuel in California with 13.6 billion gallons sold in 2023 (CEC 2024c). Diesel, which is used primarily by heavy-duty trucks, delivery vehicles, buses, trains, ships, boats and barges, farm equipment, and heavy-duty construction and military vehicles, is the second most used fuel in California with 2.3 billion gallons sold in 2023 (CEC 2024c).

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. 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*, respectively.

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?

Construction Energy Consumption

Energy use during project construction would be primarily in the form of fuel consumption to operate heavy equipment, light-duty vehicles, machinery, and construction workers travel to and from the project site. Energy use would be typical of similar-sized construction projects in the region. Table 7 summarizes the anticipated energy consumption from construction equipment and vehicles, including construction worker trips to and from the project site. As shown therein, project construction would require approximately 814 gallons of gasoline fuel and approximately 70,670 gallons of diesel fuel.

Table 7 Energy Use during Project Construction

	Fuel Consumption (Gallons)	
Source	**Gasoline**	**Diesel**
Construction Equipment & Hauling Trips	–	70,670
Construction Worker Vehicle Trips	814	–

See Appendix A for CalEEMod outputs and Appendix D for energy calculation sheets.

Energy use during construction would be temporary in nature, and construction equipment used would be typical of similar-sized construction projects in the region. In addition, construction contractors would be required to comply with the provisions of California Code of Regulations Title 13, Sections 2449 and 2485, which prohibit diesel-fueled commercial motor vehicles and off-road diesel vehicles from idling for more than five minutes, which would minimize unnecessary fuel consumption. Construction equipment would be subject to the USEPA Construction Equipment Fuel Efficiency Standard (40 Code of Federal Regulations Parts 1039, 1065, and 1068), which would minimize inefficient fuel consumption. Furthermore, in the interest of cost efficiency, construction contractors would not utilize fuel in a manner that is wasteful or unnecessary. Therefore, project construction would not result in a potential impact due to wasteful, inefficient, or unnecessary consumption of energy resources, and no impact would occur.

Operational Energy Consumption

Operation of the project would contribute to regional energy demand by consuming electricity and gasoline and diesel fuels. Electricity would be used for groundwater pumping, water treatment, and lighting, among other purposes. Gasoline and diesel consumption would be associated with vehicle trips generated by SCV Water staff, chemical deliveries, and resin replacement. Table 8 summarizes estimated operational energy consumption for the proposed project. As shown therein, project operation would require approximately 392 gallons of gasoline fuel, 89 gallons of diesel fuel, and approximately 280 to 330 MWh per year.

Table 8 Estimated Project Annual Operational Energy Consumption

Source	Energy Consumption[1]	
Gasoline Fuel (SCV Water Staff Visits)	392 gallons	43.0 MMBtu
Diesel Fuel (Chemical Deliveries and Resin Replacements)	89 gallons	11.3 MMBtu
Electricity[2]	330 MWh	1,223 MMBtu

MMBtu = million metric British thermal units; MWh = megawatt-hours

[1] Energy consumption is converted to MMBtu for each source.

[2] Calculated based on electricity consumption for similar existing groundwater treatment and disinfection facility for the N Wells (Moreno 2022). The energy estimate has been adjusted to reflect the project's treatment capacity, which is roughly one-third of the capacity of the N Wells project.

See Appendix D for transportation energy calculation sheets.

The project would be required to comply with all standards set in the latest iteration of the California Building Standards Code (California Code of Regulations Title 24), which would minimize the wasteful, inefficient, or unnecessary consumption of energy resources by the groundwater treatment facility building during operation. CALGreen (California Code of Regulations Title 24, Part 11) requires implementation of energy-efficient light fixtures and building materials into the design of new construction projects. Furthermore, the 2022 Building Energy Efficiency Standards (California Code of Regulations Title 24, Part 6) require newly constructed buildings to meet energy performance standards set by the CEC. These standards are specifically crafted for new buildings to result in energy efficient performance so that the buildings do not result in wasteful, inefficient, or unnecessary consumption of energy. Moreover, the groundwater treatment facility would be necessary to treat groundwater affected by PFAS contamination, thus enabling SCV Water to continue providing safe, potable water to its service area. Furthermore, in the interest of cost efficiency, SCV Water would not utilize electricity for groundwater pumping or the treatment process in a manner that is wasteful or inefficient. Therefore, project operation would not result in potentially significant environmental effects due to the wasteful, inefficient, or unnecessary consumption of energy, and no impact would occur.

NO IMPACT

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

In 2023, SCV Water adopted the Sustainability Plan, which provides a roadmap for implementing key sustainability initiatives and guides planning for capital investments, water resources, and conservation, helping SCV Water align with state initiatives and position itself for funding that supports operational sustainability. This commitment aims to achieve sustainability and resiliency and decrease SCV Water's energy consumption and GHG emissions, while ensuring reliable and affordable water service. The plan includes two measures related to renewable energy and energy efficiency – Measure E-1 to use 50 percent low-carbon and carbon-free electricity by 2030 and Measure EE-1 to improve energy efficiency at SCV Water facilities and buildings through all-electric new buildings (SCV Water 2023). The proposed project would be powered by the existing electricity grid, which would allow for SCV Water to procure low-carbon and carbon-free electricity for the proposed project in furtherance of Measure E-1. In addition, the proposed groundwater treatment facility building would be all-electric. Therefore, the proposed project would not conflict with the renewable energy and energy efficiency of SCV Water's Sustainability Plan, and no impact would occur.

As mentioned above, SB 1020 mandates 100 percent clean electricity for California by 2045. Because the proposed project would be powered by the existing electricity grid, the project would eventually be powered by renewable energy mandated by SB 1020 and would not conflict with this statewide plan. The proposed project would not conflict with or obstruct a state or local plan for renewable energy or energy efficiency, and no impact would occur.

NO 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?	☐	☐	■	☐

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?

According to the DOC, the project site is not located in an Alquist-Priolo Fault Zone (DOC 2025b). However, like much of California, the project site is located in a seismically active region. The United States Geological Survey defines active faults as those that have had surface displacement within the Holocene period (approximately the last 11,000 years). Potentially active faults are those that have had surface displacement during the last 1.6 million years, and inactive faults have not had surface displacement within that period (California Geological Survey 2018). The nearest fault to the project site is the San Gabriel Fault, which is located approximately 3.2 miles southwest of the project site.

The project involves construction of water infrastructure and would not involve placement of habitable structures, thereby minimizing the potential to result in loss, injury, or death involving fault rupture and strong seismic ground-shaking. Because most of California is susceptible to strong ground shaking from severe earthquakes, development of the project could expose project structures to strong seismic ground shaking. However, the project would be designed and constructed in accordance with state and local building codes to reduce the potential for exposure of structures to seismic risks to the maximum extent feasible. Design and construction of the proposed treatment facility building would be required to comply with the seismic safety requirements in the latest iteration of the California Building Code (CBC). For the remaining project components, SCV Water would incorporate the recommendations outlined in a project-specific geotechnical engineering report into the project design and construction plans to reduce seismic hazards. As such, design and construction of the proposed project would consider the seismic environment and would comply with applicable seismic design standards. Compliance with such requirements would reduce seismic ground shaking impacts to the maximum extent practicable with current engineering practices. In addition, the facility would be unmanned and would not have permanent on-site personnel. The proposed groundwater treatment facility would not be located immediately adjacent to any residences or other structures and therefore would not impact those structures or their occupants should seismic ground shaking compromise the structural integrity of the facility. Therefore, the project would not increase or exacerbate fault rupture or seismic ground shaking hazards at adjacent properties. In the event fault rupture or seismic ground shaking compromises project components during operation, SCV Water would temporarily shut-off processes and conduct emergency repairs as soon as practicable. Therefore, the project would not cause substantial adverse effects including the risk of loss, injury, or death involving rupture of known fault or strong seismic ground shaking, and impacts would be less than significant.

LESS-THAN-SIGNIFICANT IMPACT

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?

Liquefaction is the sudden loss of soil shear strength due to a rapid increase of soil pore water pressures caused by cyclic loading from a seismic event. This means a liquefied soil acts more like a fluid than a solid when shaken during an earthquake. The project site is located in a liquefaction zone (DOC 2025b). Soils therefore have the potential to liquefy during a seismic event, and seismically induced liquefaction could potentially damage project components in the event of an

earthquake, resulting in joint failures or leakages. As discussed under thresholds 7(a.1) and 7(a.2), the project would be constructed in accordance with the current seismic design provisions of the CBC and the recommendations of a project-specific geotechnical report. In the event seismically induced liquefaction compromises project components during operation, SCV Water would temporarily shut-off water pumping, treatment, and conveyance processes and conduct emergency repairs as soon as practicable. In addition, the project involves construction of water infrastructure and would not involve placement of habitable structures within a liquefaction-prone area, thereby minimizing the potential to result in loss, injury, or death involving seismic-related ground failure due to liquefaction. Furthermore, the project would not involve groundwater injection or other activities that could exacerbate the existing liquefaction hazard. As a result, with adherence to existing regulatory requirements and the recommendations of the project-specific geotechnical report, the proposed project would not directly or indirectly cause potential substantial adverse effects, including the risk of loss, injury, or death involving seismic-related ground failure, including liquefaction. Impacts would be less than significant.

LESS-THAN-SIGNIFICANT IMPACT

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

The proposed project is located in a relatively flat area that is not within or near an earthquake-induced landslide hazard zone (DOC 2025b). Therefore, the project would not directly or indirectly cause potential substantial adverse effects, including the risk of loss, injury, or death involving landslides. No impact would occur.

NO IMPACT

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

Ground-disturbing activities associated with project construction may result in the removal of some topsoil. Construction activities would be subject to the NPDES Construction General Permit which requires development of a Storm Water Pollution Prevention Plan (SWPPP) by a certified Qualified SWPPP Developer. The SWPPP includes project-specific BMPs to control erosion/sediment release and otherwise reduce the potential for discharge of pollutants from construction into stormwater. Typical BMPs would include, but would not be limited to, use of silt fences, fiber rolls, stabilized construction entrances/exists, storm drain inlet protection, wind erosion control, stockpile management, and materials storage and vehicle and equipment cleaning, fueling, and maintenance procedures that minimize the discharge of spills and leaks. Erosion from construction activities would thus be controlled through implementation of BMPs outlined in the SWPPP required by the NPDES Construction General Permit. Therefore, construction impacts related to soil erosion would be less than significant.

Project operation would have minimal potential to result in erosion because no ground-disturbing activities would occur. The project includes installation of two groundwater discharge pipelines to the Santa Clara River, one leading from the Sand Canyon well and one leading from the groundwater treatment facility. Operation the project would involve routine flushing of the Lost Canyon 2A and Sand Canyon wells. Water used for routine flushing would be treated and discharged to the Santa Clara River and would be subject to compliance with SCV Water's existing coverage under Waste Discharge Requirements Order WQ 2014-0194-DWQ/General Order No. CAG140001 (ID: 4DW0430), which is the Statewide NPDES Permit for Drinking Water System Discharges to Waters of the United States. This activity would be generally consistent with raw water discharges

from the Lost Canyon 2A and Sand Canyon wells to the Santa Clara River that previously occurred approximately twice a year when the wells were operational. The project includes installation of rip-rap or other energy-dissipating features at the terminus of each discharge pipeline to minimize erosion at the discharge points. As required under the NPDES permit, SCV Water may also implement additional BMPs to minimize sediment discharge via use of erosion control measures such as use of flow diffusers or the construction of check dams to slow flows. The proposed energy-dissipating features as well as any additional BMPs required by this NPDES permit would thus minimize potential erosion associated with well flushing discharges during project operation. As such, operational impacts related to soil erosion would be less than significant.

LESS-THAN-SIGNIFICANT IMPACT

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?

Subsidence occurs when a large portion of the land is displaced vertically, usually due to the withdrawal of groundwater, oil, or natural gas. The proposed project would restore the use of the Lost Canyon 2A and Sand Canyon wells. Annual groundwater pumping rates under this project for the two wells would be consistent with historical pumping rates for the Lost Canyon 2A and Sand Canyon wells and would not exceed the pumping quantities provided in the groundwater level simulations used in the GSP. Therefore, restoring the use of these wells would not result in an increase in SCV Water's groundwater pumping at this location as compared to baseline conditions, and the proposed project would not result in soil instability such that subsidence would occur.

Lateral spreading occurs when saturated soil deposits on slopes, such as river banks, experience horizontal displacement. As discussed under thresholds 7(a.1) and 7(a.2), the project would be constructed in accordance with the current seismic design provisions of the CBC and the recommendations of a project-specific geotechnical report. In the event seismically-induced lateral spreading compromises project components during operation, SCV Water would temporarily shut-off water pumping, treatment, and conveyance processes and conduct emergency repairs as soon as practicable. In addition, as described under threshold 7(a.3), the proposed project would not result in soil instability related to liquefaction. Consequently, impacts related to the instability of soil or geologic units would be less than significant.

LESS-THAN-SIGNIFICANT IMPACT

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?

Expansive soils are highly compressible, clay-based soils that tend to expand as they absorb water and shrink as water is drawn away. Expansive soils can result in structural damage when foundations are not designed to account for soil expansion potential. The project site is composed of Cortina sandy loam, 0 to 2 percent slopes (12.5 percent clay); Cortina sandy loam, 2 to 9 percent slopes (12.5 percent clay); riverwash (2.3 percent clay); and sandy alluvial land (10.9 percent clay) (United States Department of Agriculture 2025). Due to the relatively low clay content of on-site soils, the potential for expansive soils to occur is low. In addition, the project does not include construction of habitable structures. Therefore, the proposed project would not create substantial direct or indirect risks to life or property as a result of expansive soils, and impacts would be less than significant.

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 proposed project would not include the use of septic tanks or alternative wastewater disposal systems. Therefore, 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. They include both the fossilized remains of ancient plants and animals and the traces thereof (e.g., trackways, imprints, burrows, etc.). Paleontological resources are not found in "soil" but are contained within the geologic deposits or bedrock that underlies the soil layer. Typically, fossils are greater than 5,000 years old (i.e., older than middle Holocene in age) and are typically preserved in sedimentary rocks. Although rare, fossils can also be preserved in volcanic rocks and low-grade metamorphic rocks under certain conditions (Society of Vertebrate Paleontology [SVP] 2010). Fossils occur in a non-continuous and often unpredictable distribution within some sedimentary units, and the potential for fossils to occur within sedimentary units depends on several factors. It is possible to evaluate the potential for geologic units to contain scientifically important paleontological resources and therefore evaluate the potential for impacts to those resources and provide mitigation for paleontological resources if they are discovered during construction of a development project.

Rincon evaluated the paleontological sensitivity of the geologic units that underlie the project site to assess the project's potential for significant impacts to scientifically important paleontological resources. The analysis was based on the results of a paleontological locality search and a review of existing information in the scientific literature regarding known fossils within geologic units mapped at the project site. According to the SVP (2010) classification system, geologic units can be assigned a high, low, undetermined, or no potential for containing scientifically significant nonrenewable paleontological resources. Following the literature review, a paleontological sensitivity classification was assigned to each geologic unit mapped within the project site. This criterion is based on rock units within which vertebrate or significant invertebrate fossils have been determined by previous studies to be present or likely to be present. The potential for impacts to significant paleontological resources is based on the potential for ground disturbance to directly impact paleontologically sensitive geologic units.

Rincon requested a records search of the project site from the Natural History Museum of Los Angeles County on December 21, 2024, which identified no known fossil localities within the project site (Bell 2024). The nearest known fossil localities originate from the Miocene-aged Mint Canyon Formation, which forms many of the mountains surrounding the project site. These localities have produced horse (*Pliohippus*), pronghorn (Antilocapridae), rabbit (Lagomorpha), and invertebrate fossils.

The project site is situated in the Transverse Ranges geomorphic province, one of the eleven geomorphic provinces in California (California Geological Survey 2002). The Transverse Ranges extend approximately 275 miles west to east from Point Arguello in Santa Barbara County to the San Bernardino Mountains in Riverside County. The Transverse Ranges are composed of Proterozoic to

Mesozoic intrusive crystalline igneous and metamorphic rocks overlain by Cenozoic marine and terrestrial sedimentary deposits and volcanic rock (Norris and Webb 1976).

The project site is on the south bank of the Santa Clara River. According to the geologic map of Bedrossian and Roffers (2012), the project site is underlain by a single geologic unit - active alluvial wash deposits. Active alluvial wash deposits consist of unconsolidated sand and gravel of active or recently active streams and rivers, which are late Holocene in age. Holocene-aged sediments are generally considered too young (i.e., less than 5,000 years old) to contain paleontological resources (SVP 2010). However, Holocene-aged alluvial sediments may be underlain by older sediments with the potential to contain such resources (i.e., either Pleistocene-aged alluvium or Mint Canyon Formation). Given that the sediments underlying the project site represent deposition by a large, active river (i.e., the Santa Clara River), it is likely that this transition to sediments that are old enough to contain paleontological resources (i.e., 5,000 years old) is likely 20 feet below the surface or more. Therefore, the sediments underlying the project site are considered to have low paleontological sensitivity from the surface to 20 feet below the surface and undetermined paleontological sensitivity greater than 20 feet below the surface.

Ground-disturbing activities within previously undisturbed sediments with high paleontological sensitivity could result in significant impacts to paleontological resources. Impacts would be significant if construction activities result in the destruction, damage, or loss of scientifically important paleontological resources and associated stratigraphic and paleontological data. Ground-disturbing activities anticipated for the proposed project include grading and excavations for the proposed groundwater treatment facility and trenching for the proposed pipeline in Lost Canyon Road. Excavations for the proposed groundwater treatment facility and pipeline are anticipated to reach up to 12 feet below the surface, which would only impact low-sensitivity sediments. As such, the project would not directly or indirectly destroy a unique paleontological resource or site or unique geologic feature, and impacts would be less than significant.

LESS-THAN-SIGNIFICANT IMPACT

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?	☐	☐	☐	■

Climate Change and Greenhouse Gases

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

GHG emissions occur both naturally and from human activities, such as fossil fuel burning, decomposition of landfill wastes, raising livestock, deforestation, and some agricultural practices. GHGs produced by human activities include carbon dioxide (CO_2), methane, nitrous oxide, hydrofluorocarbons, perfluorocarbons, and sulfur hexafluoride. Different types of GHGs have varying global warming potentials (GWP). The GWP of a GHG is the potential of a gas or aerosol to trap heat in the atmosphere over a specified timescale (generally, 100 years). Because GHGs absorb different amounts of heat, a common reference gas (CO_2) is used to relate the amount of heat absorbed to the amount of the gas emitted, referred to as "carbon dioxide equivalent" (CO_2e), which is the amount of a specific GHG emitted multiplied by its GWP. Carbon dioxide has a 100-year GWP of one. By contrast, methane has a GWP of 30, meaning its global warming effect is 30 times greater than CO_2 on a molecule per molecule basis (Intergovernmental Panel on Climate Change [IPCC] 2021).

The United Nations IPCC expressed that the rise and continued growth of atmospheric CO_2 concentrations is unequivocally due to human activities in the IPCC's Sixth Assessment Report (2021). Human influence has warmed the atmosphere, ocean, and land, which has led the climate to warm at an unprecedented rate in the last 2,000 years. It is estimated that between the period of 1850 through 2019, a total of 2,390 gigatons of anthropogenic CO_2 was emitted. It is likely that anthropogenic activities have increased the global surface temperature by approximately 1.07

degrees Celsius between the years 2010 through 2019 (IPCC 2021). Emissions resulting from human activities are thereby contributing to an average increase in Earth's temperature. Potential climate change impacts in California may include loss of snowpack, sea level rise, more extreme heat days per year, more high ozone days, more large forest fires, and more drought years (California Natural Resource Agency 2019).

Significance Threshold

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

To determine a project-specific threshold, guidance on GHG significance thresholds from SCAQMD, the air district in which the project site is located, was used. The SCAQMD's GHG CEQA Significance Threshold Working Group considered a tiered approach to determine the significance of residential, commercial, and industrial projects. The draft tiered approach is outlined in meeting minutes dated September 28, 2010 (SCAQMD 2010):

- **Tier 1.** If the project is exempt from further environmental analysis under existing statutory or categorical exemptions, there is a presumption of less-than-significant impacts with respect to climate change. If not, then the Tier 2 approach should be considered.
- **Tier 2.** Consists of determining whether the project is consistent with a GHG reduction plan that may be part of a local general plan, for example. The concept embodied in this tier is equivalent to the existing concept of consistency in CEQA Guidelines Sections 15064(h)(3), 15125(d), and 15152(a). Under this tier, if the proposed project is consistent with the qualifying local GHG reduction plan, its GHG emissions impacts are not significant. If there is not an adopted plan, then the Tier 3 approach would be appropriate.
- **Tier 3.** Establishes a screening significance threshold level to determine significance. The Working Group provided a recommendation of 3,000 metric tons (MT) of carbon dioxide equivalents (CO_2e) per year for non-industrial projects.
- **Tier 4.** Establishes a service population threshold to determine significance. The Working Group provided a recommendation of 4.8 MT of CO_2e per person per year for land use projects.

Tier 1 would not apply to the project because it is not exempt from environmental analysis. For Tier 2, SCV Water has not adopted a qualified GHG reduction plan[8]. Therefore, for a project-specific threshold, SCV Water has selected to use SCAQMD's recommended threshold of 3,000 MT of CO_2e per year for non-industrial projects as the applicable project-specific threshold, in accordance with Tier 3.[9] This threshold is frequently used by jurisdictions across Southern California to determine GHG emissions impacts from non-industrial projects. In addition, the proposed project is evaluated

[8] In 2023, SCV Water adopted the SCV Water Sustainability Plan to guide operational sustainability actions through 2045, in alignment with the State's current goals, legislation, and mandates (SCV Water 2023). However, the Sustainability Plan did not undergo CEQA review and is therefore not a qualified GHG reduction plan that can be used for tiering and streamlining project-level analysis of GHG emissions pursuant to CEQA Guidelines 15183.5.

[9] The proposed project is considered non-industrial because it does not involve significant stationary source equipment that is permitted or regulated by SCAQMD.

based on consistency with plans and polices adopted for the purposes of reducing GHG emissions and mitigation effects of climate change. The most directly applicable adopted regulatory plans to reduce GHG emissions are the SCV Water Sustainability Plan and CARB's 2022 Scoping Plan.

Methodology

Calculations of CO_2, methane, and nitrous oxide emissions are provided to identify the magnitude of potential project effects. The analysis focuses on CO_2, methane, and nitrous oxide because these make up 98 percent of all GHG emissions by volume and are the GHG emissions the project would emit in the largest quantities (IPCC 2014). Emissions of all GHGs are converted into their equivalent GWP in terms of CO_2 (i.e., CO_2e). Minimal amounts of other GHGs (such as chlorofluorocarbons) would be emitted; however, these other GHG emissions would not substantially add to the total GHG emissions. GHG emissions associated with project construction were estimated using CalEEMod, version 2022.1. The project details are provided in Initial Study Section 8, *Description of Project*, and the assumptions are described in Section 3, *Air Quality*. In addition, the proposed project is expected to have a 50-year lifespan, based on information provided by SCV Water staff, which was used to amortize construction emissions on an annual basis pursuant to SCAQMD guidance (SCAQMD 2008).[10]

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

Construction of the proposed project would generate temporary GHG emissions primarily from the operation of construction equipment as well as from vehicles transporting construction workers to and from the project site and heavy trucks to transport materials and haul soil. As shown in Table 9, construction of the proposed project would generate an estimated total of 699 MT of CO_2e. When emissions are amortized over a 50-year period (i.e., the estimated project lifetime), project construction would generate an estimated 14 MT of CO_2e per year.

Table 9 Estimated Construction GHG Emissions

Construction	Project Emissions (MT of CO_2e)
2026	213
2027	385
2028	101
Total	**699**
Amortized over 50 Years	14

MT = metric tons; CO_2e = carbon dioxide equivalent

Source: See Appendix A for CalEEMod worksheets. See Table 2.2 "Construction Emissions by Year, Unmitigated" annual emissions.

Operation of the proposed project would generate GHG emissions associated with mobile sources, area sources, energy and water usage, refrigerant, and wastewater and solid waste generation. Table 10 presents estimated operational emissions and combines the estimated construction and operational GHG emissions to calculate total annual project-related GHG emissions. Annual emissions from the proposed project would be approximately 81 MT of CO_2e per year, which would not exceed SCAQMD's recommended screening-level threshold of 3,000 MT of CO_2e per year for non-industrial projects. Therefore, the project would not generate GHG emissions, either directly or

[10] Infrastructure projects typically have a longer lifetime compared to other types of development; therefore, a 50-year project lifetime is utilized in this analysis instead of SCAQMD's 30-year lifetime for industrial, residential, or commercial projects.

indirectly, that may have a significant impact on the environment and impacts would be less than significant.

Table 10 Combined Annual GHG Emissions

Emission Source	Project Emissions (MT of CO_2e per year)
Construction[1]	**14**
Operational	**67**
Mobile	13
Area	<1
Energy	52
Water	1
Waste	1
Refrigerant	<1
Total	**81**
SCAQMD Recommended Tier 3 Threshold	**3,000**
Exceed Threshold?	**No**

MT = metric tons; CO_2e = carbon dioxide equivalent

[1] Construction-related GHG emissions amortized over 50 years (see Table 9).

Source: Appendix A CalEEMod worksheets. See Table 2.5 "Operational Emissions by Sector, Unmitigated" annual 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 most directly applicable adopted regulatory plans to reduce GHG emissions are the SCV Water Sustainability Plan and CARB's 2022 Scoping Plan. The project's consistency with these plans is discussed in the following sections. In summary, the proposed project would not conflict with applicable plans, policies, or regulations adopted for the purpose of reducing GHG emissions, and no impact would occur.

SCV Water Sustainability Plan

SCV Water's (2023) Sustainability Plan outlines a roadmap to enhance operational sustainability and mitigate climate change impacts in line with statewide goals. The Sustainability Plan includes measures that would reduce GHG emissions applicable to the proposed project as follows:

Measure EE 1: Improve Energy Efficiency at SCV Water Facilities and Buildings

Action EE-1-2: Develop a policy requiring any new building to be all-electric and utilize heat pumps for space and water heating.

Action EE-1-5: Where not implemented already, utilize automated lighting for facilities in alignment with the current California Energy Commission Building Energy Efficiency Standards.

The proposed groundwater treatment facility building would be all-electric and would exclude natural gas connections. As described in the Sustainability Plan, the largest portion of SCV Water's emissions comes from grid electricity consumption (SCV Water 2023). The project would source electricity from Southern California Edison, which would be required to supply electricity generated fully by renewable energy sources, as mandated by Senate Bill 1020, thereby minimizing the project's energy-related GHG emissions. In addition, the proposed project would restore the use of the Lost Canyon 2A and Sand Canyon wells, thereby decreasing SCV Water's reliance on imported water, which would also reduce SCV Water's GHG emissions by decreasing the energy needed to transport imported potable water to the SCV Water service area. Therefore, the proposed project would not conflict with the applicable measures and actions of SCV Water's Sustainability Plan.

2022 Scoping Plan

Approximately two percent of total energy usage in California is used for the conveyance, treatment, and distribution of water. One of the goals of CARB's 2022 Scoping Plan is to support climate adaptation and biodiversity, which includes protection of the state's water supply, water quality, and infrastructure to achieve carbon neutrality as soon as possible (CARB 2022). The project would treat an existing groundwater supply source, thereby enhancing the reliability and resilience of SCV Water's local water supply portfolio. This would reduce SCV Water's dependence on energy- and GHG emission-intensive imported water supplies that are otherwise purchased and conveyed to Santa Clarita. Furthermore, Southern California Edison, the project's electricity provider, would be required to supply electricity generated fully by renewable energy sources, as mandated by Senate Bill 1020, thereby minimizing the project's energy-related GHG emissions. Thus, the project would not impede attainment of the 2022 Scoping Plan or the related 2030 and 2050 reduction goals identified in Senate Bill 32 and Assembly Bill 1279.

NO IMPACT

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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?	☐	■	☐	☐

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

Construction of the proposed project would temporarily increase the transport and use of hazardous materials during the use of construction vehicles and equipment. Limited quantities of miscellaneous hazardous substances, such as diesel fuel, oil, solvents, and other similar materials, would be brought onto the project site, used, and stored during the construction period. Any use of potentially hazardous materials during construction of the proposed project would be required to comply with all local, state, and federal regulations regarding the handling of hazardous materials, which would minimize the potential for the project to create a significant hazard to the public or the environment. These materials would be disposed off-site in accordance with applicable laws pertaining to the handling and disposal of hazardous waste. The transport, use, and storage of hazardous materials during construction would be conducted in accordance with applicable federal and State laws, such as the Hazardous Materials Transportation Act, California Hazardous Material Management Act, and California Code of Regulations, Title 22.

During operation, sodium hypochlorite (chlorine), sodium bisulfite, and liquid ammonium sulfate would be stored at the proposed groundwater treatment facility in a completely enclosed structure with proper containment and venting. Sodium hypochlorite is a liquid disinfection agent added to the water and is commonly referred to as “bleach.” Sodium hypochlorite is not the equivalent of chlorine gas, and chlorine gas would not be used or released during project operation. Chemical deliveries to the proposed groundwater treatment building would occur on a weekly basis, and these materials would be contained within vessels specifically engineered for safe storage. Furthermore, the chemicals stored on site would not be considered hazardous due to low concentrations of ammonia and chlorine and the dilution of the sodium bisulfite solution. However, in accordance with standard operating practice, SCV Water would submit an emergency response/contingency plan as part of a Hazardous Materials Business Plan to the California Environmental Reporting System for the proposed facility. Spent resin from the PFAS treatment vessels, which may be considered a hazardous waste depending on the concentration of PFAS, would be removed approximately every 9 to 12 months by the resin supplier who would be required to transport and dispose of the material in accordance with all applicable regulations, such as the Hazardous Materials Transportation Act, California Hazardous Material Management Act, and California Code of Regulations, Title 22. Compliance with existing local, state, and federal regulations regarding the handling of hazardous materials during construction and operation would not expose the public or the environment to a significant hazard through the routine transport, use, or disposal of hazardous materials. Impacts would be less than significant.

LESS-THAN-SIGNIFICANT IMPACT

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?

The presence of hazardous materials during project construction activities, including but not limited to ground-disturbing activities, could result in an accidental upset or release of hazardous materials if they are not properly stored and secured. Hazardous materials used during project construction would be disposed of off-site in accordance with all applicable laws and regulations, including but not limited to the CBC and California Fire Code, as well the regulations of the federal and state Occupational Safety and Health Administrations. In addition, project construction would require a SWPPP, which would include Good Housekeeping BMPs to reduce the risk of hazardous material

spills or leaks. With adherence to the requirements of the SWPPP, project construction would not 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, and impacts would be less than significant.

As discussed under item (a), operation and maintenance of the project would involve the routine use and storage of sodium hypochlorite, sodium bisulfite, and liquid ammonium sulfate, which are not considered hazardous materials. Spent resin from the PFAS treatment vessels, which may be considered a hazardous waste depending on the concentration of PFAS, would be removed approximately every 9 to 12 months by the resin supplier who would be required to transport and dispose of the material in accordance with all applicable regulations, such as the Hazardous Materials Transportation Act, California Hazardous Material Management Act, and California Code of Regulations, Title 22. Because of the static nature of the spent resin, any accidents occurring during the removal, transport, and disposal of the resin would be unlikely to create a significant hazard to the public or the environment. Therefore, project operation would not 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, and impacts would be less than significant.

LESS-THAN-SIGNIFICANT IMPACT

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 nearest schools to the project site are Sulphur Springs Elementary School and Gorman Learning Center located south of the project site, across Lost Canyon Road. Sulphur Springs Elementary School is approximately 50 feet from the nearest project component (the proposed pipeline in Lost Canyon Road) and approximately 300 feet from the proposed groundwater treatment facility. Gorman Learning Center is approximately 115 feet from the nearest project component (the proposed pipeline in Lost Canyon Road) and approximately 275 feet from the proposed groundwater treatment facility. As discussed under thresholds 9(a) and 9(b), the transport, use, and storage of hazardous materials during construction and operation of the project would be conducted in accordance with applicable state and federal laws. In addition, project construction would comply with the requirements of the SWPPP, which incorporates BMPs to minimize the risk of hazardous material spills or leaks. The chemicals stored on site would not be considered hazardous due to low concentrations of ammonia and chlorine and the dilution of the sodium bisulfite solution, and they would not produce hazardous air emissions under normal operating conditions when handled properly by trained personnel (i.e., the SCV Water operators). In addition, sodium hypochlorite is not the equivalent of chlorine gas, and chlorine gas would not be used or released during project operation. Therefore, 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 following databases and listings compiled pursuant to Government Code Section 65962.5 were reviewed on March 3, 2025, for known hazardous materials contamination at the project site:

- State Water Resources Control Board - GeoTracker search for leaking underground storage tanks and other cleanup sites (SWRCB 2025);
- California Department of Toxic Substances Control - EnviroStor database for hazardous waste facilities or known contamination sites (California Department of Toxic Substances Control 2025); and
- List of "active" Cease and Desist Orders and Cleanup and Abatement Orders, SWRCB (California Environmental Protection Agency 2025)
- Hazardous waste facilities subject to corrective action pursuant to Section 25187.5 of the Health and Safety Code, DTSC (California Environmental Protection Agency 2025)

In addition, the USEPA Superfund Enterprise Management System was consulted (USEPA 2025).

The project site is not listed in the above environmental databases, and no other listed sites are located within 1,000 feet of the project site. Therefore, the project would not create a significant hazard to the public or the environment related to hazardous materials sites, and no impact would occur.

NO IMPACT

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

The closest public airport to the project site is Whiteman Airport, located approximately 11 miles to the south of the project site. The project site is not located within the area of influence of Whiteman Airport (County of Los Angeles 2011). Therefore, the project site is not located in an area covered by an airport land use plan or otherwise within two miles of a public or public use airport. As such, the project would not result in a safety hazard or excessive aircraft noise for people working at the project site during construction or operation. No impact would occur.

NO IMPACT

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

During project construction, equipment staging would primarily occur on site. A temporary lane closure may be required during installation of the proposed pipeline along Lost Canyon Road. In this event, signage and traffic control measures would be implemented, including a flag person to direct two-way traffic flows along the single available lane. Construction of the proposed pipeline would be temporary and short-term, lasting approximately six weeks, which would minimize impacts to local circulation. However, access to the residential neighborhood west of the project site is limited to two access points, one via Mitchell Drive and one via Lost Canyon Road. A temporary lane closure along Lost Canyon Road could result in delays in emergency vehicle access or hinder potential evacuation for this residential neighborhood and thereby affect implementation of emergency response and emergency evacuation plans in the event of an emergency. The project may also be constructed concurrently with the nearby Vista Canyon Ranch project, located immediately west of the project site, which could result in significant cumulative impacts related to emergency access. Therefore, impacts during project construction would be potentially significant, and implementation of Mitigation Measure HAZ-1 would be required to reduce impacts to a less-than-significant level.

The project does not include changes to the existing street system that could result in inadequate emergency access, and project operation and maintenance would not introduce new activities or substantial operational traffic with the potential to interfere with emergency response and evacuations. Therefore, no operational impacts related to emergency response plans and emergency evacuation plans would occur.

Mitigation Measure

HAZ-1 Traffic Control Plan

SCV Water shall require the project contractor(s) to prepare and implement a traffic control plan that specifies how traffic will be safely and efficiently redirected during a lane closure. All work shall comply with the Work Area Traffic Control Handbook, which conforms to the standards and guidance of the California Manual on Uniform Traffic Control Devices. Traffic control measures for lane closures shall be included, and priority access shall be given to emergency vehicles. The traffic control plan shall also include requirements to notify local emergency response providers and all residences within 1,000 feet at least one week prior to the start of work when lane closures are required. The plan shall provide advance lane closure warning signage at key locations east and west of the project alignment along Lost Canyon Road to allow for efficient re-direction of traffic to Sand Canyon Road and Mitchell Drive in the event of an evacuation, including, but not limited to the following intersections:

- Lost Canyon Road and Sand Canyon Road
- Lost Canyon Road and Zion Drive
- Mitchell Drive and Grand Lane
- Mitchell Drive and Antelope Drive

The traffic control plan shall also require that if project construction occurs concurrently with construction of the Vista Canyon Ranch project, the project contractor(s) shall coordinate the timing of the project-related temporary lane closure along Lost Canyon Road with the Vista Canyon Ranch developer(s) to minimize the duration of multiple concurrent lane closures with the potential to affect the residential community on Mitchell Drive.

Significance after Mitigation

Mitigation Measure HAZ-1 would require the project contractor(s) to safely redirect traffic, utilize traffic control measures, and give emergency response providers advance notification and priority access such that the potential to impair implementation of or physically interfere with an adopted emergency response plan or emergency evacuation plan would be minimized. Therefore, implementation of Mitigation Measure HAZ-1 would reduce impacts to a less-than-significant level.

LESS THAN SIGNIFICANT WITH MITIGATION INCORPORATED

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

As discussed in Section 20, *Wildfire,* the project site is not located in a designated Very High Fire Hazard Severity Zone (VHFHSZ) or a State Responsibility Area (SRA). However, the nearest VHFHSZ is approximately 50 feet to the south and west of the nearest project component (California Department of Forestry and Fire Protection 2024). Although this area is currently developed with residences and schools, the general area south of the project site is interspersed with undeveloped,

vegetated lands. Therefore, for the purposes of this analysis, the project site is considered to be located near a VHFHSZ. The project site consist of previously developed/disturbed areas and native vegetation communities, including big sagebrush scrub, thick-leaved yerba santa scrub, and upland mustards. These vegetation types are characterized by high combustibility, which could pose a fire risk during construction activities. Heavy duty equipment used during construction that may produce sparks that could ignite vegetation would be limited through regulatory compliance. PRC 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. Nevertheless, construction activities would have the potential to result in wildland fires due to proximity to brush-covered land, and impacts would be potentially significant. Implementation of Mitigation Measure HAZ-2 would be required to reduce construction impacts to a less-than-significant level.

To accommodate for increased load demand, the three existing pole-mounted transformers on site would be replaced with a pad-mounted transformer. Replacement of the existing transformers with a new transformer would not introduce a new ignition risk to the project site. In addition, the pad-mounted transformer would be located adjacent to the groundwater treatment facility on a paved surface and would be designed in accordance with National Fire Protection Association standards, which would reduce potential ignition risks. Therefore, project operation would not expose people or structures, either directly or indirectly, to a significant risk of loss, injury, or death involving wildland fires, and impacts would be less than significant.

Mitigation Measures

HAZ-2 Fire Hazards Measures

During project construction, staging areas and other areas designated for construction shall be cleared of dried vegetation and other materials that could ignite. Construction equipment with spark arrestors shall be maintained in good working order. In addition, construction crews shall have a spotter during electrical installation activities who shall stop work should accidental sparks or other fire-inducing hazards occur. The spotter and construction crews shall take immediate action to remediate the hazard to safe conditions. Electrical work shall continue when approval by a site manager is granted that the hazard has been remediated. Other construction equipment, including those with hot vehicle catalytic converters, shall be kept in good working order and used only within cleared construction areas. During project construction, contractors shall require vehicles and crews to have access to functional fire extinguishers.

Significance after Mitigation

Mitigation Measure HAZ-2 would require the project contractor(s) to implement fire prevention measures such that the potential to ignite wildland fires would be minimized. Therefore, implementation of Mitigation Measure HAZ-2 would reduce impacts to a less-than-significant level.

LESS THAN SIGNIFICANT WITH MITIGATION INCORPORATED

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?	☐	☐	■	☐

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

Construction

Site preparation, grading, trenching, and excavation associated with project construction would result in temporary soil disturbance. As stormwater flows over a construction site, it can pick up sediment, debris, and chemicals, and transport them to receiving water bodies. Construction activities could also affect water quality in the event of an accidental fuel or hazardous materials leak or spill. Receiving water bodies in the vicinity of the project site including the Santa Clara River to the south.

As previously discussed in Section 7, *Geology and Soils*, construction activities would be required to comply with the NPDES Construction General Permit. (Order No. Order 2022-0057-DWQ, as amended) because project construction would disturb more than one acre of land. In order to obtain a Construction General Permit, a Storm Water Pollution Prevention Plan (SWPPP) must be developed. A SWPPP includes measures to ensure all pollutants and their sources are controlled, and BMPs are followed, including those related to soil erosion. Such BMPs may include, but would not be limited to, use of silt fences, fiber rolls, stabilized construction entrances/exists, storm drain inlet protection, wind erosion control, stockpile management, and materials storage and vehicle and equipment cleaning, fueling, and maintenance procedures that minimize the discharge of spills and leaks. The construction SWPPP and BMPs would be designed to prevent sedimentation of both on-site and off-site surface waters during construction activities. With adherence to the requirements of the Construction General Permit, polluted stormwater runoff would be minimized to the extent feasible.

Project construction is not anticipated to require groundwater dewatering. However, if groundwater is unexpectedly encountered during excavations, SCV Water would obtain coverage under the appropriate NPDES Permit for discharge to surface water bodies (i.e., Santa Clara River) and would comply with the water quality requirements outlined in the permit, which may necessitate treatment prior to discharge to be protective of surface water quality. Therefore, discharge of produced groundwater would not substantially degrade water quality.

Upset or accident conditions during project construction could result in accidental leaks and spills of hazardous materials such as vehicle and equipment fuels, which could adversely affect water quality if hazardous materials enter the Santa Clara River. However, the project-specific SWPPP would include Good Housekeeping BMPs that would reduce the risk of hazardous material spills or leaks. With adherence to the required SWPPP, project construction would not violate water quality standards or waste discharge requirements or otherwise substantially degrade surface or ground water quality, and impacts would be less than significant.

Operation

During operation, routine flushing of the Lost Canyon 2A and Sand Canyon wells would be required. Water used for routine flushing would be treated and discharged to the Santa Clara River and would be subject to compliance with SCV Water's existing coverage under Waste Discharge Requirements Order WQ 2014-0194-DWQ/General Order No. CAG140001 (ID: 4DW0430), which is the Statewide NPDES Permit for Drinking Water System Discharges to Waters of the United States. As such, project operation would not violate any water quality standards or waste discharge requirements or otherwise substantially degrade surface or ground water quality. Impacts would be less than significant.

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 project site overlies the Santa Clara River Valley East Groundwater Subbasin (California Department of Water Resources 2006). The Santa Clara River Valley East Groundwater Subbasin is designated as a high-priority groundwater basin under the Sustainable Groundwater Management Act (SGMA) but is not critically over-drafted. The SCV GSA manages the basin and has adopted the Santa Clara River Valley East Groundwater Subbasin GSP to guide its efforts (SCV GSA 2022).

The proposed project would involve decommissioning the Mitchell 5B and Lost Canyon 2 wells and restoring the use of Sand Canyon and Lost Canyon 2A wells to enhance their functionality and efficiency. The proposed project would not result in an increase in SCV Water's basin-wide groundwater pumping as compared to baseline conditions when Sand Canyon and Lost Canyon 2A groundwater wells were operational. Annual groundwater pumping rates under this project for the two wells would be consistent with historical pumping rates for the Lost Canyon 2A and Sand Canyon wells and would not exceed the pumping quantities provided in the groundwater level simulations used in the GSP. Moreover, groundwater extraction would be subject to the monitoring and management actions of the GSP to ensure operation of the wells would not lower groundwater levels beyond minimum thresholds for basin sustainability. Thus, the project would not substantially decrease basin-wide groundwater supplies such that the project may impede sustainable groundwater management of the basin, and no impact would occur.

The project would increase impervious surfaces on the project site through construction of the proposed groundwater treatment facility and access driveways. However, stormwater runoff from the project site would continue to sheet flow towards the Santa Clara River where it would have the opportunity to percolate into the underlying groundwater basin. Therefore, the project would not interfere substantially with groundwater recharge such that the project may impede sustainable groundwater management of the basin, and 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?

The project site does not include any streams or rivers and would not result in alterations to the course of the nearby Santa Clara River or Sand Canyon Creek. The proposed project is located within 100-year and 500-year flood zones, and directly adjacent to a regulatory floodway (Federal Emergency Management Agency 2024). The project would add approximately 5,000 square feet of impervious surfaces at the location of the proposed groundwater treatment facility. In addition, the project would include an approximately 65-foot groundwater discharge pipeline between the facility and the Santa Clara River and an approximately 40-foot-long groundwater discharge pipeline between the Sand Canyon well and the Santa Clara River. Discharges via these pipelines would be infrequent and short-term (approximately 30 minutes per event), and this activity would be generally consistent with raw water discharges from the Lost Canyon 2A and Sand Canyon wells to the Santa Clara River that previously occurred when the wells were operational. As such, these discharges would have minimal potential to result in off-site flooding. Furthermore, the net change in surface runoff discharged to the Santa Clara River from this location as compared to existing conditions would be minimal under the proposed project because runoff from this location currently partially discharges to the river. As such, the addition of impervious surfaces would not result in substantial erosion or siltation; increase the rate or amount of surface runoff such that on- or off-site flooding occurs; exceed stormwater drainage systems or provide substantial additional sources of polluted runoff; or impede or redirect flood flows. Impacts would be less than significant.

LESS-THAN-SIGNIFICANT IMPACT

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

The nearest body of water that could be subject to seiche is Castaic Lake, approximately 12 miles northwest of the project site. Given this distance, the project site is not at risk of inundation due to seiche. The project site is approximately 28.5 miles north from the Pacific Ocean and is therefore not located in a tsunami hazard zone. The proposed project is located within a 100-year and 500-year flood zones and is directly adjacent to a regulatory floodway (Federal Emergency Management Agency 2024).

Construction activities that use or store large quantities of hazardous materials could adversely affect the environment if the project site is inundated by a flood resulting from a storm event. As described in Section 9, *Hazardous and Hazardous Materials,* limited quantities of miscellaneous hazardous substances, such as diesel fuel, oil, solvents, and other similar materials, would be brought onto the project site, used, and stored during the construction period. However, flooding of the project site during project construction could result in an accidental spill of hazardous materials such as vehicle or equipment fuels that release pollutants into the Santa Clara River and Sand Canyon Creek. Therefore, project construction could result in a potentially significant impact, and implementation of Mitigation Measure HYD-1 would be required.

Operation of the project would involve the use of sodium hypochlorite (chlorine), sodium bisulfite, and liquid ammonium sulfate. These materials would be stored in completely enclosed structures with proper containment and venting, which would minimize the potential for pollutant release in the event of inundation. Therefore, operation of the proposed project would not risk release of pollutants due to project inundation in flood hazards, tsunami, or seiche zones, and impacts would be less than significant.

Mitigation Measure

HYD-1 Hazardous Materials Management and Spill Control Plan

SCV Water shall require its construction contractor to prepare and implement a Hazardous Materials Management and Spill Control Plan that specifies proactive actions that shall be implemented to prevent a release of hazardous materials to the Santa Clara River and Sand Canyon Creek in the event of flooding that inundates the project site during construction, such as the removal of hazardous materials from the project site prior to significant precipitation events.

Significance after Mitigation

Mitigation Measure HYD-1 would require preparation and implementation of a Hazardous Materials Management and Spill Control Plan with appropriate procedures to implement in the event of flooding that inundates the project site during construction. Therefore, implementation of Mitigation Measure HYD-1 would reduce potential impacts to the Santa Clara River and Sand Canyon Creek due to the release of pollutants during project site inundation to a less-than-significant level.

LESS THAN SIGNIFICANT WITH MITIGATION INCORPORATED

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

The project is subject to the requirements of the Los Angeles RWQCB's Basin Plan for the Coastal Watersheds of Los Angeles and Ventura Counties (Los Angeles RWQCB 2014). As described under threshold 10(a), the project would be required to comply with the NPDES Construction General Permit to protect water quality during construction. The NPDES Construction General Permit requires preparation and implementation of a project-specific SWPPP, which requires operators to implement BMPs to minimize the discharge of pollutants from stormwater and spilled or leaked materials. Compliance with applicable regulatory requirements would minimize potential surface water quality impacts associated with sediment erosion during project construction. In addition, pursuant to the requirements of SCV Water's existing Statewide General Permit for Drinking Water System Discharges to the Waters of the United States No 4DW0768, SCV Water would be required

to implement BMPs that would minimize sediment discharge in discharges from routine well flushing activities during project operation via the use of erosion control measures such as use of flow diffusers or the construction of check dams to slow flow. As a result, the project would not conflict with or obstruct implementation of the applicable water quality control plan, and impacts would be less than significant.

The project site overlies the Santa Clara River Valley East Groundwater Subbasin, which is subject to the Santa Clara River Valley East Groundwater Subbasin GSP (SCV GSA 2022). As discussed under threshold 10(b), the proposed project would not result in an increase in SCV Water's basin-wide groundwater pumping as compared to baseline conditions when Sand Canyon and Lost Canyon 2A groundwater wells were operational. Annual groundwater pumping rates under this project for the two wells would be consistent with historical pumping rates for the Lost Canyon 2A and Sand Canyon wells and would not exceed the pumping quantities provided in the groundwater level simulations used in the GSP. Moreover, groundwater extraction would be subject to the monitoring and management actions of the GSP to ensure operation of the wells would not lower groundwater levels beyond minimum thresholds. Accordingly, the proposed project would not conflict with or obstruct implementation of the Santa Clara River Valley East Groundwater Subbasin GSP. Impacts would be less than significant.

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?	☐	■	☐	☐

a. Would the project physically divide an established community?

The project consists of improvements to and construction of water infrastructure in a residential area in the city of Santa Clarita. Improvements to the existing Sand Canyon and Lost Canyon 2A wells, decommissioning of the Mitchell 5B and Lost Canyon 2 wells, and installation of belowground pipelines would result in minimal to no changes to the existing land use of these portions of the project site. The proposed groundwater treatment facility would not divide an established community because it would be located within an existing property owned by SCV Water bounded by the Santa Clara River to the north and west, Lost Canyon Road to the south, Sand Canyon Road to the east, and residential neighborhoods to the north, east, and west. Therefore, the project would not physically divide an established community, and 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 consists of improvements to and construction of water infrastructure on parcels zoned Urban Residential 1 (UR1) and Specific Plan-Open Space (Vista Canyon). However, according to Government Code Section 53091, building and zoning ordinances of a county or city shall not apply to the location or construction of facilities for the production, generation, storage, treatment, or transmission of water. As such, the project would not be subject to the City's building and zoning ordinances (Santa Clarita Municipal Code Titles 17 and 18) or the Vista Canyon Specific Plan, which establishes additional zoning regulations for the project area. However, SCV Water would obtain a vegetation removal permit from the Santa Clarita City Manager prior to any vegetation removal should it be necessary to complete decommissioning of the Mitchell 5B well on APN 2840-002-901 (Santa Clarita Municipal Code Section 14.10.060).

The City of Santa Clarita General Plan includes Objective LU 7.2 for water service, which states that the City shall "ensure an adequate water supply to meet the demands of growth" (City of Santa Clarita 2011). Objective CO 4.2 also aims to "work with water providers and other agencies to identify and implement programs to increase water supplies to meet the needs of future growth"

(City of Santa Clarita 2011). The proposed project would enable SCV Water to continue providing its existing customers with a safe, reliable water supply by enabling SCV Water to reactivate the Lost Canyon 2A and Sand Canyon wells. Therefore, the project would further support implementation of Objective LU 7.2 and Objective CO 4.2 by constructing water infrastructure improvements to meet necessary water supply requirements, protect the long-term security of water supplies, and safeguard groundwater quality. The project would also be consistent with the Open Space land use designation because open space can be used for managed production of resources, such as groundwater, according to the City's General Plan Conservation and Open Space Element. For all other issue areas, the project would result in no impact, less than significant impacts, or less than significant impacts with the incorporation of mitigation measures, as detailed throughout this Initial Study. For example, as discussed in Section 13, *Noise*, noise generated during project construction and operation would be consistent with the noise regulations of Santa Clarita Municipal Code Chapter 11.40 with implementation of Mitigation Measure NOI-1. In addition, as discussed in Section 1, *Aesthetics*, the project would be consistent with Objectives CO 6.1 through 6.6 in the City's General Plan Conservation and Open Space Element as they relate to scenic quality. As such, the project would not cause a significant environmental impact due to a conflict with the City's land use plans, policies, and regulations adopted for the purpose of avoiding or mitigating an environmental effect. Impacts would be less than significant with mitigation incorporated.

LESS THAN SIGNIFICANT WITH MITIGATION INCORPORATED

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?	☐	☐	☐	■

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 project site is zoned Urban Residential 1 (UR1) and Specific Plan-Open Space (Vista Canyon). The eastern portion of the project site is surrounded by Sulphur Springs Elementary and Gorman Learning Center to the south, the Santa Clara River to the north, residential development to the north, east and southwest. The western portion of the project site is surrounded by open space in all directions, including the Santa Clara River to the north. According to the City's General Plan Final EIR, the project site is in an area with a Mineral Resource Zone 2 designation, which indicates the presence of significant aggregate resources (City of Santa Clarita 2010). However, the site is not designated or zoned for mineral resource extraction, and no mineral resource extraction activities are currently occurring on site. In addition, the nearby residential and school uses are not compatible with mineral extraction activities. Furthermore, the project would not preclude future use of the site for mineral resource extraction. Therefore, the project would result in no impacts to mineral resources.

NO IMPACT

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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?	☐	☐	☐	■

Overview of Noise and Vibration

Noise

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 (California Department of Transportation [Caltrans] 2013).

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, which is most sensitive to frequencies around 4,000 Hertz and less sensitive to frequencies around and below 100 Hertz. Decibels are measured on a logarithmic scale that quantifies sound intensity in a manner similar to the Richter scale used to measure earthquake magnitudes. A doubling of the energy of a noise source, such as doubling of traffic volume, would increase the noise level by 3 dB; dividing the energy in half would result in a 3 dB decrease (Caltrans 2013).

Human perception of noise has no simple correlation with sound energy. The perception of sound is not linear in terms of dBA or in terms of sound energy. Two sources do not "sound twice as loud" as one source. It is widely accepted that the average healthy ear can barely perceive changes of 3 dBA,

increase or decrease (i.e., twice the sound energy); that a change of 5 dBA is readily perceptible (eight times the sound energy); and that an increase (or decrease) of 10 dBA sounds twice (half) as loud (10.5 times the sound energy) (Caltrans 2013).

Sound changes in both level and frequency spectrum as it travels from the source to the receiver. The most obvious change is the decrease in level as the distance from the source increases. The manner by which noise reduces with distance depends on factors such as the type of sources (e.g., point or line, the path the sound will travel, site conditions, and obstructions). Noise levels from a point source typically attenuate, or drop off, at a rate of 6 dBA per doubling of distance (e.g., construction, industrial machinery, ventilation units). Noise from a line source (e.g., roadway, pipeline, railroad) typically attenuates at about 3 dBA per doubling of distance (Caltrans 2013). The propagation of noise is also affected by the intervening ground, known as ground absorption. A hard site, such as a parking lot or smooth body of water, receives no additional ground attenuation and the changes in noise levels with distance (drop-off rate) result simply from the geometric spreading of the source. An additional ground attenuation value of 1.5 dBA per doubling of distance applies to a soft site (e.g., soft dirt, grass, or scattered bushes and trees) (Caltrans 2013). Noise levels may also be reduced by intervening structures; the amount of attenuation provided by this "shielding" depends on the size of the object and the frequencies of the noise levels. Natural terrain features such as hills and dense woods, and man-made features such as buildings and walls, can significantly alter noise levels. Generally, any large structure blocking the line of sight will provide at least a 5-dBA reduction in source noise levels at the receiver (Federal Highway Administration [FHWA] 2011). Structures can substantially reduce exposure to noise as well. The FHWA's guidelines indicate that modern building construction generally provides an exterior-to-interior noise level reduction of 35 dBA for masonry buildings with closed windows.

The impact of noise is not a function of loudness alone. The time of day when noise occurs and the duration of the noise are also important factors of project noise impact. Most noise that lasts for more than a few seconds is variable in its intensity. Consequently, a variety of noise descriptors have been developed. L_{eq} is one of the most frequently-used noise metrics; it considers both duration and sound power level. The L_{eq} is defined as the single steady-state A-weighted sound level equal to the average sound energy over a time period. When no time period is specified, a 1-hour period is assumed. The L_{max} is the highest noise level within the sampling period, and the L_{min} is the lowest noise level within the measuring period. Normal conversational levels are in the 60 to 65-dBA L_{eq} range; ambient noise levels greater than 65 dBA L_{eq} can interrupt conversations (Federal Transit Administration [FTA] 2018).

Noise that occurs at night tends to be more disturbing than that occurring during the day. Community noise is usually measured using Day-Night Average Level (DNL), which is the 24-hour average noise level with a +10 dBA penalty for noise occurring during nighttime hours (10:00 p.m. to 7:00 a.m.); it is also measured using Community Noise Equivalent Level (CNEL), which is the 24-hour average noise level with a +5 dBA penalty for noise occurring from 7:00 p.m. to 10:00 p.m. and a +10 dBA penalty for noise occurring from 10:00 p.m. to 7:00 a.m. (Caltrans 2013).

Vibration

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. Vibration may be felt, may manifest as an audible low-frequency rumbling noise (referred to as groundborne noise), and may cause windows, items on shelves, and pictures on walls to rattle. Although groundborne vibration is sometimes

noticeable in outdoor environments, it is almost never annoying to people who are outdoors. The primary concern from vibration is that it can be intrusive and annoying to building occupants at vibration-sensitive land uses and may cause structural damage. Typically, ground-borne vibration generated by manmade activities attenuates rapidly as distance from the source of the vibration increases. Vibration amplitudes are usually expressed in peak particle velocity (PPV) or root mean squared (RMS) vibration velocity. The PPV and RMS velocity are normally described in inches per second (in/sec). PPV is defined as the maximum instantaneous positive or negative peak of a vibration signal. PPV is often used as it corresponds to the stresses that are experienced by buildings (Caltrans 2020). High levels of groundborne vibration may cause damage to nearby buildings or structures; at lower levels, groundborne vibration may cause minor cosmetic (i.e., non-structural damage) such as cracks. These vibration levels are nearly exclusively associated with high-impact activities such as blasting, pile-driving, vibratory compaction, demolition, drilling, or excavation.

Sensitive Receivers

Noise exposure goals for various types of land uses reflect the varying noise sensitivities associated with those uses. The City's Noise Element describes noise-sensitive land uses as schools, hospitals, childcare, senior care, congregate care, churches, and all types of residential uses (City of Santa Clarita 2011). The nearest noise-sensitive receivers to the eastern portion of the project site consist of residences along La Veda Avenue and Sulphur Springs Elementary School, which are located approximately 45 feet to the south of the proposed pipeline alignment along Lost Canyon Road and approximately 160 feet to the south of the proposed groundwater treatment facility at the closest point. The nearest noise-sensitive receivers to the western portion of the project site consist of single-family residences approximately 315 feet to the southeast from the Mitchell 5B well.

Vibration-sensitive receivers are similar to noise-sensitive receivers and include residences and institutional uses, such as schools, churches, and hospitals. However, vibration-sensitive receivers also include buildings where vibrations may interfere with vibration-sensitive equipment, which can affected by levels that may be well below those associated with human annoyance. The closest vibration-sensitive receivers are the same as the closest noise-sensitive receivers described above.

Project Noise Setting

The most common source of noise in the project site vicinity is vehicular traffic along Lost Canyon Road. To characterize ambient sound levels at and near the project site, two 15-minute sound level measurements were conducted on February 20, 2025. The sound meter was calibrated prior to measurements. As shown in Figure 7, Noise Measurement (ST) 1 was taken along the northern side of Lost Canyon Road, across from Sulphur Springs Elementary School, to measure ambient noise levels on site with traffic and school noise, and ST-2 was taken at the northern property line of 28164 La Veda Avenue to measure ambient noise levels at the nearest residence.
Table 11summarizes the results of the noise measurements, and Table 12 shows the recorded traffic volumes from ST-2. Detailed sound level measurement data are included in Appendix E.

Figure 7 Approximate Noise Measurement Locations

Table 11 Project Site Noise Monitoring Results

Measurement	Location	Sample Times	Approximate Distance to Primary Noise Source	L_{eq} (dBA)	L_{max} (dBA)
ST-1	North side of Lost Canyon Road, across from Sulphur Springs Elementary	8:51 – 9:06 a.m.	Approximately 20 feet to centerline of Lost Canyon Road	64.5	90.6
ST-2	Northern property line of 28164 La Veda Avenue	8:08 – 8:23 a.m.	Approximately 25 feet to centerline of Lost Canyon Road	65.5	81.4

Note: Noise measurements were not taken near the western portion of the project site due to its distance from the nearest sensitive receivers and the relatively low-intensity of construction activities proposed for this area.

Detailed sound level measurement data are included in Appendix E.

Table 12 Noise Monitoring Traffic Counts

Measurement	Roadway	Traffic	Automobiles[1]	Medium Trucks[2]	Heavy Trucks[3]
ST-1	Lost Canyon Road	15-minute count	41	3	0
		One-hour Equivalent	164	12	0
Percent			**93%**	**7%**	**0%**
ST-2	Lost Canyon Road	15-minute count	102	0	0
		One-hour Equivalent	408	0	0
Percent			**100%**	**0%**	**0%**

[1] Automobiles: all vehicles with two axles and four tires -- primarily designed to carry nine or fewer people (passenger cars, vans) or cargo (vans, light trucks) -- generally with gross vehicle weight less than 9,900 pounds.

[2] Medium trucks: all cargo vehicles with two axles and six tires -- generally with gross vehicle weight between 9,900 pounds and 26,400 pounds.

[3] Heavy trucks: all cargo vehicles with three or more axles -- generally with gross vehicle weight more than 26,400 pounds.

Note: Detailed sound level measurement data are included in Appendix E.

Regulatory Setting

Chapter 11.44 of the Santa Clarita Municipal Code contains the City's noise regulations. Section 11.40.040 sets operational noise levels at residential, commercial, and manufacturing uses, which are shown in Table 13.

Table 13 City of Santa Clarita Noise Limits

Land Use[1]	Time	Noise Limit (dB)[2]
Residential Zone	7:00 a.m. to 9:00 p.m. (Day)	65
Residential Zone	9:00 p.m. to 7:00 a.m. (Night)	55
Commercial/manufacturing	7:00 a.m. to 9:00 p.m. (Day)	80
Commercial/manufacturing	9:00 p.m. to 7:00 a.m. (Night)	70

[1] At the boundary line between a residential property and a commercial and manufacturing property, the noise level of the quieter zone shall be used.

[2] Corrections to Noise Limits. The numerical limits above shall be adjusted by the following corrections, where the following noise conditions exist:

- Repetitive impulsive noise: Correction of -5 dB
- Steady whine, screech or hum: Correction of -5 dB
- The following corrections apply to daytime hours only:
  - Noise occurring more than 5 but less than 15 minutes per hour: Correction of +5 dB
  - Noise occurring more than 1 but less than 5 minutes per hour: Correction of +10 dB
  - Noise occurring less than 1 minute per hour: Correction of +20 dB

Source: Santa Clarita Municipal Code Section 11.40.040

Santa Clarita Municipal Code Section 11.44.070 states, "any noise level from the use or operation of any machinery, equipment, pump, fan, air conditioning apparatus, refrigerating equipment, motor vehicle, or other mechanical or electrical device, or in repairing or rebuilding any motor vehicle, which exceeds the noise limits as set forth in Section 11.44.040 at any property line, or, if a condominium or rental units, within any condominium or rental unit within the complex, shall be a violation of this chapter."

Section 11.44.080 states that no person shall engage in any construction work which requires a building permit from the City on sites within 300 feet of a residentially-zoned property, except between the hours of 7:00 a.m. to 7:00 p.m., Monday through Friday, and 8:00 a.m. to 6:00 p.m. on Saturday. Furthermore, no work shall be performed on the following public holidays: New Year's Day, Independence Day, Thanksgiving, Christmas, Memorial Day and Labor Day. According to previous noise reports conducted in the City, City staff have indicated that construction work performed in conformance with Santa Clarita Municipal Code Section 11.44.080 is exempt from Santa Clarita Municipal Code Section 11.44.070 (Impact Sciences, Inc. 2010).

Significance Thresholds

Construction Noise

Although construction activity is exempt from compliance with Santa Clarita Municipal Code Section 11.44.070 if it occurs in conformance with Santa Clarita Municipal Code Section 11.44.080, for purposes of this analysis, the FTA Transit Noise and Vibration Impact Assessment (FTA 2018) criteria are used. The FTA provides reasonable criteria for assessing construction noise impacts based on the potential for adverse community reaction. For residential uses, the daytime noise threshold is 80 dBA L_{eq} for an 8-hour period.

Nighttime construction activities between 7:00 p.m. and 7:00 a.m. may be required for installation of the proposed pipeline along Lost Canyon Road and would therefore be subject to the noise level limits contained in Santa Clarita Municipal Code Section 11.44.070. As a result, the nighttime noise level limit of 55 dBA L_{eq} for residential uses is utilized to evaluate the significance of nighttime construction noise impacts associated with pipeline installation (see Table 13).

Operational Noise

The noise level limits contained in Santa Clarita Municipal Code Section 11.40.040 (see Table 13) were utilized to evaluate the project's operational noise impacts.

Vibration

Vibration limits used in this analysis to determine a potential impact to local land uses from construction activities, such as vibratory compaction or excavation, are based on information contained in the FTA *Transit Noise and Vibration Impact Assessment Manual* (FTA 2018). Groundborne vibration levels that could induce potential architectural damage to buildings are identified in Table 14. Based on FTA recommendations, limiting vibration levels to below 0.2 in/sec PPV at non-engineered timber and masonry buildings (which would apply to the nearby buildings) would prevent architectural damage.

Table 14 Groundborne Vibration Architectural Damage Criteria

Building Category	PPV (in/sec)
I. Reinforced concrete, steel, or timber (no plaster)	0.5
II. Engineered concrete and masonry (no plaster)	0.3
III. Nonengineered timber and masonry buildings	0.2
IV. Buildings extremely susceptible to vibration damage	0.12

PPV = peak particle velocity; in/sec = inches per second
Source: FTA 2018

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?

Construction Equipment

Construction noise was estimated using the FHWA Roadway Construction Noise Model (RCNM). RCNM predicts construction noise levels for a variety of construction operations based on empirical data and the application of acoustical propagation formulas. Using RCNM, construction noise levels were estimated at noise-sensitive receivers near the project site. RCNM provides reference noise levels for standard construction equipment, with an attenuation rate of 6 dBA per doubling of distance for stationary equipment.

Variation in power imposes additional complexity in characterizing the noise source level from construction equipment. Power variation is accounted for by describing the noise at a reference distance from the equipment operating at full power and adjusting it based on the duty cycle of the activity to determine the L_{eq} of the operation (FHWA 2006). Each phase of construction has a specific equipment mix, depending on the work to be accomplished during that phase. Each phase also has its own noise characteristics; some will have higher continuous noise levels than others, and some have high-impact noise levels.

Construction activity would result in temporary noise in the project site vicinity, exposing nearby receivers to increased noise levels. Construction noise would typically be higher during the more intensive phases of construction (i.e., building construction and infrastructure installation) and would be lower during the less intensive construction phases (i.e., site preparation, grading and excavation, and paving and site restoration). Typical heavy construction equipment during building construction and infrastructure installation could include a crane, backhoe and compactor. It is assumed diesel engines would power all construction equipment. Construction equipment would not all operate at the same time or location. In addition, construction equipment would not be in constant use during the 8-hour operating day.

Project construction would occur between May 2026 and May 2028, and the nearest sensitive receivers to construction would be residences along La Veda Avenue and Sulphur Springs Elementary School, approximately 45 feet to the south of the project site. Over the course of a typical construction day, construction equipment would be located as close as 45 feet to these properties during the six-week construction period for the proposed pipeline along Lost Canyon Road but would typically be located at an average distance farther away (a minimum of 80 feet) for the remainder of the construction period due to the nature of construction and the size of the project site.

Daytime Construction Work

A potential construction scenario includes a crane, backhoe and compactor working during building construction and infrastructure installation. All equipment was assumed to operate along the center of Lost Canyon Road to account for the average location of equipment for the pipeline work area. As shown in Table 15, at a distance of 45 feet (i.e., the distance to the nearest sensitive receiver), building construction and infrastructure installation would generate a noise level of 80 dBA L_{eq} for an 8-hour period, which would not exceed the FTA daytime threshold of 80 dBA L_{eq} for an 8-hour period. In addition, daytime construction would occur between the hours of 7:00 a.m. to 7:00 p.m., Monday through Friday, which is the timeframe during which construction is exempt from compliance with the City of Santa Clarita's noise standards. Therefore, daytime construction would not generate a substantial temporary 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, and impacts would be less than significant.

Table 15 Project Construction Noise Levels

Construction Activity Phase	Approximate Noise Level (dBA L_{eq})		
	RCNM Reference Noise Level (50 feet)	Single-Family Residence to the South (45 feet)[1]	Sulphur Springs Elementary School (120 feet)[2]
Site Preparation	74	75	66
Grading and Excavation	76	77	68
Building Construction and Infrastructure Installation	79	80	71
Paving and Site Restoration	74	75	66

dBA = A-weighted decibels, L_{eq} = equivalent noise level

Notes: Calculations performed with the FHWA's RCNM software are included in Appendix E.

[1] Distance from the center of construction activity along proposed pipeline alignment on Lost Canyon Road.

[2] Distance from the center of the eastern portion of the project site.

Nighttime Construction Work

Nighttime construction may occur for a period of approximately six weeks during installation of the proposed pipeline along Lost Canyon Road, which would result in a temporary increase in noise at nearby residences where people may be sleeping. (Sulphur Springs Elementary School is not considered a noise-sensitive receiver for nighttime construction work because it would not typically be open during these hours.) As shown in Table 15, at a distance of 45 feet (i.e., the distance to the nearest residence), infrastructure installation would generate a noise level of 80 dBA L_{eq}, which would exceed the City's exterior noise limit of 55 dBA L_{eq}. Although this impact would be temporary and short-term in duration (i.e., approximately six weeks), nighttime construction is conservatively considered to have the potential to generate a substantial temporary 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, and impacts would be potentially significant. Implementation of Mitigation Measure NOI-1 is required.

Construction Traffic

According to the CalEEMod assumptions for the project, project construction would involve approximately 13 trips per day. According to the City's General Plan, the segment of Sand Canyon Road in the vicinity of the project site has a traffic volume of approximately 9,000 average daily trips (City of Santa Clarita 2011).[11] As such, project construction traffic would result in a less than 0.01 percent increase in existing roadway traffic. Generally, a doubling of traffic would result in a 3 dBA increase, which is the magnitude of noise level increase that is perceptible to humans and would be considered a significant noise increase. The negligible increase in traffic volumes during project construction would not have the potential to double existing traffic volumes on Sand Canyon Road. Therefore, construction traffic would not generate a substantial temporary 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, and impacts would be less than significant.

Operational Mechanical Equipment

The primary on-site operational noise source from the project would be one five-ton HVAC unit at the proposed groundwater treatment facility building , which may operate 24 hours a day depending on weather conditions. Specific mechanical specifications for the proposed HVAC system are not available at this stage of project design. Therefore, this analysis assumes the use of a typical five-ton Carrier 50JCV06 air conditioner that has a sound power level of 79 dBA (see Appendix E), equivalent to a sound pressure level of 71 dBA at three feet. To provide a conservative analysis, it was assumed the HVAC unit would be located on the side of building nearest to Sulphur Springs Elementary School, which is the nearest noise-sensitive receiver, and would thus be approximately 180 feet from the Sulphur Springs Elementary School property line. At this distance, noise generated by the project's HVAC equipment would attenuate to approximately 35 dBA L_{eq}. Nearby residential uses would be located further away from the proposed groundwater treatment facility building, and HVAC noise levels would be lower at these locations. As such, noise generated by the project's HVAC equipment would not exceed the City's residential daytime exterior noise limit of 65 dBA L_{eq} or nighttime exterior noise limit of 55 dBA L_{eq}. Therefore, operational mechanical equipment would not generate a substantial 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, and impacts would be less than significant.

Operational Traffic

The project would involve one daily maintenance trip to the project site, weekly chemical deliveries, and resin change-outs approximately every nine to 12 months. At most, the project would generate six daily one-way trips if daily site visits, the resin media replacement visit, and the chemical delivery visit occur on the same day. Similar to construction traffic, this level of vehicle trips would represent a negligible increase over existing traffic volumes and would result in a negligible noise increase. Therefore, operational traffic would not generate a substantial 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, and impacts would be less than significant.

[11] Existing traffic volumes are based on data from 2011, which results in a more conservative analysis because actual 2025 traffic volumes are anticipated to be higher, which would reduce the project's relative contribution to traffic noise.

Mitigation Measure

NOI-1 Nighttime Construction Noise Reduction Measures

SCV Water shall require the project contractor(s) to implement the following measures during nighttime construction activities:

- All construction equipment, stationary and mobile, shall be equipped with properly operating and maintained mufflers, air-inlet silencers where appropriate, and any other shrouds, shields, or other noise-reducing features that are supplied as standard accessories from the original equipment manufacturer and meet or exceed original factory specifications.
- Routine field inspection of mufflers to ensure proper function shall be performed by the construction manager.
- All noisy equipment shall be operated only when necessary and shall be switched off when not in use. All other equipment shall be turned off if not in use for more than five minutes. The construction manager shall be responsible for enforcing this restriction.
- Stationary noise-generating equipment such as portable power generators shall be located as far as practicable from noise-sensitive receivers.
- A non-automated "hotline" telephone number for registering nighttime construction noise complaints shall be posted at construction site and shall be provided to all residences within 500 feet of the project site along with the estimated nighttime construction schedule. The disturbance coordinator shall determine the cause of noise complaints and institute actions warranted to correct the issue. All complaints shall be logged noting the date, time, complainant's name, nature of the complaint, and any corrective action taken.
- At least two weeks prior to nighttime construction activities, but no more than one month in advance, written notification shall be provided to residents located within 500 feet of the project site identifying the type, duration, and frequency of nighttime construction activities.
- If needed, temporary noise barriers shall be installed to limit construction noise to no more than 55 dBA L_{eq} at nearby residences. Temporary noise barriers shall be constructed with solid materials (e.g., wood) with a density of at least 1.5 pounds per square foot with no gaps from the ground to the top of the barrier at a minimum height of 12 feet along the boundaries of the project site facing noise-sensitive receivers. If a sound blanket is used, barriers shall be constructed with solid material with a density of at least one pound per square foot with no gaps from the ground to the top of the barrier and be lined on the construction side with acoustical blanket, curtain or equivalent absorptive material rated sound transmission class 32 or higher.

Significance After Mitigation

Implementation of Mitigation Measure NOI-1 would require the use of several noise reduction measures during nighttime construction, including resident notification, a noise complaint hotline, and noise attenuation measures, which would reduce construction noise to at or below the City's nighttime exterior noise limit of 55 dBA L_{eq} at the nearest residences. Therefore, implementation of Mitigation Measure NOI-1 would reduce project impacts related to nighttime construction noise to a less-than-significant level.

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

Construction

Construction activities have the greatest potential to generate ground-borne vibration affecting nearby receivers, especially during paving and site restoration phase of the project site. Neither blasting nor pile driving would be required for construction of the project. The greatest vibratory source during construction in the project vicinity would be a vibratory roller, which may be used within 40 feet of the nearest off-site structure. Table 16 shows typical vibration levels for various pieces of construction equipment used in the assessment of construction vibration. As shown therein, a vibratory roller would create a vibration level of approximately 0.210 in/sec PPV at a distance of 25 feet (FTA 2018), which would attenuate to a vibration level of 0.104 in/sec PPV at a distance of 40 feet. This level of vibration would not exceed the significance threshold of 0.2 in/sec PPV for nonengineered timber and masonry buildings, which is appropriate to use in evaluating impacts to residential buildings. Therefore, project construction would not generate excessive groundborne vibration or groundborne noise levels, and impacts would be less than significant.

Table 16 Construction Vibration Levels

	PPV (in/sec)		
Equipment	**Reference Level (25 Feet)**	**Nearest Residential Building (50 Feet)**	**Sulphur Springs Elementary School (60 Feet)**
Vibratory Roller	0.210	0.074	0.074
Loaded Trucks	0.076	0.027	0.027
Small Bulldozer	0.003	0.001	0.001
FTA Threshold for Building Damage	–	0.2	0.2
Threshold Exceeded?	–	**No**	**No**

Source: FTA 2018
PPV = peak particle velocity; in/sec = inches per second
Note: Vibration analysis worksheets are included in Appendix E.

Operation

The project does not include any substantial vibration sources associated with operation. Therefore, project operation would not generate excessive groundborne vibration or groundborne noise levels, and no impact would occur.

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?

The project site is not located in the vicinity of an airport. The nearest airport is Whiteman Airport, located approximately 11 miles to the south of the project site. The project site is not within the 65 CNEL noise contour of this airport (County of Los Angeles 2011). Therefore, the project would not expose people working in the project area to excessive airport noise levels, and no impact would occur.

NO IMPACT

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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?	☐	☐	☐	■

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)?

The proposed project would not result in the construction of new homes and therefore would not directly induce substantial unplanned population growth. The project involves the construction and improvement of water infrastructure in a residential area of Santa Clarita, including the improvement and decommissioning of existing groundwater wells and the construction of underground pipelines and a new groundwater treatment facility. The proposed groundwater treatment facility would enable SCV Water to restore the use of the Sand Canyon and Lost Canyon 2A wells. The purpose of the proposed project is to reduce SCV Water's dependence on imported water supplies by restoring its groundwater production capacity. The proposed project would not result in an increase in SCV Water's basin-wide groundwater pumping as compared to baseline conditions when the Sand Canyon and Lost Canyon 2A wells were operational; thus, the project would not provide an additional source of water supplies to serve new population growth. Rather, the project would enable SCV Water to continue providing its existing customers with a safe, reliable water supply. As such, the proposed project would not increase water supply such that it would facilitate the development of land that previously could not be developed due to water service constraints. In addition, project operation would not require any new employees because the employees who would operate the facility would be sourced from SCV Water's existing workforce. Therefore, the project would not induce substantial unplanned population growth in the area, either directly or indirectly. No impact would occur.

NO IMPACT

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

The proposed project involves construction of a groundwater treatment facility and associated pipelines as well as improvements to and decommissioning of existing wells. The project would not include demolition of existing housing. As such, the project would not displace people or housing, and no impact would occur.

NO IMPACT

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?	☐	☐	☐	■

a.1. Would the project result in substantial adverse physical impacts associated with the provision of new or physically altered fire protection facilities, or the need for new or physically altered fire protection facilities, the construction of which could cause significant environmental impacts, in order to maintain acceptable service ratios, response times or other performance objectives?

a.2. Would the project result in substantial adverse physical impacts associated with the provision of new or physically altered police protection facilities, or the need for new or physically altered police protection facilities, the construction of which could cause significant environmental impacts, in order to maintain acceptable service ratios, response times or other performance objectives?

a.3. Would the project result in substantial adverse physical impacts associated with the provision of new or physically altered schools, or the need for new or physically altered schools, the construction of which could cause significant environmental impacts, in order to maintain acceptable service ratios or other performance objectives?

a.4. Would the project result in substantial adverse physical impacts associated with the provision of new or physically altered parks, or the need for new or physically altered parks, the construction of which could cause significant environmental impacts, in order to maintain acceptable service ratios or other performance objectives?

a.5. Would the project result in substantial adverse physical impacts associated with the provision of other new or physically altered public facilities, or the need for other new or physically altered public facilities, the construction of which could cause significant environmental impacts, in order to maintain acceptable service ratios, response times or other performance objectives?

As discussed in Section 14, *Population and Housing*, the proposed project would not directly or indirectly induce population growth that may increase demand for fire protection services, police protection services, schools, parks or other public facilities. The proposed project would not include features or facilities requiring additional or unusual fire protection resources during operation. In the event of the unexpected need for fire protection for the project, the closest fire station is the Los Angeles County Fire Department Fire Station No. 132, located approximately 1.3 miles northwest of the project site. In addition, the project would include security measures that would minimize the need for additional police protection services, such as a concrete masonry unit wall with sliding gates for secure vehicle and pedestrian access to the groundwater treatment facility, a concrete masonry unit wall around the Sand Canyon well, and lighting around the treatment facility building and site ingress/egress. As such, the proposed project would not increase demand for fire protection, police protection, schools, parks, or other public facilities. Therefore, the project would not 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 fire protection, police protection, schools, parks, or other public facilities. No impacts 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?	☐	☐	☐	■

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?

As discussed in Section 15, *Public Services*, project construction may require a temporary lane closure during installation of the proposed pipeline along Lost Canyon Road, which could impact access to Vista Canyon Park, located approximately 875 feet to the west of this portion of the project site, due to increased congestion. Signage and traffic control measures would be implemented along Lost Canyon Road, including a flag person to direct two-way traffic flows along the single available lane, thereby maintaining access to Vista Canyon Park via Lost Canyon Road. In addition, park visitors would alternately be able to access the park via Mitchell Drive. Should park visitors be deterred by congestion, they may choose to temporarily instead use other nearby parks, such as Oak Spring Canyon Park (approximately 0.9 mile northeast) and Canyon Country Park (approximately 1.0 mile to the west) during project construction. However, this temporary and partial disruption to access to Vista Canyon Park via Lost Canyon Road would last for approximately six weeks of the approximately 19-month construction period, and would not be substantial enough to cause substantial physical deterioration of other existing neighborhood and regional parks and recreational facilities, such as Canyon Country Park. Therefore, construction impacts related to recreation would be less than significant.

Upon completion of construction, the portion of Lost Canyon Road disturbed by project construction activities would be restored to its existing condition or better. The project would not result in ongoing, long-term impacts to access to Vista Canyon Park; therefore, operational impacts would be less than significant.

LESS-THAN-SIGNIFICANT IMPACT

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

The project does not include recreational facilities and would not otherwise require the construction or expansion of recreational facilities. Therefore, no impact would occur.

NO IMPACT

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?	☐	■	☐	☐

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

The project site is located primarily along a local residential street – Lost Canyon Road. Lost Canyon Road does not have any bicycle lanes or transit facilities. Sidewalks are present along the eastbound lane of Lost Canyon Road. The nearest transit facility to the project site is the Vista Canyon Regional Transportation Center located approximately 0.3 mile southeast of the western portion of the project site and 0.6 mile southwest of the eastern portion of the project site.

Temporary closure of one lane of the Lost Canyon Road may be necessary during construction of the pipeline along this roadway. Construction activities would be short-term, and at least one lane would be maintained open to traffic. Should a lane closure be required, signage and traffic control measures, including a flag person to direct traffic flows, would be implemented.

Project construction would require vehicle trips, including construction workers traveling to and from the project site, haul trucks (including for import and export of soil materials), and other trucks associated with equipment, material, and concrete deliveries. Heavy-duty equipment would be staged on the project site, reducing the need for daily vehicle trips. The number of vehicle trips associated with construction workers would be minimal and typical of similar-sized construction projects in the region. Construction-related traffic would be short-term and would cease upon completion of construction activities. Construction-related vehicle trips would be infrequent, and drivers would be required to comply with local traffic control measures (e.g., stop signs) and posted speed limits. Project construction activities would primarily affect Lost Canyon Road, which provides vehicular access to Sulphur Springs Elementary School and Gorman Learning Center. The presence of heavy construction vehicles and a temporary lane closure on Lost Canyon Road could contribute to congestion if heavy truck traffic is traveling to and from the project site or if a lane closure occurs

during school drop-off and pick-up hours. Therefore, project construction may conflict with a program, plan, ordinance or policy addressing the circulation system, including transit, roadway, bicycle and pedestrian facilities, and impacts would be potentially significant. Implementation of Mitigation Measure TRA-1 would be required to reduce impacts to a less-than-significant level.

Operation of the proposed project would require daily site visits by SCV Water staff, which would be integrated into existing staff rounds, and weekly chemical deliveries, which would be integrated into existing routine chemical deliveries in SCV Water's service area. Resin change-outs would occur approximately every nine to 12 months. At most, the project would generate six daily one-way trips if daily site visits, the resin media replacement visit, and the chemical delivery visit occur on the same day, aligning with similar projects in the region. Given the minimal number of trips generated, project operation would not conflict with a program, plan, ordinance or policy addressing the circulation system, including transit, roadway, bicycle and pedestrian facilities, and impacts would be less than significant.

Mitigation Measure

TRA-1 Transportation Congestion Conflict Reduction Measures

SCV Water shall restrict the construction contractor(s) from transporting heavy-duty construction equipment and materials to the project site during school pick-up and drop-off times (typically between 7:45 and 8:45 a.m. on weekdays, between 3:00 and 3:45 p.m. on Mondays, Tuesdays, Thursdays, and Fridays; and between 2:00 and 2:45 p.m. on Wednesdays during the school year). SCV Water shall also inform Sulphur Springs Elementary School and Gorman Learning Center of the anticipated construction timeframe at least two weeks in advance of the start of construction activities so that Sulphur Springs Elementary School and Gorman Learning Center may notify parents and guardians of students of the potential for construction traffic along Lost Canyon Road. SCV Water shall also notify Sulphur Springs Elementary School and Gorman Learning Center at least two weeks in advance of a lane closure along Lost Canyon Road and work with school staff to establish appropriate traffic circulation routes, signage, and traffic control measures to minimize impacts to school pick-up and drop-off.

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

CEQA Guidelines Section 15064.3(b) identifies criteria for evaluating transportation impacts. Specifically, the guidelines state vehicle miles traveled (VMT) exceeding an applicable threshold of significance may indicate a significant impact. According to CEQA Guidelines Section 15064.3(b)(3), a lead agency may include a qualitative analysis of operational and construction traffic. A VMT calculation is typically conducted on a daily or annual basis to determine operational usage of a project. Construction of the proposed project would result in a minimal, short-term increase in local VMT as a result of construction-related worker traffic, material and equipment deliveries, and construction activities. However, VMT generated from construction-related traffic would cease once construction is completed.

The Governor's Office of Planning and Research *Technical Advisory on Evaluating Transportation Impacts in CEQA* (2018) states, "Projects that generate or attract fewer than 110 trips per day generally may be assumed to cause a less-than-significant VMT impact." As discussed under

threshold 17(a), project operation and maintenance activities would generate approximately six daily trips if the daily site visit, resin media replacement visit, and chemical delivery visit occur on the same day. This level of daily traffic would not exceed the VMT screening level of 110 trips per day. As a result, the project would not conflict or be inconsistent with CEQA Guidelines Section 15064.3(b), and impacts 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 includes the construction of a new driveway entrance along Lost Canyon Road; no sharp curves or dangerous intersections are proposed. Access to the site would be through the new entrances on Lost Canyon Road, which would be utilized by SCV Water staff and delivery vehicles and would not be open to the public. As discussed in Section 9, *Hazardous and Hazardous Materials*, a temporary lane closure along Lost Canyon Road may be required during installation of the proposed pipeline. During this closure, signage and traffic control measures would be implemented, including a flag person to direct two-way traffic flows along the single available lane. Furthermore, Lost Canyon Road would be resurfaced upon completion of construction activities if damage from construction equipment occurs. Therefore, the project would not substantially increase hazards due to a geometric design feature or incompatible use during construction or operation. Impacts would be less than significant.

LESS-THAN-SIGNIFICANT IMPACT

d. Would the project result in inadequate emergency access?

As discussed in Section 9, *Hazards and Hazardous Materials,* A temporary lane closure along Lost Canyon Road may be required during construction of the proposed pipeline. In this event, signage and traffic control measures would be implemented, including a flag person to direct two-way traffic flows along the single available lane. Construction of the proposed pipeline would be temporary and short-term, lasting approximately six weeks, which would minimize impacts to local circulation. However, access to the residential neighborhood west of the project site is limited to two access points, one via Mitchell Drive and one via Lost Canyon Road. A temporary lane closure along Lost Canyon Road could result in delays in emergency vehicle access or hinder potential evacuation for this residential neighborhood and thereby affect emergency access. Therefore, impacts during project construction would be potentially significant, and implementation of Mitigation Measure HAZ-1 would be required. This measure would require contractors to prepare and implement a traffic control plan that specifies how traffic will be safely and efficiently redirected during a lane closure and includes advance warning signage at key locations to direct motorists toward alternate routes in the event of an emergency. In addition, staging equipment and temporary work areas utilized during construction of the proposed project would be located within the project site and would not be located in the public right-of-way.

During operation, the project would provide adequate site access for emergency response with the proposed access driveway. Therefore, project operation would not result in inadequate emergency access, and impacts would be less than significant.

LESS THAN SIGNIFICANT WITH MITIGATION INCORPORATED

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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.	☐	■	☐	☐

AB 52 of 2015 expanded CEQA by defining a new resource category, "tribal cultural resources." AB 52 states, "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 the lead agency shall establish measures to avoid impacts altering the significant characteristics of a tribal cultural resource, when feasible (PRC Section 21084.3). PRC Sections 21074(a)(1)(A-B) define 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.

AB 52 also establishes a formal consultation process for California tribes regarding those resources. The consultation process must be completed before a CEQA document can be certified or adopted. Under AB 52, lead agencies are required to "begin consultation with a California Native American tribe that is traditionally and culturally affiliated with the geographic area of the proposed project." Native American tribes to be included in the process are those having requested notice of projects proposed in the jurisdiction of the lead agency.

On February 13, 2025, SCV Water distributed AB 52 consultation letters for the proposed project, including project information, map, and contact information, to four Native American Tribes (see Appendix F). The Native American contacts provided with an AB 52 consultation letters include the following list of recipients:

- FTBMI
- Gabrieleño Band of Mission Indians – Kizh Nation
- Torres Martinez Desert Cahuilla Indians
- San Gabriel Band of Mission Indians

Under AB 52, Native American tribes have 30 days to respond and request further project information and formal consultation. Therefore, the consultation request period for all tribes closed on March 17, 2025.

SCV Water received one response from Miguel Luna, Chief Administrative Officer, of FTBMI, who submitted a formal request for tribal consultation on March 3, 2025. On March 18, 2025, SCV Water held a consultation meeting with Sarah Brunzell, Cultural Resources Management Division Manager and Miguel Luna. The results of this meeting are summarized below. Tribal consultation is ongoing.

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?

A search of the NAHC Sacred Lands File was returned with negative results, indicating there are no known tribal cultural resources in the project area. One Native American Tribe, the FTBMI, requested consultation under AB 52. During the consultation meeting held on March 18, 2025, Sarah Brunzell of the FTBMI indicated the presence of several tribal cultural resources within close proximity to the project site, including one within 700 feet, and expressed concerns about the tribal cultural resource sensitivity of the project site. As a result, Sarah Brunzell requested full-time Native American monitoring of initial ground-disturbing activities (not including demolition). On March 27, 2025, Miguel Luna provided SCV Water with suggested language for tribal cultural resources mitigation measures. Mitigation Measure TCR-1 has been included in response to the FTBMI's

request for full-time Native American monitoring of initial ground-disturbing activities, and other requested provisions have been incorporated into Mitigation Measure CR-1 in Section 5, *Cultural Resources*. Furthermore, as indicated in Section 5, *Cultural Resources*, SCV Water would be required to comply with existing regulations outlined in California Health and Safety Code Section 7050.5 should human remains be inadvertently discovered during construction. Implementation of Mitigation Measures CR-1 and TCR-1 along with regulatory compliance with California Health and Safety Code Section 7050.5 would be required to reduce impacts to tribal cultural resources to a less-than-significant level.

Mitigation Measure

TCR-1 Native American Monitoring

SCV Water shall retain a professional Tribal Monitor from a locally-affiliated tribe (e.g., Fernandeño Tataviam Band of Mission Indians [FTBMI]) to observe new ground-disturbing activities within the project site, including grubbing, grading, trench excavation, and underground utility installation. No monitoring will be required for decommissioning the existing Mitchell 5B and Lost Canyon 2 wells. One Tribal Monitor shall be required on-site for all project-related ground-disturbing activities. However, if ground-disturbing activities occur in more than one area at the same time, then the parties may mutually agree to additional monitors to ensure that simultaneously occurring ground-disturbing activities receive thorough levels of monitoring coverage. If the project's scheduled activities require the Tribal Monitor(s) to leave the project site for a period of time and return, SCV Water shall provide confirmation to the Tribe by SCV Water, in writing, upon completion of each set of scheduled activities. SCV Water shall provide a minimum of 48 hours' notice (five days when feasible) to the Tribe, in writing, prior to recommencement of ground-disturbing activities. If cultural resources archaeological resources of Native American origin are encountered, the Tribal Monitor will have the authority to request ground disturbing activities cease within 60 feet of the discovery to assess and document potential finds in real time. Native American monitoring may be reduced to spot-checking or eliminated at the discretion of the monitor, in consultation with SCV Water, as warranted by conditions such as encountering bedrock, sediments being excavated are fill, or negative findings during the first 60 percent of rough grading. If monitoring is reduced to spot-checking, spot-checking shall occur when new ground disturbance moves to a new location within the project site and when ground disturbance will extend to depths not previously reached (unless those depths are within bedrock).

Significance after Mitigation

Implementation of Mitigation Measure TCR-1 as well as Mitigation Measure CR-1 (described in Section 5, *Cultural Resources*) would reduce potential impacts to tribal cultural resources to a less-than-significant level by requiring Native American monitoring of ground disturbance during construction activities and appropriate procedures for evaluation and treatment should any discoveries be made during construction.

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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?	☐	☐	■	☐

a. wastewater treatment or storm water drainage, electric power, natural gas, or telecommunications facilities, the construction or relocation of which could cause significant environmental effects?

Water

The proposed project would involve the construction of water treatment and conveyance infrastructure, the environmental effects of which are analyzed and mitigated throughout this document. Therefore, no additional environmental impacts associated with the relocation and construction of water facilities would occur.

Wastewater Treatment

The proposed project includes construction of a restroom within the proposed treatment facility building, which would connect to the existing sewer system in Lost Canyon Road. Therefore, the project would not result in the construction or relocation of additional new or expanded wastewater facilities, and no impact would occur.

Stormwater Drainage

As discussed in Section 10, *Hydrology and Water Quality*, the project would minimally alter drainage patterns on site, primarily due to the addition of approximately 5,000 square feet of impervious surfaces associated with the groundwater treatment facility. Stormwater runoff would continue to be directed towards the Santa Clara River, as under existing conditions. Other project components, such as improvements to the existing Sand Canyon and Lost Canyon 2A wells, decommissioning of the Mitchell 5B and Lost Canyon 2 wells, and the installation of belowground pipelines, would have little to no potential to result in additional stormwater runoff because existing drainage conditions would remain largely unchanged after the completion of construction. Therefore, the project would not require or result in the relocation or construction of new or expanded stormwater drainage facilities, the construction or relocation of which could cause significant environmental effects, and impacts would be less than significant.

Electric Power

Operation of the proposed project would require approximately 770 to 900 kWh of electricity daily, or approximately 280 to 330 MWh annually. However, the facility would tie-in to existing electrical lines adjacent to the project site via a new pad-mounted transformer installed on the project site, and the existing pole-mounted transformers would be removed. In addition, new underground conduits and wires would be routed to the existing Lost Canyon 2A and Sand Canyon well pump sites, and the electrical service to the Mitchell 5B well would be disconnected and removed. The environmental effects of these modifications to electric power facilities are analyzed and mitigated throughout this document. Therefore, no additional environmental impacts associated with the relocation and construction of electric power facilities would occur.

Natural Gas

The project would not involve any components requiring natural gas service and would not involve the relocation of existing natural gas facilities. Therefore, no impact related to natural gas facilities would occur.

Telecommunications

The proposed project includes installing a SCADA system as part of the groundwater treatment facility to provide communications to SCV Water's central station. The environmental impacts of this infrastructure have been evaluated in this document, and no additional impacts from the construction or relocation of telecommunications facilities are expected. Therefore, no impacts related to telecommunications facilities would occur.

NO IMPACT

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?

The project involves construction of a groundwater treatment facility and associated infrastructure. The proposed groundwater treatment facility would enable SCV Water to restore the use of the Sand Canyon and Lost Canyon 2A wells. The purpose of the proposed project is to reduce SCV Water's dependence on imported water supplies by restoring its groundwater production capacity. The proposed project would not result in an increase in SCV Water's basin-wide groundwater pumping as compared to baseline conditions when the Sand Canyon and Lost Canyon 2A wells were operational; thus, the project would not provide an additional source of water supplies to serve new population growth. Rather, the project would enable SCV Water to continue providing its existing customers with a safe, reliable water supply during normal, dry, and multiple dry years in accordance with the SCV Water Urban Water Management Plan and the Santa Clara River Valley East Groundwater Subbasin GSP. Therefore, no impacts to water supply would occur.

NO IMPACT

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?

The proposed project would include the construction of a restroom within the proposed treatment facility building, which would connect to the existing sewer system in Lost Canyon Road. Wastewater generated on site would ultimately be conveyed to Santa Clarita Valley Sanitation District Valencia Water Reclamation Plant. Project operation would require daily site visits by existing SCV Water staff, who may choose to use the on-site restroom instead of restrooms at other SCV Water facilities, meaning there would be no net change in wastewater generation in the local sewershed (i.e., the area served by a wastewater treatment plant). Therefore, the project would not result in a determination by the Santa Clarita Valley Sanitation District that it does not have adequate capacity to serve the project's projected demand in addition to its existing commitments. No impact would occur.

NO 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?

Sunshine Canyon Landfill would receive solid waste generated by the proposed project. The landfill is located approximately 8.5 miles southwest of the project site and has a permitted capacity of 140.9 million cubic yards and a maximum permitted throughput of 12,100 tons per day. As of May 2024, the remaining capacity at the landfill was approximately 66.2 million cubic yards. Sunshine Canyon Landfill accepts a variety of waste, including inert, industrial, construction/ demolition, green materials, and mixed municipal waste (California Department of Resources Recycling and Recovery 2025).

Project construction would temporarily generate solid waste, including approximately 60 cubic yards of excavated soil to be exported from the project site. Construction-generated solid waste would be disposed of in accordance with all applicable federal, state, and local statutes and regulations. Given the minimal level of demolition debris, Sunshine Canyon Landfill would have the capacity to accept non-hazardous solid waste generated by project construction activities. Once constructed, solid waste produced by project operation would primarily include spent resin media from the treatment vessels. The spent resin, which may be considered a hazardous waste depending on the concentration of PFAS, would be collected every 9 to 12 months by the resin supplier who would be required to transport and dispose of the material at a licensed hazardous waste disposal facility in accordance with all applicable regulations, such as the Hazardous Materials Transportation Act, California Hazardous Material Management Act, and California Code of Regulations, Title 22. The project would not generate solid waste in excess of state or local standards, and would comply with all federal, state, and local management statutes and regulations, including those for hazardous waste in the event that spent resin is determined to be hazardous waste. The project would not impair the attainment of solid waste reduction goals. Therefore, impacts to solid waste would be less than significant.

LESS-THAN-SIGNIFICANT IMPACT

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?	☐	☐	☐	■

The entire coastal southern California region is prone to large wildfires due to its hot, dry climate and expansive coverage of ignitable vegetation. During the autumn and winter months, strong offshore Santa Ana wind events carry dry, desert air and can fan fast-moving fires that spread rapidly from heavily-vegetated wilderness and mountainous areas into developed communities. The city of Santa Clarita is urbanized but is surrounded by undeveloped open space. The area is prone to regular brush fires, particularly during summer heat waves, which can pose a safety risk. Recent fires in the project site vicinity include the 10,425-acre Hughes Fire in January 2025, which burned approximately 10 miles northwest of the project site, as well as the 1,525-acre Soledad Fire east of Santa Clarita in July 2020, the 650-acre North Fire near Castaic north of Santa Clarita in April 2021, and the 5,208-acre Route Fire near Castaic in August 2022 (California Department of Forestry and Fire Protection 2022 and 2025).

While a natural ecological process in coastal chaparral and forest systems, wildfire return intervals have decreased throughout southern California, resulting in more frequent ecological disturbance, loss of biodiversity, and colonization by non-native grass species (United States Forest Service 2005).

Furthermore, post-fire conditions leave exposed mountain slopes and hillsides vulnerable to surface erosion and runoff. Debris flows during post-fire rainy seasons can pose a risk to life and property and occur with little warning. In southern California, as little as 0.3 inch of rain in 30 minutes can produce debris flows on post-fire landscapes (United States Geological Survey 2018).

The project site is not located in a designated VHFHSZ or a SRA.[12] However, the nearest VHFHSZ is approximately 50 feet to the south and west of the nearest project component, which is the proposed pipeline alignment along Lost Canyon Road (California Department of Forestry and Fire Protection 2024). Therefore, for the purposes of this analysis, the project site is considered to be located near a VHFHSZ. In addition, as discussed in Section 9, *Hazards and Hazardous Materials,* the project site is adjacent to brush-covered open space vegetated with native plant communities, which are highly combustible.

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?

The City's Local Hazard Mitigation Plan (2021) sets forth hazard mitigation strategies related to a variety of threats, including wildfire. Strategies towards mitigating wildfire include working with the Los Angeles County Fire Department to enhance emergency service and increase the efficiency of response times, enhance outreach and education programs on wildfires, encourage and increase communication among wildland/urban interface property owners, and enhance the City's Urban Forestry ability to manage wildfire events. The proposed project does not include components that would interfere with implementation of the City's Local Hazard Mitigation Plan.

As discussed in Section 9, *Hazards and Hazardous Materials*, construction of the proposed treatment facilities would require a temporary lane closure during installation of the pipeline along Lost Canyon Road that could impede emergency response during project construction by slowing traffic and thereby affect implementation of emergency response and emergency evacuation plans. As a result, impacts during project construction would be potentially significant, and implementation of Mitigation Measure HAZ-1 (outlined in Section 9, *Hazards and Hazardous Materials*) would be required to reduce impacts to a less-than-significant level.

The project does not include changes to the existing street system that could result in inadequate emergency access, and project operation and maintenance would not introduce new activities or substantial operational traffic with the potential to interfere with emergency response and evacuations. Therefore, no operational impacts related to emergency response plans and emergency evacuation plans would occur.

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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?

As discussed in Section 9, *Hazards and Hazardous Materials,* project operation would not involve activities with potential wildfire ignition risk. However, project construction in proximity to vegetated areas would have the potential to result in wildfire ignition. The project site consists of

[12] The western portion of the project site was formerly classified as a Moderate Fire Hazard Severity Zone in an SRA but was recently re-classified to the Local Responsibility Area and is not a VHFHSZ (California Department of Forestry and Fire Protection 2024).

previously developed/disturbed areas and native vegetation communities, including big sagebrush scrub, thick-leaved yerba santa scrub, and upland mustards, which are characterized by high combustibility. Potential ignition sources may include sparks from exhaust pipes, discarded cigarette butts, contact of mufflers with dry grass, other sources of sparks or flame, and spills or releases of flammable materials such as gasoline. PRC 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. Nevertheless, the project may exacerbate wildfire risks during construction, and impacts would be potentially significant. Implementation of Mitigation Measure HAZ-2 (outlined in Section 9, *Hazards and Hazardous Materials*), which includes a suite of fire prevention measures for construction activities, would be required to reduce impacts to a less-than-significant level.

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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 proposed project consists of the construction of a groundwater treatment facility and pipelines well as improvements to and decommissioning to existing groundwater wells. As discussed in Section 19, *Utilities and Service Systems,* the project would not result in the relocation or construction of new or expanded utility infrastructure beyond those facilities included in the proposed project. The project would not include roads, fuel breaks, emergency water sources, or above-ground power lines that would exacerbate fire risk or result in temporary or ongoing impacts to the environment. Furthermore, the proposed project does not include habitable structures and would not substantially change the topography of the project site. Therefore, the project would not expose people to significant risks as a result of runoff, post-fire slope instability, or drainage changes, and no impacts would occur.

NO IMPACT

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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?	☐	■	☐	☐

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?

As discussed in Section 4, *Biological Resources*, the proposed project would not substantially reduce the habitat of fish and wildlife species, cause a fish or wildlife population to drop below self-sustaining levels, eliminate a plant or animal community, or substantially reduce the number or restrict the range of a rare or endangered plant or animal. In addition, as discussed in Section 5, *Cultural Resources*, the project would not eliminate important examples of the major periods of California history or prehistory because none are known to be present in the project area. Impacts would be less than significant.

LESS-THAN-SIGNIFICANT IMPACT

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)?

Cumulative impacts are defined as two or more individual (and potentially less than significant) project effects which, when considered together or in concert with other projects, combine to result in a significant impact within an identified geographic area. Cumulatively considerable impacts could occur if the construction of other projects occurs at the same time as the proposed project and in the same vicinity, such that the effects of similar impacts of multiple projects combine to expose adjacent sensitive receptors to greater levels of impact than would occur under the proposed project. For example, if the construction of other projects in the area occurs at the same time as construction of the proposed project, potential impacts associated with noise and traffic in the project area may be more substantial. Major cumulative development in the vicinity of the project site includes the following (City of Santa Clarita 2025):

- **Vista Canyon Bridge and Road Improvements Project.** This project involves the construction of a two-lane bridge, approximately 780 feet in length, and improvements to Soledad Canyon Road and Vista Canyon Boulevard.
- **Sand Canyon Village.** This project involves the construction of 580 residential units, approximately 45,000 square feet of retail/commercial space, and a 147,000-square-foot assisted living facility in an area northeast of Sand Canyon Road and Soledad Canyon Road. Construction of the first phase of this project began in 2023.
- **Vista Canyon Ranch.** This project involves the construction of 1,100 residential units and 950,000 square feet of commercial space in an area south of the Santa Clara River along Lost Canyon Road, between Fair Oaks Avenue and Sand Canyon Road.

Project impacts are primarily temporary, localized effects that would occur during construction activities. As discussed throughout this IS-MND, the project would result in no impacts to agriculture and forestry resources, energy, mineral resources, population and housing, and public services; therefore, the project would not contribute to cumulative impacts to these resources. The potential for the project to contribute to cumulative impacts would be limited to the infrequent periods of project activities and the following specific issue areas, for which the project is anticipated to have less than significant impacts (with or without mitigation):

- **Aesthetics:** Cumulative development in the region could continue to change the existing visual landscape. The projects listed above, in addition to other planned development in Santa Clarita, would introduce multi-story residential and commercial uses to previously undeveloped areas located on hillsides and/or within the viewshed of the Santa Clara River. While cumulative development would be subject to existing regulations governing scenic character, including the City's General Plan, development would likely impact scenic vistas and visual character in Santa Clarita, resulting in a significant cumulative impact to aesthetics. However, the proposed project would result in a minor, localized change to public views of scenic vistas and would not conflict with applicable zoning and other regulations governing scenic quality. Therefore, while cumulative impacts related to aesthetics may be significant, the proposed project would not result in a cumulatively considerable contribution to this impact.
- **Air Quality:** Because the SCAB is designated as nonattainment for the ozone and $PM_{2.5}$ NAAQS and CAAQS and nonattainment for the PM_{10} CAAQS, significant cumulative air quality impacts currently exist for these pollutants. As discussed in Section 3, *Air Quality,* the proposed project

would not generate emissions of these air pollutants that exceed the SCAQMD significance thresholds, which are intended to assess whether a project's contribution to existing cumulative air quality impacts is considerable. Therefore, the project's contribution to significant cumulative air quality impacts would not be cumulatively considerable.

- **Biological Resources:** Cumulative development in the region would continue to disturb areas with the potential to contain or provide habitat for regulated biological resources. Cumulative development projects have undergone or would be required to undergo CEQA review, which would determine the extent of potential biological resources impacts and mitigate those impacts appropriately. If these cumulative projects would result in significant impacts to biological resources, impacts to such resources would be addressed on a case-by-case basis. Given the uncertainty in the extent of impacts associated with these projects, this analysis conservatively assumes a significant cumulative impact to biological resources would occur. Nevertheless, as discussed in Section 4, *Biological Resources*, project impacts to biological resources would be localized and primarily limited to the temporary construction period with minimal permanent impacts to suitable habitat for special-status species (approximately 0.19 acre of big sagebrush scrub and 0.01 acre of thick-leaved yerba santa scrub) and state protected waters, including riparian habitat (approximately 0.03 acre). In addition, the proposed project would be required to implement Mitigation Measures BIO-1 through BIO-6 to reduce its temporary and permanent impacts to biological resources to a less-than-significant level such that project-level impacts would not result in a cumulatively considerable contribution to this cumulative impact.
- **Cultural and Tribal Cultural Resources:** Cumulative development in the region would continue to disturb areas with the potential to contain cultural and tribal cultural resources. As mentioned above, cumulative development projects have undergone or would be required to undergo CEQA review, which would determine the extent of potential cultural and tribal resources impacts and mitigate those impacts appropriately. If cumulative projects would result in impacts to known or unknown cultural and tribal cultural resources, impacts to such resources would be addressed on a case-by-case basis. Given the uncertainty in the extent of impacts associated with these projects, this analysis conservatively assumes a significant cumulative impact to cultural and tribal cultural resources would occur. Nevertheless, no cultural or tribal cultural resources are known to be present within the project site, and the proposed project would be required to implement Mitigation Measures CR-1 and TCR-1 to reduce its impacts to unanticipated discoveries of cultural resources and archaeological resources of Native American origin to a less-than-significant level such that project-level impacts would not result in a cumulatively considerable contribution to these cumulative impacts.
- **Geology and Soils:** Impacts related to geology and soils are generally localized and site-specific based on soil characteristics and seismic hazards. However, cumulative development in the region would continue to disturb areas with the potential to contain paleontological resources. As discussed above, cumulative development projects have undergone or would be required to undergo CEQA review, which would determine the extent of potential paleontological resources impacts and mitigate those impacts appropriately. This analysis conservatively assumes a significant cumulative impact to paleontological resources would occur. However, as discussed in Section 7, *Geology and Soils*, sediments within the project site that would be impacted by the proposed project are generally considered too young to contain paleontological resources. Therefore, the project would not result in a cumulatively considerable contribution to cumulative impacts to paleontological resources.

- **Greenhouse Gas Emissions:** GHG emissions and climate change are, by definition, cumulative impacts. As discussed in Section 8, *Greenhouse Gas Emissions*, the adverse environmental impacts of cumulative GHG emissions, including increased average temperatures, more drought years, and more frequent large wildfires, are already occurring. As a result, cumulative impacts related to GHG emissions are significant. Thus, the issue of climate change involves an analysis of whether a project's contribution towards an impact is cumulatively considerable. As discussed in Section 8, *Greenhouse Gas Emissions*, project-level GHG emissions impacts would be less than significant and would therefore not be cumulatively considerable.
- **Hazards and Hazardous Materials:** Similar to the proposed project, cumulative projects would be required to comply with regulations applicable to the use, disposal, and transportation of hazardous materials during construction activities, and compliance with applicable regulations would reduce potential cumulative impacts to less-than-significant levels. With respect to the use and accidental release of hazardous materials in the environment during construction, effects are generally limited to site-specific conditions. Therefore, cumulative impacts related to accidental release of hazardous materials would not be significant. The Vista Canyon Ranch project would occur immediately west of the project site and could result in significant cumulative impacts to emergency response and evacuation if both projects are simultaneously under construction. However, Mitigation Measure HAZ-1 requires coordinating the project-related temporary lane closure with the developer(s) of the Vista Canyon Ranch project to minimize the potential for concurrent lane closures affecting emergency response and evacuation for the residential community on Mitchell Drive. Therefore, the project would not result in a cumulatively considerable contribution to significant cumulative impacts to hazards and hazardous materials.
- **Hydrology and Water Quality:** Cumulative projects in the region, including the proposed project, would be required to comply with existing National Pollutant Discharge Elimination System regulations to ensure they do not result in substantial erosion, surface runoff, or stormwater discharges that would substantially affect water quality in the area. Implementation of these regulations minimizes and avoids the potential for cumulative hydrology and water quality impacts to occur. Therefore, cumulative impacts related to hydrology and water quality would not be significant.
- **Land Use and Planning.** Cumulative development would be subject to existing land use and planning regulations adopted for the purpose of avoiding and mitigating environmental effects, including the City's General Plan and Santa Clarita Municipal Code and would be required to address and minimize any conflicts on a case-by-case basis. Therefore, cumulative impacts related to land use and planning would be less than significant.
- **Noise:** Cumulative development projects may occur at the same time as the proposed project. However, cumulative projects are not located directly adjacent to the project site, and it is unlikely that development of the proposed project and cumulative projects would result in an increase in noise, should construction schedules overlap. In addition, potentially significant project noise impacts are limited to nighttime construction activities, and based on the nature of cumulative development projects, it is unlikely they would require nighttime construction. Therefore, cumulative noise impacts would not be significant.
- **Recreation.** No cumulative projects are proposed within one mile of the project site that would also result in impacts to the Vista Canyon Park. Therefore, cumulative impacts related to recreation would be less than significant.

- **Transportation:** The cumulative development projects listed above may occur at the same time as the proposed project. Cumulative development would introduce new residential and commercial uses to previously undeveloped areas, and would result in an increase in VMT. While a cumulatively considerable increase in VMT may occur, the Sand Canyon Village and Vista Canyon Ranch projects involve construction of new transit and/or MetroLink stations. The project would result in a minimal increase in trips during construction and no new trips in operation. The Vista Canyon Ranch project would occur immediately west of the project site and could result in significant cumulative impacts to emergency access if both projects are simultaneously under construction. However, Mitigation Measure HAZ-1 requires coordinating the project-related temporary lane closure with the developer(s) of the Vista Canyon Ranch project to minimize the potential for concurrent lane closures affecting emergency access to the residential community on Mitchell Drive. Therefore, the project would not result in a cumulatively considerable contribution to significant cumulative impacts to transportation.
- **Utilities and Service Systems:** Cumulative development in Santa Clarita would generally result in increased demands for utilities and service systems. As mentioned above, cumulative development projects have undergone or would be required to undergo CEQA review, which would determine the extent of potential utility and service system impacts and mitigate those impacts appropriately. If cumulative projects would result in impacts to utilities and service systems, impacts to such services would be addressed on a case-by-case basis. Given the uncertainty in the extent of impacts associated with these projects, this analysis conservatively assumes significant cumulative impacts to utilities and service systems would occur. The project itself consists of water conveyance infrastructure and would therefore not result in a cumulatively considerable contribution to adverse impacts on water supply. The project would not generate a net increase in wastewater and would temporarily generate minimal solid waste during construction. Therefore, the project's contribution to cumulative impacts related to solid waste or wastewater would not be considerable.
- **Wildfire:** The cumulative projects listed above would introduce new development to previously undeveloped areas and hillsides; accordingly, cumulative impacts related to wildfire may be significant. As described in Section 20, *Wildfire*, potential wildfire impacts associated with the proposed project would be limited to construction equipment possibly producing sparks to ignite vegetation, which would be less than significant with compliance with applicable laws and implementation of Mitigation Measure HAZ-2. Project operation would not involve potentially flammable activities. In addition, the proposed project would not introduce habitable structures, and therefore, would not expose new residents to pollutant concentrations from a wildfire or the uncontrolled spread of a wildfire. As a result, the project would not result in a cumulatively considerable contribution to potentially significant cumulative wildfire impacts.

Given the above discussion, the proposed project would not result in a cumulatively considerable contribution to a significant cumulative impact with mitigation incorporated.

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

In general, impacts to human beings are associated with air quality, hazards and hazardous materials, noise, and wildfire. As detailed in Section 3, *Air Quality*, the project would not result, either directly or indirectly, in substantial adverse effects related to air quality. As discussed in Section 9, *Hazards and Hazardous Materials*, implementation of Mitigation Measures HAZ-1 and HAZ-2, as well as compliance with applicable rules and regulations would reduce potential impacts on human beings related to hazards and hazardous materials to a less-than-significant level. As discussed in Section 13, *Noise*, implementation of Mitigation Measure NOI-1 would reduce potential impacts on human beings related to nighttime construction noise to a less-than-significant level. As discussed in Section 9, *Hazards and Hazardous Materials,* and Section 20, *Wildfire,* compliance with PRC Section 4428 and implementation of Mitigation Measure HAZ-2 would reduce impacts related to wildfire to less-than-significant levels. Therefore, impacts to human beings would be less than significant with mitigation incorporated.

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Appendix A

CalEEMod Modeling Outputs

Lost Canyon/Sand Canyon Groundwater Treatment Project AQ Emissions Detailed Report

Table of Contents

1. Basic Project Information

1.1. Basic Project Information

Data Field	Value
Project Name	Lost Canyon/Sand Canyon Groundwater Treatment Project AQ Emissions
Construction Start Date	5/1/2026
Operational Year	2028
Lead Agency	—
Land Use Scale	Project/site
Analysis Level for Defaults	County
Windspeed (m/s)	2.50
Precipitation (days)	19.6
Location	34.42028249397181, -118.42620845442978
County	Los Angeles-South Coast
City	Santa Clarita
Air District	South Coast AQMD
Air Basin	South Coast
TAZ	3619
EDFZ	7
Electric Utility	Southern California Edison
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
General Light Industry	1.44	1000sqft	0.03	1,440	0.00	—	—	—

Other Asphalt Surfaces	5.00	1000sqft	1.23	0.00	0.00	—	—	—
Other Non-Asphalt Surfaces	1.41	Acre	1.41	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.	1.57	1.31	11.5	13.0	0.03	0.43	0.48	0.75	0.39	0.06	0.40	—	2,944	2,944	0.12	0.03	0.47	2,955
Daily, Winter (Max)	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Unmit.	1.57	1.31	11.5	13.0	0.03	0.43	0.16	0.44	0.39	0.04	0.40	—	2,944	2,944	0.12	0.03	0.01	2,954
Average Daily (Max)	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Unmit.	1.20	1.00	8.69	10.2	0.02	0.31	0.03	0.32	0.28	0.01	0.29	—	2,318	2,318	0.09	0.02	0.03	2,326
Annual (Max)	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Unmit.	0.22	0.18	1.59	1.86	< 0.005	0.06	0.01	0.06	0.05	< 0.005	0.05	—	384	384	0.02	< 0.005	< 0.005	385

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)	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
2026	1.57	1.31	11.5	13.0	0.03	0.43	0.48	0.75	0.39	0.06	0.40	—	2,944	2,944	0.12	0.03	0.28	2,955
2027	1.52	1.27	11.0	13.0	0.03	0.39	0.02	0.41	0.36	< 0.005	0.37	—	2,944	2,944	0.12	0.03	0.09	2,955
2028	1.00	0.88	5.28	8.14	0.01	0.18	0.16	0.34	0.17	0.04	0.20	—	1,439	1,439	0.06	0.01	0.47	1,445
Daily - Winter (Max)	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
2026	1.57	1.31	11.5	13.0	0.03	0.43	0.02	0.44	0.39	< 0.005	0.40	—	2,944	2,944	0.12	0.03	< 0.005	2,954
2027	1.52	1.27	11.0	13.0	0.03	0.39	0.02	0.41	0.36	< 0.005	0.37	—	2,943	2,943	0.12	0.03	< 0.005	2,954
2028	1.47	1.23	10.4	12.9	0.03	0.36	0.16	0.37	0.33	0.04	0.33	—	2,943	2,943	0.12	0.03	0.01	2,954
Average Daily	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
2026	0.67	0.56	4.93	5.61	0.01	0.18	0.03	0.22	0.17	0.01	0.17	—	1,283	1,283	0.05	0.01	0.03	1,288
2027	1.20	1.00	8.69	10.2	0.02	0.31	0.02	0.32	0.28	< 0.005	0.29	—	2,318	2,318	0.09	0.02	0.03	2,326
2028	0.31	0.26	2.15	2.76	0.01	0.07	0.01	0.09	0.07	< 0.005	0.07	—	610	610	0.02	0.01	0.02	613
Annual	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
2026	0.12	0.10	0.90	1.02	< 0.005	0.03	0.01	0.04	0.03	< 0.005	0.03	—	212	212	0.01	< 0.005	< 0.005	213
2027	0.22	0.18	1.59	1.86	< 0.005	0.06	< 0.005	0.06	0.05	< 0.005	0.05	—	384	384	0.02	< 0.005	< 0.005	385
2028	0.06	0.05	0.39	0.50	< 0.005	0.01	< 0.005	0.02	0.01	< 0.005	0.01	—	101	101	< 0.005	< 0.005	< 0.005	101

2.4. Operations 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.	0.09	0.07	0.32	0.25	< 0.005	< 0.005	0.09	0.09	< 0.005	0.02	0.03	1.60	576	578	0.21	0.05	0.91	597

Daily, Winter (Max)	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Unmit.	0.08	0.06	0.33	0.18	< 0.005	< 0.005	0.09	0.09	< 0.005	0.02	0.03	1.60	575	577	0.21	0.05	0.39	596
Average Daily (Max)	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Unmit.	0.08	0.07	0.33	0.23	< 0.005	< 0.005	0.09	0.09	< 0.005	0.02	0.03	1.60	576	577	0.21	0.05	0.61	596
Annual (Max)	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Unmit.	0.02	0.01	0.06	0.04	< 0.005	< 0.005	0.02	0.02	< 0.005	< 0.005	< 0.005	0.26	95.3	95.5	0.03	0.01	0.10	98.7

2.5. Operations Emissions by Sector, Unmitigated

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

Sector	TOG	ROG	NOx	CO	SO2	PM10E	PM10D	PM10T	PM2.5E	PM2.5D	PM2.5T	BCO2	NBCO2	CO2T	CH4	N2O	R	CO2e
Daily, Summer (Max)	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Mobile	0.02	0.01	0.32	0.19	< 0.005	< 0.005	0.09	0.09	< 0.005	0.02	0.03	—	262	262	0.01	0.04	0.54	275
Area	0.06	0.06	< 0.005	0.06	< 0.005	< 0.005	—	< 0.005	< 0.005	—	< 0.005	—	0.26	0.26	< 0.005	< 0.005	—	0.26
Energy	0.00	0.00	0.00	0.00	0.00	0.00	—	0.00	0.00	—	0.00	—	312	312	0.03	< 0.005	—	314
Water	—	—	—	—	—	—	—	—	—	—	—	0.64	2.15	2.79	0.07	< 0.005	—	4.90
Waste	—	—	—	—	—	—	—	—	—	—	—	0.96	0.00	0.96	0.10	0.00	—	3.37
Refrig.	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	0.37	0.37
Total	0.09	0.07	0.32	0.25	< 0.005	< 0.005	0.09	0.09	< 0.005	0.02	0.03	1.60	576	578	0.21	0.05	0.91	597
Daily, Winter (Max)	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Mobile	0.02	0.01	0.33	0.18	< 0.005	< 0.005	0.09	0.09	< 0.005	0.02	0.03	—	261	261	0.01	0.04	0.01	274
Area	0.05	0.05	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Energy	0.00	0.00	0.00	0.00	0.00	0.00	—	0.00	0.00	—	0.00	—	312	312	0.03	< 0.005	—	314

Water	—	—	—	—	—	—	—	—	—	—	—	0.64	2.15	2.79	0.07	< 0.005	—	4.90
Waste	—	—	—	—	—	—	—	—	—	—	—	0.96	0.00	0.96	0.10	0.00	—	3.37
Refrig.	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	0.37	0.37
Total	0.08	0.06	0.33	0.18	< 0.005	< 0.005	0.09	0.09	< 0.005	0.02	0.03	1.60	575	577	0.21	0.05	0.39	596
Average Daily	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Mobile	0.02	0.01	0.33	0.18	< 0.005	< 0.005	0.09	0.09	< 0.005	0.02	0.03	—	261	261	0.01	0.04	0.23	274
Area	0.06	0.06	< 0.005	0.04	< 0.005	< 0.005	—	< 0.005	< 0.005	—	< 0.005	—	0.18	0.18	< 0.005	< 0.005	—	0.18
Energy	0.00	0.00	0.00	0.00	0.00	0.00	—	0.00	0.00	—	0.00	—	312	312	0.03	< 0.005	—	314
Water	—	—	—	—	—	—	—	—	—	—	—	0.64	2.15	2.79	0.07	< 0.005	—	4.90
Waste	—	—	—	—	—	—	—	—	—	—	—	0.96	0.00	0.96	0.10	0.00	—	3.37
Refrig.	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	0.37	0.37
Total	0.08	0.07	0.33	0.23	< 0.005	< 0.005	0.09	0.09	< 0.005	0.02	0.03	1.60	576	577	0.21	0.05	0.61	596
Annual	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Mobile	< 0.005	< 0.005	0.06	0.03	< 0.005	< 0.005	0.02	0.02	< 0.005	< 0.005	< 0.005	—	43.3	43.3	< 0.005	0.01	0.04	45.4
Area	0.01	0.01	< 0.005	0.01	< 0.005	< 0.005	—	< 0.005	< 0.005	—	< 0.005	—	0.03	0.03	< 0.005	< 0.005	—	0.03
Energy	0.00	0.00	0.00	0.00	0.00	0.00	—	0.00	0.00	—	0.00	—	51.6	51.6	< 0.005	< 0.005	—	51.9
Water	—	—	—	—	—	—	—	—	—	—	—	0.11	0.36	0.46	0.01	< 0.005	—	0.81
Waste	—	—	—	—	—	—	—	—	—	—	—	0.16	0.00	0.16	0.02	0.00	—	0.56
Refrig.	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	0.06	0.06
Total	0.02	0.01	0.06	0.04	< 0.005	< 0.005	0.02	0.02	< 0.005	< 0.005	< 0.005	0.26	95.3	95.5	0.03	0.01	0.10	98.7

3. Construction Emissions Details

3.1. Site Preparation (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	0.94	0.79	7.14	7.18	0.02	0.27	—	0.27	0.25	—	0.25	—	2,148	2,148	0.09	0.02	—	2,155
Dust From Material Movement	—	—	—	—	—	—	0.41	0.41	—	0.04	0.04	—	—	—	—	—	—	—
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)	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Average Daily	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Off-Road Equipment	0.04	0.03	0.31	0.31	< 0.005	0.01	—	0.01	0.01	—	0.01	—	94.2	94.2	< 0.005	< 0.005	—	94.5
Dust From Material Movement	—	—	—	—	—	—	0.02	0.02	—	< 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	0.01	0.01	0.06	0.06	< 0.005	< 0.005	—	< 0.005	< 0.005	—	< 0.005	—	15.6	15.6	< 0.005	< 0.005	—	15.6
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	0.02	0.02	0.02	0.32	0.00	0.00	0.07	0.07	0.00	0.02	0.02	—	67.7	67.7	< 0.005	< 0.005	0.23	68.7
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)	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Average Daily	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Worker	< 0.005	< 0.005	< 0.005	0.01	0.00	0.00	< 0.005	< 0.005	0.00	< 0.005	< 0.005	—	2.86	2.86	< 0.005	< 0.005	< 0.005	2.90
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	< 0.005	< 0.005	< 0.005	< 0.005	0.00	0.00	< 0.005	< 0.005	0.00	< 0.005	< 0.005	—	0.47	0.47	< 0.005	< 0.005	< 0.005	0.48
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

3.3. Decommissioning (2028) - 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	0.53	0.45	4.17	5.46	0.01	0.15	—	0.15	0.14	—	0.14	—	1,374	1,374	0.06	0.01	—	1,379
Dust From Material Movement	—	—	—	—	—	—	0.00	0.00	—	0.00	0.00	—	—	—	—	—	—	—
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)	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Average Daily	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Off-Road Equipment	0.02	0.02	0.16	0.21	< 0.005	0.01	—	0.01	0.01	—	0.01	—	52.7	52.7	< 0.005	< 0.005	—	52.9
Dust From Material Movement	—	—	—	—	—	—	0.00	0.00	—	0.00	0.00	—	—	—	—	—	—	—
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	< 0.005	< 0.005	0.03	0.04	< 0.005	< 0.005	—	< 0.005	< 0.005	—	< 0.005	—	8.72	8.72	< 0.005	< 0.005	—	8.75
Dust From Material Movement	—	—	—	—	—	—	0.00	0.00	—	0.00	0.00	—	—	—	—	—	—	—
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	0.02	0.02	0.02	0.28	0.00	0.00	0.07	0.07	0.00	0.02	0.02	—	65.3	65.3	< 0.005	< 0.005	0.19	66.2
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	0.00	0.00	0.00	0.00	0.00	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)	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Average Daily	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Worker	< 0.005	< 0.005	< 0.005	0.01	0.00	0.00	< 0.005	< 0.005	0.00	< 0.005	< 0.005	—	2.41	2.41	< 0.005	< 0.005	< 0.005	2.44
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	< 0.005	< 0.005	< 0.005	< 0.005	0.00	0.00	< 0.005	< 0.005	0.00	< 0.005	< 0.005	—	0.40	0.40	< 0.005	< 0.005	< 0.005	0.40
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. Grading/Excavation (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	0.15	0.12	1.16	1.88	< 0.005	0.04	—	0.04	0.04	—	0.04	—	289	289	0.01	< 0.005	—	290

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)	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Average Daily	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Off-Road Equipment	0.01	0.01	0.09	0.15	< 0.005	< 0.005	—	< 0.005	< 0.005	—	< 0.005	—	22.9	22.9	< 0.005	< 0.005	—	23.0
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	< 0.005	< 0.005	0.02	0.03	< 0.005	< 0.005	—	< 0.005	< 0.005	—	< 0.005	—	3.80	3.80	< 0.005	< 0.005	—	3.81
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	0.02	0.02	0.02	0.32	0.00	0.00	0.07	0.07	0.00	0.02	0.02	—	67.7	67.7	< 0.005	< 0.005	0.23	68.7

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	0.03	0.01	< 0.005	< 0.005	0.01	0.01	< 0.005	< 0.005	< 0.005	—	23.5	23.5	< 0.005	< 0.005	0.05	24.7
Daily, Winter (Max)	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Average Daily	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Worker	< 0.005	< 0.005	< 0.005	0.02	0.00	0.00	0.01	0.01	0.00	< 0.005	< 0.005	—	5.18	5.18	< 0.005	< 0.005	0.01	5.25
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	—	1.86	1.86	< 0.005	< 0.005	< 0.005	1.96
Annual	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Worker	< 0.005	< 0.005	< 0.005	< 0.005	0.00	0.00	< 0.005	< 0.005	0.00	< 0.005	< 0.005	—	0.86	0.86	< 0.005	< 0.005	< 0.005	0.87
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	—	0.31	0.31	< 0.005	< 0.005	< 0.005	0.32

3.7. Infrastructure Installation/Building 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)	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Off-Road Equipment	0.77	0.64	5.62	6.23	0.01	0.21	—	0.21	0.19	—	0.19	—	1,420	1,420	0.06	0.01	—	1,425
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	0.77	0.64	5.62	6.23	0.01	0.21	—	0.21	0.19	—	0.19	—	1,420	1,420	0.06	0.01	—	1,425
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	0.27	0.23	2.00	2.22	< 0.005	0.07	—	0.07	0.07	—	0.07	—	506	506	0.02	< 0.005	—	508
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	0.05	0.04	0.37	0.40	< 0.005	0.01	—	0.01	0.01	—	0.01	—	83.8	83.8	< 0.005	< 0.005	—	84.0
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	< 0.005	< 0.005	< 0.005	0.04	0.00	0.00	0.01	0.01	0.00	< 0.005	< 0.005	—	8.19	8.19	< 0.005	< 0.005	0.03	8.32
Vendor	< 0.005	< 0.005	0.01	< 0.005	< 0.005	< 0.005	< 0.005	< 0.005	< 0.005	< 0.005	< 0.005	—	7.36	7.36	< 0.005	< 0.005	0.02	7.70
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	< 0.005	< 0.005	< 0.005	0.03	0.00	0.00	0.01	0.01	0.00	< 0.005	< 0.005	—	7.77	7.77	< 0.005	< 0.005	< 0.005	7.86
Vendor	< 0.005	< 0.005	0.01	< 0.005	< 0.005	< 0.005	< 0.005	< 0.005	< 0.005	< 0.005	< 0.005	—	7.36	7.36	< 0.005	< 0.005	< 0.005	7.68
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	< 0.005	< 0.005	< 0.005	0.01	0.00	0.00	< 0.005	< 0.005	0.00	< 0.005	< 0.005	—	2.81	2.81	< 0.005	< 0.005	< 0.005	2.85
Vendor	< 0.005	< 0.005	< 0.005	< 0.005	< 0.005	< 0.005	< 0.005	< 0.005	< 0.005	< 0.005	< 0.005	—	2.62	2.62	< 0.005	< 0.005	< 0.005	2.74
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	< 0.005	< 0.005	< 0.005	< 0.005	0.00	0.00	< 0.005	< 0.005	0.00	< 0.005	< 0.005	—	0.46	0.46	< 0.005	< 0.005	< 0.005	0.47
Vendor	< 0.005	< 0.005	< 0.005	< 0.005	< 0.005	< 0.005	< 0.005	< 0.005	< 0.005	< 0.005	< 0.005	—	0.43	0.43	< 0.005	< 0.005	< 0.005	0.45
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. Infrastructure Installation/Building Construction (2027) - 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	0.74	0.62	5.38	6.20	0.01	0.19	—	0.19	0.18	—	0.18	—	1,420	1,420	0.06	0.01	—	1,425
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	0.74	0.62	5.38	6.20	0.01	0.19	—	0.19	0.18	—	0.18	—	1,420	1,420	0.06	0.01	—	1,425
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	0.53	0.44	3.85	4.43	0.01	0.14	—	0.14	0.13	—	0.13	—	1,015	1,015	0.04	0.01	—	1,018
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	0.70	0.81	< 0.005	0.03	—	0.03	0.02	—	0.02	—	168	168	0.01	< 0.005	—	169
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	< 0.005	< 0.005	< 0.005	0.04	0.00	0.00	0.01	0.01	0.00	< 0.005	< 0.005	—	8.04	8.04	< 0.005	< 0.005	0.03	8.16
Vendor	< 0.005	< 0.005	0.01	< 0.005	< 0.005	< 0.005	< 0.005	< 0.005	< 0.005	< 0.005	< 0.005	—	7.22	7.22	< 0.005	< 0.005	0.02	7.54
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	< 0.005	< 0.005	< 0.005	0.03	0.00	0.00	0.01	0.01	0.00	< 0.005	< 0.005	—	7.62	7.62	< 0.005	< 0.005	< 0.005	7.71
Vendor	< 0.005	< 0.005	0.01	< 0.005	< 0.005	< 0.005	< 0.005	< 0.005	< 0.005	< 0.005	< 0.005	—	7.22	7.22	< 0.005	< 0.005	< 0.005	7.53
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	< 0.005	< 0.005	< 0.005	0.02	0.00	0.00	0.01	0.01	0.00	< 0.005	< 0.005	—	5.52	5.52	< 0.005	< 0.005	0.01	5.59
Vendor	< 0.005	< 0.005	0.01	< 0.005	< 0.005	< 0.005	< 0.005	< 0.005	< 0.005	< 0.005	< 0.005	—	5.16	5.16	< 0.005	< 0.005	0.01	5.38
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	< 0.005	< 0.005	< 0.005	< 0.005	0.00	0.00	< 0.005	< 0.005	0.00	< 0.005	< 0.005	—	0.91	0.91	< 0.005	< 0.005	< 0.005	0.93
Vendor	< 0.005	< 0.005	< 0.005	< 0.005	< 0.005	< 0.005	< 0.005	< 0.005	< 0.005	< 0.005	< 0.005	—	0.85	0.85	< 0.005	< 0.005	< 0.005	0.89

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. Infrastructure Installation/Building Construction (2028) - 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	0.72	0.60	5.05	6.19	0.01	0.17	—	0.17	0.16	—	0.16	—	1,421	1,421	0.06	0.01	—	1,426
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	0.09	0.79	0.97	< 0.005	0.03	—	0.03	0.03	—	0.03	—	222	222	0.01	< 0.005	—	223
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	0.14	0.18	< 0.005	< 0.005	—	< 0.005	< 0.005	—	< 0.005	—	36.8	36.8	< 0.005	< 0.005	—	37.0
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	< 0.005	< 0.005	< 0.005	0.03	0.00	0.00	0.01	0.01	0.00	< 0.005	< 0.005	—	7.48	7.48	< 0.005	< 0.005	< 0.005	7.57
Vendor	< 0.005	< 0.005	0.01	< 0.005	< 0.005	< 0.005	< 0.005	< 0.005	< 0.005	< 0.005	< 0.005	—	7.05	7.05	< 0.005	< 0.005	< 0.005	7.36
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	< 0.005	< 0.005	< 0.005	< 0.005	0.00	0.00	< 0.005	< 0.005	0.00	< 0.005	< 0.005	—	1.19	1.19	< 0.005	< 0.005	< 0.005	1.20
Vendor	< 0.005	< 0.005	< 0.005	< 0.005	< 0.005	< 0.005	< 0.005	< 0.005	< 0.005	< 0.005	< 0.005	—	1.10	1.10	< 0.005	< 0.005	< 0.005	1.15
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	< 0.005	< 0.005	< 0.005	< 0.005	0.00	0.00	< 0.005	< 0.005	0.00	< 0.005	< 0.005	—	0.20	0.20	< 0.005	< 0.005	< 0.005	0.20
Vendor	< 0.005	< 0.005	< 0.005	< 0.005	< 0.005	< 0.005	< 0.005	< 0.005	< 0.005	< 0.005	< 0.005	—	0.18	0.18	< 0.005	< 0.005	< 0.005	0.19
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

3.13. Nighttime 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)	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Off-Road Equipment	0.80	0.67	5.87	6.70	0.01	0.22	—	0.22	0.20	—	0.20	—	1,493	1,493	0.06	0.01	—	1,498
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	0.80	0.67	5.87	6.70	0.01	0.22	—	0.22	0.20	—	0.20	—	1,493	1,493	0.06	0.01	—	1,498
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	0.34	0.28	2.51	2.86	0.01	0.09	—	0.09	0.09	—	0.09	—	638	638	0.03	0.01	—	640
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	0.06	0.05	0.46	0.52	< 0.005	0.02	—	0.02	0.02	—	0.02	—	106	106	< 0.005	< 0.005	—	106
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	< 0.005	< 0.005	< 0.005	0.04	0.00	0.00	0.01	0.01	0.00	< 0.005	< 0.005	—	8.19	8.19	< 0.005	< 0.005	0.03	8.32
Vendor	< 0.005	< 0.005	0.01	< 0.005	< 0.005	< 0.005	< 0.005	< 0.005	< 0.005	< 0.005	< 0.005	—	7.36	7.36	< 0.005	< 0.005	0.02	7.70
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	< 0.005	< 0.005	< 0.005	0.03	0.00	0.00	0.01	0.01	0.00	< 0.005	< 0.005	—	7.77	7.77	< 0.005	< 0.005	< 0.005	7.86

Vendor	< 0.005	< 0.005	0.01	< 0.005	< 0.005	< 0.005	< 0.005	< 0.005	< 0.005	< 0.005	< 0.005	—	7.36	7.36	< 0.005	< 0.005	< 0.005	7.68
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	< 0.005	< 0.005	< 0.005	0.01	0.00	0.00	< 0.005	< 0.005	0.00	< 0.005	< 0.005	—	3.37	3.37	< 0.005	< 0.005	0.01	3.41
Vendor	< 0.005	< 0.005	< 0.005	< 0.005	< 0.005	< 0.005	< 0.005	< 0.005	< 0.005	< 0.005	< 0.005	—	3.15	3.15	< 0.005	< 0.005	< 0.005	3.29
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	< 0.005	< 0.005	< 0.005	< 0.005	0.00	0.00	< 0.005	< 0.005	0.00	< 0.005	< 0.005	—	0.56	0.56	< 0.005	< 0.005	< 0.005	0.57
Vendor	< 0.005	< 0.005	< 0.005	< 0.005	< 0.005	< 0.005	< 0.005	< 0.005	< 0.005	< 0.005	< 0.005	—	0.52	0.52	< 0.005	< 0.005	< 0.005	0.54
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

3.15. Nighttime Construction (2027) - 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	0.77	0.65	5.63	6.68	0.01	0.20	—	0.20	0.18	—	0.18	—	1,493	1,493	0.06	0.01	—	1,498
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	0.77	0.65	5.63	6.68	0.01	0.20	—	0.20	0.18	—	0.18	—	1,493	1,493	0.06	0.01	—	1,498

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	0.66	0.55	4.83	5.73	0.01	0.17	—	0.17	0.16	—	0.16	—	1,280	1,280	0.05	0.01	—	1,284
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	0.12	0.10	0.88	1.04	< 0.005	0.03	—	0.03	0.03	—	0.03	—	212	212	0.01	< 0.005	—	213
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	< 0.005	< 0.005	< 0.005	0.04	0.00	0.00	0.01	0.01	0.00	< 0.005	< 0.005	—	8.04	8.04	< 0.005	< 0.005	0.03	8.16
Vendor	< 0.005	< 0.005	0.01	< 0.005	< 0.005	< 0.005	< 0.005	< 0.005	< 0.005	< 0.005	< 0.005	—	7.22	7.22	< 0.005	< 0.005	0.02	7.54
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	< 0.005	< 0.005	< 0.005	0.03	0.00	0.00	0.01	0.01	0.00	< 0.005	< 0.005	—	7.62	7.62	< 0.005	< 0.005	< 0.005	7.71
Vendor	< 0.005	< 0.005	0.01	< 0.005	< 0.005	< 0.005	< 0.005	< 0.005	< 0.005	< 0.005	< 0.005	—	7.22	7.22	< 0.005	< 0.005	< 0.005	7.53
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	< 0.005	< 0.005	< 0.005	0.03	0.00	0.00	0.01	0.01	0.00	< 0.005	< 0.005	—	6.63	6.63	< 0.005	< 0.005	0.01	6.71
Vendor	< 0.005	< 0.005	0.01	< 0.005	< 0.005	< 0.005	< 0.005	< 0.005	< 0.005	< 0.005	< 0.005	—	6.19	6.19	< 0.005	< 0.005	0.01	6.45

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	< 0.005	< 0.005	< 0.005	0.01	0.00	0.00	< 0.005	< 0.005	0.00	< 0.005	< 0.005	—	1.10	1.10	< 0.005	< 0.005	< 0.005	1.11
Vendor	< 0.005	< 0.005	< 0.005	< 0.005	< 0.005	< 0.005	< 0.005	< 0.005	< 0.005	< 0.005	< 0.005	—	1.02	1.02	< 0.005	< 0.005	< 0.005	1.07
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

3.17. Nighttime Construction (2028) - 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	0.74	0.62	5.29	6.67	0.01	0.18	—	0.18	0.17	—	0.17	—	1,493	1,493	0.06	0.01	—	1,499
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	0.14	0.12	0.99	1.25	< 0.005	0.03	—	0.03	0.03	—	0.03	—	281	281	0.01	< 0.005	—	282
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	0.03	0.02	0.18	0.23	< 0.005	0.01	—	0.01	0.01	—	0.01	—	46.5	46.5	< 0.005	< 0.005	—	46.6
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	< 0.005	< 0.005	< 0.005	0.03	0.00	0.00	0.01	0.01	0.00	< 0.005	< 0.005	—	7.48	7.48	< 0.005	< 0.005	< 0.005	7.57
Vendor	< 0.005	< 0.005	0.01	< 0.005	< 0.005	< 0.005	< 0.005	< 0.005	< 0.005	< 0.005	< 0.005	—	7.05	7.05	< 0.005	< 0.005	< 0.005	7.36
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	< 0.005	< 0.005	< 0.005	0.01	0.00	0.00	< 0.005	< 0.005	0.00	< 0.005	< 0.005	—	1.43	1.43	< 0.005	< 0.005	< 0.005	1.45
Vendor	< 0.005	< 0.005	< 0.005	< 0.005	< 0.005	< 0.005	< 0.005	< 0.005	< 0.005	< 0.005	< 0.005	—	1.32	1.32	< 0.005	< 0.005	< 0.005	1.38
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	< 0.005	< 0.005	< 0.005	< 0.005	0.00	0.00	< 0.005	< 0.005	0.00	< 0.005	< 0.005	—	0.24	0.24	< 0.005	< 0.005	< 0.005	0.24
Vendor	< 0.005	< 0.005	< 0.005	< 0.005	< 0.005	< 0.005	< 0.005	< 0.005	< 0.005	< 0.005	< 0.005	—	0.22	0.22	< 0.005	< 0.005	< 0.005	0.23
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

3.19. Paving/Site Restoration (2028) - 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	0.72	0.61	5.24	7.43	0.01	0.18	—	0.18	0.17	—	0.17	—	1,075	1,075	0.04	0.01	—	1,079
Paving	0.23	0.23	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
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	0.72	0.61	5.24	7.43	0.01	0.18	—	0.18	0.17	—	0.17	—	1,075	1,075	0.04	0.01	—	1,079
Paving	0.23	0.23	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
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	0.03	0.02	0.20	0.29	< 0.005	0.01	—	0.01	0.01	—	0.01	—	41.2	41.2	< 0.005	< 0.005	—	41.4
Paving	0.01	0.01	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
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	0.01	< 0.005	0.04	0.05	< 0.005	< 0.005	—	< 0.005	< 0.005	—	< 0.005	—	6.83	6.83	< 0.005	< 0.005	—	6.85
Paving	< 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	0.05	0.04	0.04	0.71	0.00	0.00	0.16	0.16	0.00	0.04	0.04	—	163	163	< 0.005	0.01	0.47	165
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	0.05	0.04	0.05	0.60	0.00	0.00	0.16	0.16	0.00	0.04	0.04	—	155	155	< 0.005	0.01	0.01	157
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	< 0.005	< 0.005	< 0.005	0.02	0.00	0.00	0.01	0.01	0.00	< 0.005	< 0.005	—	6.02	6.02	< 0.005	< 0.005	0.01	6.10
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	< 0.005	< 0.005	< 0.005	< 0.005	0.00	0.00	< 0.005	< 0.005	0.00	< 0.005	< 0.005	—	1.00	1.00	< 0.005	< 0.005	< 0.005	1.01
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

4. Operations Emissions Details

4.1. Mobile Emissions by Land Use

4.1.1. 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)	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
General Light Industry	0.02	0.01	0.32	0.19	< 0.005	< 0.005	0.09	0.09	< 0.005	0.02	0.03	—	262	262	0.01	0.04	0.54	275
Other Asphalt Surfaces	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	—	0.00	0.00	0.00	0.00	0.00	0.00
Other Non-Asphalt Surfaces	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	—	0.00	0.00	0.00	0.00	0.00	0.00
Total	0.02	0.01	0.32	0.19	< 0.005	< 0.005	0.09	0.09	< 0.005	0.02	0.03	—	262	262	0.01	0.04	0.54	275
Daily, Winter (Max)	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
General Light Industry	0.02	0.01	0.33	0.18	< 0.005	< 0.005	0.09	0.09	< 0.005	0.02	0.03	—	261	261	0.01	0.04	0.01	274
Other Asphalt Surfaces	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	—	0.00	0.00	0.00	0.00	0.00	0.00
Other Non-Asphalt Surfaces	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	—	0.00	0.00	0.00	0.00	0.00	0.00
Total	0.02	0.01	0.33	0.18	< 0.005	< 0.005	0.09	0.09	< 0.005	0.02	0.03	—	261	261	0.01	0.04	0.01	274
Annual	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
General Light Industry	< 0.005	< 0.005	0.06	0.03	< 0.005	< 0.005	0.02	0.02	< 0.005	< 0.005	< 0.005	—	43.3	43.3	< 0.005	0.01	0.04	45.4
Other Asphalt Surfaces	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	—	0.00	0.00	0.00	0.00	0.00	0.00

Other Non-Asphalt Surfaces	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	—	0.00	0.00	0.00	0.00	0.00	0.00
Total	< 0.005	< 0.005	0.06	0.03	< 0.005	< 0.005	0.02	0.02	< 0.005	< 0.005	< 0.005	—	43.3	43.3	< 0.005	0.01	0.04	45.4

4.2. Energy

4.2.1. Electricity Emissions By Land Use - 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)	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
General Light Industry	—	—	—	—	—	—	—	—	—	—	—	—	312	312	0.03	< 0.005	—	314
Other Asphalt Surfaces	—	—	—	—	—	—	—	—	—	—	—	—	0.00	0.00	0.00	0.00	—	0.00
Other Non-Asphalt Surfaces	—	—	—	—	—	—	—	—	—	—	—	—	0.00	0.00	0.00	0.00	—	0.00
Total	—	—	—	—	—	—	—	—	—	—	—	—	312	312	0.03	< 0.005	—	314
Daily, Winter (Max)	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
General Light Industry	—	—	—	—	—	—	—	—	—	—	—	—	312	312	0.03	< 0.005	—	314
Other Asphalt Surfaces	—	—	—	—	—	—	—	—	—	—	—	—	0.00	0.00	0.00	0.00	—	0.00

Other Non-Asphalt Surfaces	—	—	—	—	—	—	—	—	—	—	—	—	0.00	0.00	0.00	0.00	—	0.00
Total	—	—	—	—	—	—	—	—	—	—	—	—	312	312	0.03	< 0.005	—	314
Annual	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
General Light Industry	—	—	—	—	—	—	—	—	—	—	—	—	51.6	51.6	< 0.005	< 0.005	—	51.9
Other Asphalt Surfaces	—	—	—	—	—	—	—	—	—	—	—	—	0.00	0.00	0.00	0.00	—	0.00
Other Non-Asphalt Surfaces	—	—	—	—	—	—	—	—	—	—	—	—	0.00	0.00	0.00	0.00	—	0.00
Total	—	—	—	—	—	—	—	—	—	—	—	—	51.6	51.6	< 0.005	< 0.005	—	51.9

4.2.3. Natural Gas Emissions By Land Use - 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)	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
General Light Industry	0.00	0.00	0.00	0.00	0.00	0.00	—	0.00	0.00	—	0.00	—	0.00	0.00	0.00	0.00	—	0.00
Other Asphalt Surfaces	0.00	0.00	0.00	0.00	0.00	0.00	—	0.00	0.00	—	0.00	—	0.00	0.00	0.00	0.00	—	0.00
Other Non-Asphalt Surfaces	0.00	0.00	0.00	0.00	0.00	0.00	—	0.00	0.00	—	0.00	—	0.00	0.00	0.00	0.00	—	0.00
Total	0.00	0.00	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)	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
General Light Industry	0.00	0.00	0.00	0.00	0.00	0.00	—	0.00	0.00	—	0.00	—	0.00	0.00	0.00	0.00	—	0.00
Other Asphalt Surfaces	0.00	0.00	0.00	0.00	0.00	0.00	—	0.00	0.00	—	0.00	—	0.00	0.00	0.00	0.00	—	0.00
Other Non-Asphalt Surfaces	0.00	0.00	0.00	0.00	0.00	0.00	—	0.00	0.00	—	0.00	—	0.00	0.00	0.00	0.00	—	0.00
Total	0.00	0.00	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	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
General Light Industry	0.00	0.00	0.00	0.00	0.00	0.00	—	0.00	0.00	—	0.00	—	0.00	0.00	0.00	0.00	—	0.00
Other Asphalt Surfaces	0.00	0.00	0.00	0.00	0.00	0.00	—	0.00	0.00	—	0.00	—	0.00	0.00	0.00	0.00	—	0.00
Other Non-Asphalt Surfaces	0.00	0.00	0.00	0.00	0.00	0.00	—	0.00	0.00	—	0.00	—	0.00	0.00	0.00	0.00	—	0.00
Total	0.00	0.00	0.00	0.00	0.00	0.00	—	0.00	0.00	—	0.00	—	0.00	0.00	0.00	0.00	—	0.00

4.3. Area Emissions by Source

4.3.1. Unmitigated

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

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

Consumer Product	0.04	0.04	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Architectural Coatings	0.01	0.01	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Landscape Equipment	0.01	0.01	< 0.005	0.06	< 0.005	< 0.005	—	< 0.005	< 0.005	—	< 0.005	—	0.26	0.26	< 0.005	< 0.005	—	0.26
Total	0.06	0.06	< 0.005	0.06	< 0.005	< 0.005	—	< 0.005	< 0.005	—	< 0.005	—	0.26	0.26	< 0.005	< 0.005	—	0.26
Daily, Winter (Max)	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Consumer Products	0.04	0.04	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Architectural Coatings	0.01	0.01	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Total	0.05	0.05	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Annual	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Consumer Products	0.01	0.01	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Architectural Coatings	< 0.005	< 0.005	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Landscape Equipment	< 0.005	< 0.005	< 0.005	0.01	< 0.005	< 0.005	—	< 0.005	< 0.005	—	< 0.005	—	0.03	0.03	< 0.005	< 0.005	—	0.03
Total	0.01	0.01	< 0.005	0.01	< 0.005	< 0.005	—	< 0.005	< 0.005	—	< 0.005	—	0.03	0.03	< 0.005	< 0.005	—	0.03

4.4. Water Emissions by Land Use

4.4.1. 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)	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
General Light Industry	—	—	—	—	—	—	—	—	—	—	—	0.64	2.15	2.79	0.07	< 0.005	—	4.90
Other Asphalt Surfaces	—	—	—	—	—	—	—	—	—	—	—	0.00	0.00	0.00	0.00	0.00	—	0.00
Other Non-Asphalt Surfaces	—	—	—	—	—	—	—	—	—	—	—	0.00	0.00	0.00	0.00	0.00	—	0.00
Total	—	—	—	—	—	—	—	—	—	—	—	0.64	2.15	2.79	0.07	< 0.005	—	4.90
Daily, Winter (Max)	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
General Light Industry	—	—	—	—	—	—	—	—	—	—	—	0.64	2.15	2.79	0.07	< 0.005	—	4.90
Other Asphalt Surfaces	—	—	—	—	—	—	—	—	—	—	—	0.00	0.00	0.00	0.00	0.00	—	0.00
Other Non-Asphalt Surfaces	—	—	—	—	—	—	—	—	—	—	—	0.00	0.00	0.00	0.00	0.00	—	0.00
Total	—	—	—	—	—	—	—	—	—	—	—	0.64	2.15	2.79	0.07	< 0.005	—	4.90
Annual	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—

General Light Industry	—	—	—	—	—	—	—	—	—	—	—	0.11	0.36	0.46	0.01	< 0.005	—	0.81
Other Asphalt Surfaces	—	—	—	—	—	—	—	—	—	—	—	0.00	0.00	0.00	0.00	0.00	—	0.00
Other Non-Asphalt Surfaces	—	—	—	—	—	—	—	—	—	—	—	0.00	0.00	0.00	0.00	0.00	—	0.00
Total	—	—	—	—	—	—	—	—	—	—	—	0.11	0.36	0.46	0.01	< 0.005	—	0.81

4.5. Waste Emissions by Land Use

4.5.1. 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)	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
General Light Industry	—	—	—	—	—	—	—	—	—	—	—	0.96	0.00	0.96	0.10	0.00	—	3.37
Other Asphalt Surfaces	—	—	—	—	—	—	—	—	—	—	—	0.00	0.00	0.00	0.00	0.00	—	0.00
Other Non-Asphalt Surfaces	—	—	—	—	—	—	—	—	—	—	—	0.00	0.00	0.00	0.00	0.00	—	0.00
Total	—	—	—	—	—	—	—	—	—	—	—	0.96	0.00	0.96	0.10	0.00	—	3.37
Daily, Winter (Max)	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—

General Light Industry	—	—	—	—	—	—	—	—	—	—	—	0.96	0.00	0.96	0.10	0.00	—	3.37
Other Asphalt Surfaces	—	—	—	—	—	—	—	—	—	—	—	0.00	0.00	0.00	0.00	0.00	—	0.00
Other Non-Asphalt Surfaces	—	—	—	—	—	—	—	—	—	—	—	0.00	0.00	0.00	0.00	0.00	—	0.00
Total	—	—	—	—	—	—	—	—	—	—	—	0.96	0.00	0.96	0.10	0.00	—	3.37
Annual	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
General Light Industry	—	—	—	—	—	—	—	—	—	—	—	0.16	0.00	0.16	0.02	0.00	—	0.56
Other Asphalt Surfaces	—	—	—	—	—	—	—	—	—	—	—	0.00	0.00	0.00	0.00	0.00	—	0.00
Other Non-Asphalt Surfaces	—	—	—	—	—	—	—	—	—	—	—	0.00	0.00	0.00	0.00	0.00	—	0.00
Total	—	—	—	—	—	—	—	—	—	—	—	0.16	0.00	0.16	0.02	0.00	—	0.56

4.6. Refrigerant Emissions by Land Use

4.6.1. 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)	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
General Light Industry	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	0.37	0.37
Total	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	0.37	0.37

Daily, Winter (Max)	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
General Light Industry	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	0.37	0.37
Total	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	0.37	0.37
Annual	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
General Light Industry	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	0.06	0.06
Total	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	0.06	0.06

4.7. Offroad Emissions By Equipment Type

4.7.1. Unmitigated

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

Equipment Type	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	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—

4.8. Stationary Emissions By Equipment Type

4.8.1. Unmitigated

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

Equipment Type	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	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—

4.9. User Defined Emissions By Equipment Type

4.9.1. Unmitigated

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

Equipment Type	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. 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)

Vegetation	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
Site Preparation	Site Preparation	5/1/2026	5/22/2026	5.00	16.0	—
Decommissioning	Site Preparation	4/8/2028	4/27/2028	5.00	14.0	—
Grading/Excavation	Grading	5/23/2026	7/2/2026	5.00	29.0	—
Infrastructure Installation/Building Construction	Building Construction	7/3/2026	3/20/2028	5.00	447	—
Nighttime Construction	Building Construction	7/3/2026	3/20/2028	6.00	537	—
Paving/Site Restoration	Paving	3/21/2028	4/7/2028	5.00	14.0	—

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
Site Preparation	Tractors/Loaders/Backhoes	Diesel	Average	1.00	7.00	84.0	0.37
Site Preparation	Scrapers	Diesel	Average	1.00	8.00	423	0.48
Decommissioning	Cranes	Diesel	Average	1.00	8.00	367	0.29

Decommissioning	Bore/Drill Rigs	Diesel	Average	1.00	8.00	83.0	0.50
Grading/Excavation	Tractors/Loaders/Backhoes	Diesel	Average	1.00	7.00	84.0	0.37
Grading/Excavation	Plate Compactors	Diesel	Average	1.00	8.00	8.00	0.43
Infrastructure Installation/Building Construction	Cranes	Diesel	Average	1.00	8.00	367	0.29
Infrastructure Installation/Building Construction	Tractors/Loaders/Backhoes	Diesel	Average	1.00	6.00	84.0	0.37
Infrastructure Installation/Building Construction	Plate Compactors	Diesel	Average	1.00	8.00	8.00	0.43
Infrastructure Installation/Building Construction	Air Compressors	Diesel	Average	1.00	8.00	37.0	0.48
Nighttime Construction	Cranes	Diesel	Average	1.00	8.00	367	0.29
Nighttime Construction	Tractors/Loaders/Backhoes	Diesel	Average	1.00	8.00	84.0	0.37
Nighttime Construction	Plate Compactors	Diesel	Average	1.00	8.00	8.00	0.43
Nighttime Construction	Air Compressors	Diesel	Average	1.00	8.00	37.0	0.48
Paving/Site Restoration	Pavers	Diesel	Average	1.00	8.00	81.0	0.42
Paving/Site Restoration	Paving Equipment	Diesel	Average	1.00	8.00	89.0	0.36
Paving/Site Restoration	Rollers	Diesel	Average	2.00	8.00	36.0	0.38
Paving/Site Restoration	Air Compressors	Diesel	Average	1.00	8.00	37.0	0.48

5.3. Construction Vehicles

5.3.1. Unmitigated

Phase Name	Trip Type	One-Way Trips per Day	Miles per Trip	Vehicle Mix
Site Preparation	—	—	—	—
Site Preparation	Worker	5.00	18.5	LDA,LDT1,LDT2
Site Preparation	Vendor	—	10.2	HHDT,MHDT
Site Preparation	Hauling	0.00	20.0	HHDT
Site Preparation	Onsite truck	—	—	HHDT
Grading/Excavation	—	—	—	—
Grading/Excavation	Worker	5.00	18.5	LDA,LDT1,LDT2
Grading/Excavation	Vendor	—	10.2	HHDT,MHDT
Grading/Excavation	Hauling	0.34	20.0	HHDT
Grading/Excavation	Onsite truck	—	—	HHDT
Infrastructure Installation/Building Construction	—	—	—	—
Infrastructure Installation/Building Construction	Worker	0.60	18.5	LDA,LDT1,LDT2
Infrastructure Installation/Building Construction	Vendor	0.24	10.2	HHDT,MHDT
Infrastructure Installation/Building Construction	Hauling	0.00	20.0	HHDT
Infrastructure Installation/Building Construction	Onsite truck	—	—	HHDT
Nighttime Construction	—	—	—	—
Nighttime Construction	Worker	0.60	18.5	LDA,LDT1,LDT2
Nighttime Construction	Vendor	0.24	10.2	HHDT,MHDT
Nighttime Construction	Hauling	0.00	20.0	HHDT
Nighttime Construction	Onsite truck	—	—	HHDT
Paving/Site Restoration	—	—	—	—
Paving/Site Restoration	Worker	12.5	18.5	LDA,LDT1,LDT2
Paving/Site Restoration	Vendor	—	10.2	HHDT,MHDT

Paving/Site Restoration	Hauling	0.00	20.0	HHDT
Paving/Site Restoration	Onsite truck	—	—	HHDT
Decommissioning	—	—	—	—
Decommissioning	Worker	5.00	18.5	LDA,LDT1,LDT2
Decommissioning	Vendor	—	10.2	HHDT,MHDT
Decommissioning	Hauling	0.00	20.0	HHDT
Decommissioning	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 (cy)	Material Exported (cy)	Acres Graded (acres)	Material Demolished (sq. ft.)	Acres Paved (acres)
Site Preparation	—	—	16.0	0.00	—
Decommissioning	—	—	0.00	0.00	—
Grading/Excavation	20.0	60.0	0.00	0.00	—
Paving/Site Restoration	0.00	0.00	0.00	0.00	2.65

5.6.2. Construction Earthmoving Control Strategies

Control Strategies Applied	Frequency (per day)	PM10 Reduction	PM2.5 Reduction
Water Exposed Area	2	61%	61%

5.7. Construction Paving

Land Use	Area Paved (acres)	% Asphalt
General Light Industry	0.00	0%
Other Asphalt Surfaces	1.23	100%
Other Non-Asphalt Surfaces	1.41	0%

5.8. Construction Electricity Consumption and Emissions Factors

kWh per Year and Emission Factor (lb/MWh)

Year	kWh per Year	CO2	CH4	N2O
2026	0.00	346	0.03	< 0.005
2027	0.00	346	0.03	< 0.005
2028	0.00	346	0.03	< 0.005

5.9. Operational Mobile Sources

5.9.1. Unmitigated

Land Use Type	Trips/Weekday	Trips/Saturday	Trips/Sunday	Trips/Year	VMT/Weekday	VMT/Saturday	VMT/Sunday	VMT/Year
General Light Industry	8.00	8.00	8.00	2,920	99.8	99.8	99.8	36,430
Other Asphalt Surfaces	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
Other Non-Asphalt Surfaces	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00

5.10. Operational Area Sources

5.10.1. Hearths

5.10.1.1. Unmitigated

5.10.2. Architectural Coatings

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)
0	0.00	2,160	720	6,918

5.10.3. Landscape Equipment

Season	Unit	Value
Snow Days	day/yr	0.00
Summer Days	day/yr	250

5.11. Operational Energy Consumption

5.11.1. Unmitigated

Electricity (kWh/yr) and CO2 and CH4 and N2O and Natural Gas (kBTU/yr)

Land Use	Electricity (kWh/yr)	CO2	CH4	N2O	Natural Gas (kBTU/yr)
General Light Industry	328,667	346	0.0330	0.0040	0.00
Other Asphalt Surfaces	0.00	346	0.0330	0.0040	0.00
Other Non-Asphalt Surfaces	0.00	346	0.0330	0.0040	0.00

5.12. Operational Water and Wastewater Consumption

5.12.1. Unmitigated

Land Use	Indoor Water (gal/year)	Outdoor Water (gal/year)
General Light Industry	333,000	0.00
Other Asphalt Surfaces	0.00	0.00
Other Non-Asphalt Surfaces	0.00	0.00

5.13. Operational Waste Generation

5.13.1. Unmitigated

Land Use	Waste (ton/year)	Cogeneration (kWh/year)
General Light Industry	1.79	—
Other Asphalt Surfaces	0.00	—
Other Non-Asphalt Surfaces	0.00	—

5.14. Operational Refrigeration and Air Conditioning Equipment

5.14.1. Unmitigated

Land Use Type	Equipment Type	Refrigerant	GWP	Quantity (kg)	Operations Leak Rate	Service Leak Rate	Times Serviced
General Light Industry	Other commercial A/C and heat pumps	R-410A	2,088	0.30	4.00	4.00	18.0

5.15. Operational Off-Road Equipment

5.15.1. Unmitigated

Equipment Type	Fuel Type	Engine Tier	Number per Day	Hours Per Day	Horsepower	Load Factor

5.16. Stationary Sources

5.16.1. Emergency Generators and Fire Pumps

Equipment Type	Fuel Type	Number per Day	Hours per Day	Hours per Year	Horsepower	Load Factor

5.16.2. Process Boilers

Equipment Type	Fuel Type	Number	Boiler Rating (MMBtu/hr)	Daily Heat Input (MMBtu/day)	Annual Heat Input (MMBtu/yr)

5.17. User Defined

Equipment Type	Fuel Type

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	24.0	annual days of extreme heat
Extreme Precipitation	7.50	annual days with precipitation above 20 mm

Sea Level Rise	—	meters of inundation depth
Wildfire	17.8	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	3	0	0	N/A
Extreme Precipitation	N/A	N/A	N/A	N/A
Sea Level Rise	1	0	0	N/A
Wildfire	1	0	0	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	0	0	0	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	3	1	1	3

Extreme Precipitation	N/A	N/A	N/A	N/A
Sea Level Rise	1	1	1	2
Wildfire	1	1	1	2
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	1	1	1	2

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	97.0
AQ-PM	51.0
AQ-DPM	38.4
Drinking Water	68.0
Lead Risk Housing	28.3
Pesticides	0.00
Toxic Releases	36.2
Traffic	92.3
Effect Indicators	—

CleanUp Sites	0.00
Groundwater	2.11
Haz Waste Facilities/Generators	16.6
Impaired Water Bodies	23.9
Solid Waste	0.00
Sensitive Population	—
Asthma	59.7
Cardio-vascular	58.7
Low Birth Weights	54.8
Socioeconomic Factor Indicators	—
Education	59.3
Housing	31.7
Linguistic	23.8
Poverty	50.9
Unemployment	67.5

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	56.39676633
Employed	56.93571154
Median HI	63.40305402
Education	—
Bachelor's or higher	42.93596818
High school enrollment	17.07943026
Preschool enrollment	64.57076864
Transportation	—

Auto Access	89.83703323
Active commuting	11.22802515
Social	—
2-parent households	25.45874503
Voting	52.05954061
Neighborhood	—
Alcohol availability	52.47016553
Park access	4.38855383
Retail density	43.42358527
Supermarket access	43.51340947
Tree canopy	64.23713589
Housing	—
Homeownership	21.01886308
Housing habitability	43.69305787
Low-inc homeowner severe housing cost burden	15.57808289
Low-inc renter severe housing cost burden	93.76363403
Uncrowded housing	23.82907738
Health Outcomes	—
Insured adults	37.31553959
Arthritis	71.8
Asthma ER Admissions	61.2
High Blood Pressure	89.6
Cancer (excluding skin)	45.0
Asthma	61.7
Coronary Heart Disease	77.0
Chronic Obstructive Pulmonary Disease	71.2
Diagnosed Diabetes	78.0
Life Expectancy at Birth	12.4

Cognitively Disabled	43.0
Physically Disabled	80.2
Heart Attack ER Admissions	23.4
Mental Health Not Good	57.3
Chronic Kidney Disease	79.8
Obesity	50.5
Pedestrian Injuries	69.2
Physical Health Not Good	65.0
Stroke	80.6
Health Risk Behaviors	—
Binge Drinking	7.9
Current Smoker	56.8
No Leisure Time for Physical Activity	76.1
Climate Change Exposures	—
Wildfire Risk	51.4
SLR Inundation Area	0.0
Children	9.0
Elderly	91.2
English Speaking	67.5
Foreign-born	33.1
Outdoor Workers	45.7
Climate Change Adaptive Capacity	—
Impervious Surface Cover	44.5
Traffic Density	81.3
Traffic Access	23.0
Other Indices	—
Hardship	58.6
Other Decision Support	—

2016 Voting	25.8

7.3. Overall Health & Equity Scores

Metric	Result for Project Census Tract
CalEnviroScreen 4.0 Score for Project Location (a)	48.0
Healthy Places Index Score for Project Location (b)	48.0
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
Land Use	Project details provided by the applicant
Construction: Construction Phases	Based on applicant provided information
Construction: Off-Road Equipment	Based on applicant provided information
Operations: Vehicle Data	Daily staff visits, weekly chemical deliveries, and resin change outs once per year would occur. Assumed all mobile trips would overlap for conservative max daily AQ emissions.
Operations: Fleet Mix	Conservatively assume HHD truck for weekly chemical deliveries and resign change outs activites, and LDA vehicles for daily staff visits

Operations: Energy Use	Electricity estimate based on 12-month billing period for a similar SCV Water groundwater treatment and disinfection facility for the N Wells. The proposed project has 1/3 its treatment capacity

Lost Canyon/Sand Canyon Groundwater Treatment Project GHG emissions Detailed Report

Table of Contents

1. Basic Project Information

1.1. Basic Project Information

Data Field	Value
Project Name	Lost Canyon/Sand Canyon Groundwater Treatment Project GHG emissions
Construction Start Date	5/1/2026
Operational Year	2028
Lead Agency	—
Land Use Scale	Project/site
Analysis Level for Defaults	County
Windspeed (m/s)	2.50
Precipitation (days)	19.6
Location	34.42028249397181, -118.42620845442978
County	Los Angeles-South Coast
City	Santa Clarita
Air District	South Coast AQMD
Air Basin	South Coast
TAZ	3619
EDFZ	7
Electric Utility	Southern California Edison
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
General Light Industry	1.44	1000sqft	0.03	1,440	0.00	—	—	—

Other Asphalt Surfaces	5.00	1000sqft	1.23	0.00	0.00	—	—	—
Other Non-Asphalt Surfaces	1.41	Acre	1.41	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.	1.57	1.31	11.5	13.0	0.03	0.43	0.48	0.75	0.39	0.06	0.40	—	2,944	2,944	0.12	0.03	0.47	2,955
Daily, Winter (Max)	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Unmit.	1.57	1.31	11.5	13.0	0.03	0.43	0.16	0.44	0.39	0.04	0.40	—	2,944	2,944	0.12	0.03	0.01	2,954
Average Daily (Max)	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Unmit.	1.20	1.00	8.69	10.2	0.02	0.31	0.03	0.32	0.28	0.01	0.29	—	2,318	2,318	0.09	0.02	0.03	2,326
Annual (Max)	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Unmit.	0.22	0.18	1.59	1.86	< 0.005	0.06	0.01	0.06	0.05	< 0.005	0.05	—	384	384	0.02	< 0.005	< 0.005	385

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)	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
2026	1.57	1.31	11.5	13.0	0.03	0.43	0.48	0.75	0.39	0.06	0.40	—	2,944	2,944	0.12	0.03	0.28	2,955
2027	1.52	1.27	11.0	13.0	0.03	0.39	0.02	0.41	0.36	< 0.005	0.37	—	2,944	2,944	0.12	0.03	0.09	2,955
2028	1.00	0.88	5.28	8.14	0.01	0.18	0.16	0.34	0.17	0.04	0.20	—	1,439	1,439	0.06	0.01	0.47	1,445
Daily - Winter (Max)	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
2026	1.57	1.31	11.5	13.0	0.03	0.43	0.02	0.44	0.39	< 0.005	0.40	—	2,944	2,944	0.12	0.03	< 0.005	2,954
2027	1.52	1.27	11.0	13.0	0.03	0.39	0.02	0.41	0.36	< 0.005	0.37	—	2,943	2,943	0.12	0.03	< 0.005	2,954
2028	1.47	1.23	10.4	12.9	0.03	0.36	0.16	0.37	0.33	0.04	0.33	—	2,943	2,943	0.12	0.03	0.01	2,954
Average Daily	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
2026	0.67	0.56	4.93	5.61	0.01	0.18	0.03	0.22	0.17	0.01	0.17	—	1,283	1,283	0.05	0.01	0.03	1,288
2027	1.20	1.00	8.69	10.2	0.02	0.31	0.02	0.32	0.28	< 0.005	0.29	—	2,318	2,318	0.09	0.02	0.03	2,326
2028	0.31	0.26	2.15	2.76	0.01	0.07	0.01	0.09	0.07	< 0.005	0.07	—	610	610	0.02	0.01	0.02	613
Annual	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
2026	0.12	0.10	0.90	1.02	< 0.005	0.03	0.01	0.04	0.03	< 0.005	0.03	—	212	212	0.01	< 0.005	< 0.005	213
2027	0.22	0.18	1.59	1.86	< 0.005	0.06	< 0.005	0.06	0.05	< 0.005	0.05	—	384	384	0.02	< 0.005	< 0.005	385
2028	0.06	0.05	0.39	0.50	< 0.005	0.01	< 0.005	0.02	0.01	< 0.005	0.01	—	101	101	< 0.005	< 0.005	< 0.005	101

2.4. Operations 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.	0.07	0.07	0.09	0.12	< 0.005	< 0.005	0.02	0.03	< 0.005	0.01	0.01	1.60	389	391	0.20	0.02	0.53	401

Daily, Winter (Max)	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Unmit.	0.06	0.05	0.10	0.05	< 0.005	< 0.005	0.02	0.03	< 0.005	0.01	0.01	1.60	389	390	0.20	0.02	0.38	401
Average Daily (Max)	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Unmit.	0.07	0.06	0.10	0.10	< 0.005	< 0.005	0.02	0.03	< 0.005	0.01	0.01	1.60	389	391	0.20	0.02	0.44	401
Annual (Max)	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Unmit.	0.01	0.01	0.02	0.02	< 0.005	< 0.005	< 0.005	< 0.005	< 0.005	< 0.005	< 0.005	0.26	64.4	64.7	0.03	< 0.005	0.07	66.4

2.5. Operations Emissions by Sector, Unmitigated

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

Sector	TOG	ROG	NOx	CO	SO2	PM10E	PM10D	PM10T	PM2.5E	PM2.5D	PM2.5T	BCO2	NBCO2	CO2T	CH4	N2O	R	CO2e
Daily, Summer (Max)	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Mobile	0.01	< 0.005	0.09	0.05	< 0.005	< 0.005	0.02	0.03	< 0.005	0.01	0.01	—	75.0	75.0	< 0.005	0.01	0.15	78.7
Area	0.06	0.06	< 0.005	0.06	< 0.005	< 0.005	—	< 0.005	< 0.005	—	< 0.005	—	0.26	0.26	< 0.005	< 0.005	—	0.26
Energy	0.00	0.00	0.00	0.00	0.00	0.00	—	0.00	0.00	—	0.00	—	312	312	0.03	< 0.005	—	314
Water	—	—	—	—	—	—	—	—	—	—	—	0.64	2.15	2.79	0.07	< 0.005	—	4.90
Waste	—	—	—	—	—	—	—	—	—	—	—	0.96	0.00	0.96	0.10	0.00	—	3.37
Refrig.	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	0.37	0.37
Total	0.07	0.07	0.09	0.12	< 0.005	< 0.005	0.02	0.03	< 0.005	0.01	0.01	1.60	389	391	0.20	0.02	0.53	401
Daily, Winter (Max)	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Mobile	0.01	< 0.005	0.10	0.05	< 0.005	< 0.005	0.02	0.03	< 0.005	0.01	0.01	—	74.8	74.8	< 0.005	0.01	< 0.005	78.3
Area	0.05	0.05	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Energy	0.00	0.00	0.00	0.00	0.00	0.00	—	0.00	0.00	—	0.00	—	312	312	0.03	< 0.005	—	314

Water	—	—	—	—	—	—	—	—	—	—	—	0.64	2.15	2.79	0.07	< 0.005	—	4.90
Waste	—	—	—	—	—	—	—	—	—	—	—	0.96	0.00	0.96	0.10	0.00	—	3.37
Refrig.	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	0.37	0.37
Total	0.06	0.05	0.10	0.05	< 0.005	< 0.005	0.02	0.03	< 0.005	0.01	0.01	1.60	389	390	0.20	0.02	0.38	401
Average Daily	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Mobile	0.01	< 0.005	0.10	0.05	< 0.005	< 0.005	0.02	0.03	< 0.005	0.01	0.01	—	74.9	74.9	< 0.005	0.01	0.07	78.4
Area	0.06	0.06	< 0.005	0.04	< 0.005	< 0.005	—	< 0.005	< 0.005	—	< 0.005	—	0.18	0.18	< 0.005	< 0.005	—	0.18
Energy	0.00	0.00	0.00	0.00	0.00	0.00	—	0.00	0.00	—	0.00	—	312	312	0.03	< 0.005	—	314
Water	—	—	—	—	—	—	—	—	—	—	—	0.64	2.15	2.79	0.07	< 0.005	—	4.90
Waste	—	—	—	—	—	—	—	—	—	—	—	0.96	0.00	0.96	0.10	0.00	—	3.37
Refrig.	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	0.37	0.37
Total	0.07	0.06	0.10	0.10	< 0.005	< 0.005	0.02	0.03	< 0.005	0.01	0.01	1.60	389	391	0.20	0.02	0.44	401
Annual	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Mobile	< 0.005	< 0.005	0.02	0.01	< 0.005	< 0.005	< 0.005	< 0.005	< 0.005	< 0.005	< 0.005	—	12.4	12.4	< 0.005	< 0.005	0.01	13.0
Area	0.01	0.01	< 0.005	0.01	< 0.005	< 0.005	—	< 0.005	< 0.005	—	< 0.005	—	0.03	0.03	< 0.005	< 0.005	—	0.03
Energy	0.00	0.00	0.00	0.00	0.00	0.00	—	0.00	0.00	—	0.00	—	51.6	51.6	< 0.005	< 0.005	—	51.9
Water	—	—	—	—	—	—	—	—	—	—	—	0.11	0.36	0.46	0.01	< 0.005	—	0.81
Waste	—	—	—	—	—	—	—	—	—	—	—	0.16	0.00	0.16	0.02	0.00	—	0.56
Refrig.	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	0.06	0.06
Total	0.01	0.01	0.02	0.02	< 0.005	< 0.005	< 0.005	< 0.005	< 0.005	< 0.005	< 0.005	0.26	64.4	64.7	0.03	< 0.005	0.07	66.4

3. Construction Emissions Details

3.1. Site Preparation (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	0.94	0.79	7.14	7.18	0.02	0.27	—	0.27	0.25	—	0.25	—	2,148	2,148	0.09	0.02	—	2,155
Dust From Material Movement	—	—	—	—	—	—	0.41	0.41	—	0.04	0.04	—	—	—	—	—	—	—
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)	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Average Daily	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Off-Road Equipment	0.04	0.03	0.31	0.31	< 0.005	0.01	—	0.01	0.01	—	0.01	—	94.2	94.2	< 0.005	< 0.005	—	94.5
Dust From Material Movement	—	—	—	—	—	—	0.02	0.02	—	< 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	0.01	0.01	0.06	0.06	< 0.005	< 0.005	—	< 0.005	< 0.005	—	< 0.005	—	15.6	15.6	< 0.005	< 0.005	—	15.6
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	0.02	0.02	0.02	0.32	0.00	0.00	0.07	0.07	0.00	0.02	0.02	—	67.7	67.7	< 0.005	< 0.005	0.23	68.7
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)	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Average Daily	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Worker	< 0.005	< 0.005	< 0.005	0.01	0.00	0.00	< 0.005	< 0.005	0.00	< 0.005	< 0.005	—	2.86	2.86	< 0.005	< 0.005	< 0.005	2.90
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	< 0.005	< 0.005	< 0.005	< 0.005	0.00	0.00	< 0.005	< 0.005	0.00	< 0.005	< 0.005	—	0.47	0.47	< 0.005	< 0.005	< 0.005	0.48
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

3.3. Decommissioning (2028) - 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	0.53	0.45	4.17	5.46	0.01	0.15	—	0.15	0.14	—	0.14	—	1,374	1,374	0.06	0.01	—	1,379
Dust From Material Movement	—	—	—	—	—	—	0.00	0.00	—	0.00	0.00	—	—	—	—	—	—	—
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)	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Average Daily	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Off-Road Equipment	0.02	0.02	0.16	0.21	< 0.005	0.01	—	0.01	0.01	—	0.01	—	52.7	52.7	< 0.005	< 0.005	—	52.9
Dust From Material Movement	—	—	—	—	—	—	0.00	0.00	—	0.00	0.00	—	—	—	—	—	—	—
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	< 0.005	< 0.005	0.03	0.04	< 0.005	< 0.005	—	< 0.005	< 0.005	—	< 0.005	—	8.72	8.72	< 0.005	< 0.005	—	8.75
Dust From Material Movement	—	—	—	—	—	—	0.00	0.00	—	0.00	0.00	—	—	—	—	—	—	—
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	0.02	0.02	0.02	0.28	0.00	0.00	0.07	0.07	0.00	0.02	0.02	—	65.3	65.3	< 0.005	< 0.005	0.19	66.2
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	0.00	0.00	0.00	0.00	0.00	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)	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Average Daily	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Worker	< 0.005	< 0.005	< 0.005	0.01	0.00	0.00	< 0.005	< 0.005	0.00	< 0.005	< 0.005	—	2.41	2.41	< 0.005	< 0.005	< 0.005	2.44
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	< 0.005	< 0.005	< 0.005	< 0.005	0.00	0.00	< 0.005	< 0.005	0.00	< 0.005	< 0.005	—	0.40	0.40	< 0.005	< 0.005	< 0.005	0.40
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. Grading/Excavation (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	0.15	0.12	1.16	1.88	< 0.005	0.04	—	0.04	0.04	—	0.04	—	289	289	0.01	< 0.005	—	290

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)	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Average Daily	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Off-Road Equipment	0.01	0.01	0.09	0.15	< 0.005	< 0.005	—	< 0.005	< 0.005	—	< 0.005	—	22.9	22.9	< 0.005	< 0.005	—	23.0
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	< 0.005	< 0.005	0.02	0.03	< 0.005	< 0.005	—	< 0.005	< 0.005	—	< 0.005	—	3.80	3.80	< 0.005	< 0.005	—	3.81
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	0.02	0.02	0.02	0.32	0.00	0.00	0.07	0.07	0.00	0.02	0.02	—	67.7	67.7	< 0.005	< 0.005	0.23	68.7

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	0.03	0.01	< 0.005	< 0.005	0.01	0.01	< 0.005	< 0.005	< 0.005	—	23.5	23.5	< 0.005	< 0.005	0.05	24.7
Daily, Winter (Max)	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Average Daily	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Worker	< 0.005	< 0.005	< 0.005	0.02	0.00	0.00	0.01	0.01	0.00	< 0.005	< 0.005	—	5.18	5.18	< 0.005	< 0.005	0.01	5.25
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	—	1.86	1.86	< 0.005	< 0.005	< 0.005	1.96
Annual	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Worker	< 0.005	< 0.005	< 0.005	< 0.005	0.00	0.00	< 0.005	< 0.005	0.00	< 0.005	< 0.005	—	0.86	0.86	< 0.005	< 0.005	< 0.005	0.87
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	—	0.31	0.31	< 0.005	< 0.005	< 0.005	0.32

3.7. Infrastructure Installation/Building 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)	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Off-Road Equipment	0.77	0.64	5.62	6.23	0.01	0.21	—	0.21	0.19	—	0.19	—	1,420	1,420	0.06	0.01	—	1,425
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	0.77	0.64	5.62	6.23	0.01	0.21	—	0.21	0.19	—	0.19	—	1,420	1,420	0.06	0.01	—	1,425
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	0.27	0.23	2.00	2.22	< 0.005	0.07	—	0.07	0.07	—	0.07	—	506	506	0.02	< 0.005	—	508
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	0.05	0.04	0.37	0.40	< 0.005	0.01	—	0.01	0.01	—	0.01	—	83.8	83.8	< 0.005	< 0.005	—	84.0
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	< 0.005	< 0.005	< 0.005	0.04	0.00	0.00	0.01	0.01	0.00	< 0.005	< 0.005	—	8.19	8.19	< 0.005	< 0.005	0.03	8.32
Vendor	< 0.005	< 0.005	0.01	< 0.005	< 0.005	< 0.005	< 0.005	< 0.005	< 0.005	< 0.005	< 0.005	—	7.36	7.36	< 0.005	< 0.005	0.02	7.70
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	< 0.005	< 0.005	< 0.005	0.03	0.00	0.00	0.01	0.01	0.00	< 0.005	< 0.005	—	7.77	7.77	< 0.005	< 0.005	< 0.005	7.86
Vendor	< 0.005	< 0.005	0.01	< 0.005	< 0.005	< 0.005	< 0.005	< 0.005	< 0.005	< 0.005	< 0.005	—	7.36	7.36	< 0.005	< 0.005	< 0.005	7.68
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	< 0.005	< 0.005	< 0.005	0.01	0.00	0.00	< 0.005	< 0.005	0.00	< 0.005	< 0.005	—	2.81	2.81	< 0.005	< 0.005	< 0.005	2.85
Vendor	< 0.005	< 0.005	< 0.005	< 0.005	< 0.005	< 0.005	< 0.005	< 0.005	< 0.005	< 0.005	< 0.005	—	2.62	2.62	< 0.005	< 0.005	< 0.005	2.74
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	< 0.005	< 0.005	< 0.005	< 0.005	0.00	0.00	< 0.005	< 0.005	0.00	< 0.005	< 0.005	—	0.46	0.46	< 0.005	< 0.005	< 0.005	0.47
Vendor	< 0.005	< 0.005	< 0.005	< 0.005	< 0.005	< 0.005	< 0.005	< 0.005	< 0.005	< 0.005	< 0.005	—	0.43	0.43	< 0.005	< 0.005	< 0.005	0.45
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. Infrastructure Installation/Building Construction (2027) - 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	0.74	0.62	5.38	6.20	0.01	0.19	—	0.19	0.18	—	0.18	—	1,420	1,420	0.06	0.01	—	1,425
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	0.74	0.62	5.38	6.20	0.01	0.19	—	0.19	0.18	—	0.18	—	1,420	1,420	0.06	0.01	—	1,425
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	0.53	0.44	3.85	4.43	0.01	0.14	—	0.14	0.13	—	0.13	—	1,015	1,015	0.04	0.01	—	1,018
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	0.70	0.81	< 0.005	0.03	—	0.03	0.02	—	0.02	—	168	168	0.01	< 0.005	—	169
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	< 0.005	< 0.005	< 0.005	0.04	0.00	0.00	0.01	0.01	0.00	< 0.005	< 0.005	—	8.04	8.04	< 0.005	< 0.005	0.03	8.16
Vendor	< 0.005	< 0.005	0.01	< 0.005	< 0.005	< 0.005	< 0.005	< 0.005	< 0.005	< 0.005	< 0.005	—	7.22	7.22	< 0.005	< 0.005	0.02	7.54
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	< 0.005	< 0.005	< 0.005	0.03	0.00	0.00	0.01	0.01	0.00	< 0.005	< 0.005	—	7.62	7.62	< 0.005	< 0.005	< 0.005	7.71
Vendor	< 0.005	< 0.005	0.01	< 0.005	< 0.005	< 0.005	< 0.005	< 0.005	< 0.005	< 0.005	< 0.005	—	7.22	7.22	< 0.005	< 0.005	< 0.005	7.53
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	< 0.005	< 0.005	< 0.005	0.02	0.00	0.00	0.01	0.01	0.00	< 0.005	< 0.005	—	5.52	5.52	< 0.005	< 0.005	0.01	5.59
Vendor	< 0.005	< 0.005	0.01	< 0.005	< 0.005	< 0.005	< 0.005	< 0.005	< 0.005	< 0.005	< 0.005	—	5.16	5.16	< 0.005	< 0.005	0.01	5.38
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	< 0.005	< 0.005	< 0.005	< 0.005	0.00	0.00	< 0.005	< 0.005	0.00	< 0.005	< 0.005	—	0.91	0.91	< 0.005	< 0.005	< 0.005	0.93
Vendor	< 0.005	< 0.005	< 0.005	< 0.005	< 0.005	< 0.005	< 0.005	< 0.005	< 0.005	< 0.005	< 0.005	—	0.85	0.85	< 0.005	< 0.005	< 0.005	0.89

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. Infrastructure Installation/Building Construction (2028) - 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	0.72	0.60	5.05	6.19	0.01	0.17	—	0.17	0.16	—	0.16	—	1,421	1,421	0.06	0.01	—	1,426
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	0.09	0.79	0.97	< 0.005	0.03	—	0.03	0.03	—	0.03	—	222	222	0.01	< 0.005	—	223
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	0.14	0.18	< 0.005	< 0.005	—	< 0.005	< 0.005	—	< 0.005	—	36.8	36.8	< 0.005	< 0.005	—	37.0
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	< 0.005	< 0.005	< 0.005	0.03	0.00	0.00	0.01	0.01	0.00	< 0.005	< 0.005	—	7.48	7.48	< 0.005	< 0.005	< 0.005	7.57
Vendor	< 0.005	< 0.005	0.01	< 0.005	< 0.005	< 0.005	< 0.005	< 0.005	< 0.005	< 0.005	< 0.005	—	7.05	7.05	< 0.005	< 0.005	< 0.005	7.36
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	< 0.005	< 0.005	< 0.005	< 0.005	0.00	0.00	< 0.005	< 0.005	0.00	< 0.005	< 0.005	—	1.19	1.19	< 0.005	< 0.005	< 0.005	1.20
Vendor	< 0.005	< 0.005	< 0.005	< 0.005	< 0.005	< 0.005	< 0.005	< 0.005	< 0.005	< 0.005	< 0.005	—	1.10	1.10	< 0.005	< 0.005	< 0.005	1.15
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	< 0.005	< 0.005	< 0.005	< 0.005	0.00	0.00	< 0.005	< 0.005	0.00	< 0.005	< 0.005	—	0.20	0.20	< 0.005	< 0.005	< 0.005	0.20
Vendor	< 0.005	< 0.005	< 0.005	< 0.005	< 0.005	< 0.005	< 0.005	< 0.005	< 0.005	< 0.005	< 0.005	—	0.18	0.18	< 0.005	< 0.005	< 0.005	0.19
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

3.13. Nighttime 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)	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Off-Road Equipment	0.80	0.67	5.87	6.70	0.01	0.22	—	0.22	0.20	—	0.20	—	1,493	1,493	0.06	0.01	—	1,498
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	0.80	0.67	5.87	6.70	0.01	0.22	—	0.22	0.20	—	0.20	—	1,493	1,493	0.06	0.01	—	1,498
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	0.34	0.28	2.51	2.86	0.01	0.09	—	0.09	0.09	—	0.09	—	638	638	0.03	0.01	—	640
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	0.06	0.05	0.46	0.52	< 0.005	0.02	—	0.02	0.02	—	0.02	—	106	106	< 0.005	< 0.005	—	106
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	< 0.005	< 0.005	< 0.005	0.04	0.00	0.00	0.01	0.01	0.00	< 0.005	< 0.005	—	8.19	8.19	< 0.005	< 0.005	0.03	8.32
Vendor	< 0.005	< 0.005	0.01	< 0.005	< 0.005	< 0.005	< 0.005	< 0.005	< 0.005	< 0.005	< 0.005	—	7.36	7.36	< 0.005	< 0.005	0.02	7.70
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	< 0.005	< 0.005	< 0.005	0.03	0.00	0.00	0.01	0.01	0.00	< 0.005	< 0.005	—	7.77	7.77	< 0.005	< 0.005	< 0.005	7.86

Vendor	< 0.005	< 0.005	0.01	< 0.005	< 0.005	< 0.005	< 0.005	< 0.005	< 0.005	< 0.005	< 0.005	—	7.36	7.36	< 0.005	< 0.005	< 0.005	7.68
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	< 0.005	< 0.005	< 0.005	0.01	0.00	0.00	< 0.005	< 0.005	0.00	< 0.005	< 0.005	—	3.37	3.37	< 0.005	< 0.005	0.01	3.41
Vendor	< 0.005	< 0.005	< 0.005	< 0.005	< 0.005	< 0.005	< 0.005	< 0.005	< 0.005	< 0.005	< 0.005	—	3.15	3.15	< 0.005	< 0.005	< 0.005	3.29
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	< 0.005	< 0.005	< 0.005	< 0.005	0.00	0.00	< 0.005	< 0.005	0.00	< 0.005	< 0.005	—	0.56	0.56	< 0.005	< 0.005	< 0.005	0.57
Vendor	< 0.005	< 0.005	< 0.005	< 0.005	< 0.005	< 0.005	< 0.005	< 0.005	< 0.005	< 0.005	< 0.005	—	0.52	0.52	< 0.005	< 0.005	< 0.005	0.54
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

3.15. Nighttime Construction (2027) - 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	0.77	0.65	5.63	6.68	0.01	0.20	—	0.20	0.18	—	0.18	—	1,493	1,493	0.06	0.01	—	1,498
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	0.77	0.65	5.63	6.68	0.01	0.20	—	0.20	0.18	—	0.18	—	1,493	1,493	0.06	0.01	—	1,498

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	0.66	0.55	4.83	5.73	0.01	0.17	—	0.17	0.16	—	0.16	—	1,280	1,280	0.05	0.01	—	1,284
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	0.12	0.10	0.88	1.04	< 0.005	0.03	—	0.03	0.03	—	0.03	—	212	212	0.01	< 0.005	—	213
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	< 0.005	< 0.005	< 0.005	0.04	0.00	0.00	0.01	0.01	0.00	< 0.005	< 0.005	—	8.04	8.04	< 0.005	< 0.005	0.03	8.16
Vendor	< 0.005	< 0.005	0.01	< 0.005	< 0.005	< 0.005	< 0.005	< 0.005	< 0.005	< 0.005	< 0.005	—	7.22	7.22	< 0.005	< 0.005	0.02	7.54
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	< 0.005	< 0.005	< 0.005	0.03	0.00	0.00	0.01	0.01	0.00	< 0.005	< 0.005	—	7.62	7.62	< 0.005	< 0.005	< 0.005	7.71
Vendor	< 0.005	< 0.005	0.01	< 0.005	< 0.005	< 0.005	< 0.005	< 0.005	< 0.005	< 0.005	< 0.005	—	7.22	7.22	< 0.005	< 0.005	< 0.005	7.53
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	< 0.005	< 0.005	< 0.005	0.03	0.00	0.00	0.01	0.01	0.00	< 0.005	< 0.005	—	6.63	6.63	< 0.005	< 0.005	0.01	6.71
Vendor	< 0.005	< 0.005	0.01	< 0.005	< 0.005	< 0.005	< 0.005	< 0.005	< 0.005	< 0.005	< 0.005	—	6.19	6.19	< 0.005	< 0.005	0.01	6.45

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	< 0.005	< 0.005	< 0.005	0.01	0.00	0.00	< 0.005	< 0.005	0.00	< 0.005	< 0.005	—	1.10	1.10	< 0.005	< 0.005	< 0.005	1.11
Vendor	< 0.005	< 0.005	< 0.005	< 0.005	< 0.005	< 0.005	< 0.005	< 0.005	< 0.005	< 0.005	< 0.005	—	1.02	1.02	< 0.005	< 0.005	< 0.005	1.07
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

3.17. Nighttime Construction (2028) - 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	0.74	0.62	5.29	6.67	0.01	0.18	—	0.18	0.17	—	0.17	—	1,493	1,493	0.06	0.01	—	1,499
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	0.14	0.12	0.99	1.25	< 0.005	0.03	—	0.03	0.03	—	0.03	—	281	281	0.01	< 0.005	—	282
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	0.03	0.02	0.18	0.23	< 0.005	0.01	—	0.01	0.01	—	0.01	—	46.5	46.5	< 0.005	< 0.005	—	46.6
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	< 0.005	< 0.005	< 0.005	0.03	0.00	0.00	0.01	0.01	0.00	< 0.005	< 0.005	—	7.48	7.48	< 0.005	< 0.005	< 0.005	7.57
Vendor	< 0.005	< 0.005	0.01	< 0.005	< 0.005	< 0.005	< 0.005	< 0.005	< 0.005	< 0.005	< 0.005	—	7.05	7.05	< 0.005	< 0.005	< 0.005	7.36
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	< 0.005	< 0.005	< 0.005	0.01	0.00	0.00	< 0.005	< 0.005	0.00	< 0.005	< 0.005	—	1.43	1.43	< 0.005	< 0.005	< 0.005	1.45
Vendor	< 0.005	< 0.005	< 0.005	< 0.005	< 0.005	< 0.005	< 0.005	< 0.005	< 0.005	< 0.005	< 0.005	—	1.32	1.32	< 0.005	< 0.005	< 0.005	1.38
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	< 0.005	< 0.005	< 0.005	< 0.005	0.00	0.00	< 0.005	< 0.005	0.00	< 0.005	< 0.005	—	0.24	0.24	< 0.005	< 0.005	< 0.005	0.24
Vendor	< 0.005	< 0.005	< 0.005	< 0.005	< 0.005	< 0.005	< 0.005	< 0.005	< 0.005	< 0.005	< 0.005	—	0.22	0.22	< 0.005	< 0.005	< 0.005	0.23
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

3.19. Paving/Site Restoration (2028) - 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	0.72	0.61	5.24	7.43	0.01	0.18	—	0.18	0.17	—	0.17	—	1,075	1,075	0.04	0.01	—	1,079
Paving	0.23	0.23	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
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	0.72	0.61	5.24	7.43	0.01	0.18	—	0.18	0.17	—	0.17	—	1,075	1,075	0.04	0.01	—	1,079
Paving	0.23	0.23	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
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	0.03	0.02	0.20	0.29	< 0.005	0.01	—	0.01	0.01	—	0.01	—	41.2	41.2	< 0.005	< 0.005	—	41.4
Paving	0.01	0.01	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
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	0.01	< 0.005	0.04	0.05	< 0.005	< 0.005	—	< 0.005	< 0.005	—	< 0.005	—	6.83	6.83	< 0.005	< 0.005	—	6.85
Paving	< 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	0.05	0.04	0.04	0.71	0.00	0.00	0.16	0.16	0.00	0.04	0.04	—	163	163	< 0.005	0.01	0.47	165
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	0.05	0.04	0.05	0.60	0.00	0.00	0.16	0.16	0.00	0.04	0.04	—	155	155	< 0.005	0.01	0.01	157
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	< 0.005	< 0.005	< 0.005	0.02	0.00	0.00	0.01	0.01	0.00	< 0.005	< 0.005	—	6.02	6.02	< 0.005	< 0.005	0.01	6.10
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	< 0.005	< 0.005	< 0.005	< 0.005	0.00	0.00	< 0.005	< 0.005	0.00	< 0.005	< 0.005	—	1.00	1.00	< 0.005	< 0.005	< 0.005	1.01
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

4. Operations Emissions Details

4.1. Mobile Emissions by Land Use

4.1.1. 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)	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
General Light Industry	0.01	< 0.005	0.09	0.05	< 0.005	< 0.005	0.02	0.03	< 0.005	0.01	0.01	—	75.0	75.0	< 0.005	0.01	0.15	78.7
Other Asphalt Surfaces	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	—	0.00	0.00	0.00	0.00	0.00	0.00
Other Non-Asphalt Surfaces	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	—	0.00	0.00	0.00	0.00	0.00	0.00
Total	0.01	< 0.005	0.09	0.05	< 0.005	< 0.005	0.02	0.03	< 0.005	0.01	0.01	—	75.0	75.0	< 0.005	0.01	0.15	78.7
Daily, Winter (Max)	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
General Light Industry	0.01	< 0.005	0.10	0.05	< 0.005	< 0.005	0.02	0.03	< 0.005	0.01	0.01	—	74.8	74.8	< 0.005	0.01	< 0.005	78.3
Other Asphalt Surfaces	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	—	0.00	0.00	0.00	0.00	0.00	0.00
Other Non-Asphalt Surfaces	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	—	0.00	0.00	0.00	0.00	0.00	0.00
Total	0.01	< 0.005	0.10	0.05	< 0.005	< 0.005	0.02	0.03	< 0.005	0.01	0.01	—	74.8	74.8	< 0.005	0.01	< 0.005	78.3
Annual	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
General Light Industry	< 0.005	< 0.005	0.02	0.01	< 0.005	< 0.005	< 0.005	< 0.005	< 0.005	< 0.005	< 0.005	—	12.4	12.4	< 0.005	< 0.005	0.01	13.0
Other Asphalt Surfaces	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	—	0.00	0.00	0.00	0.00	0.00	0.00

Other Non-Asphalt Surfaces	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	—	0.00	0.00	0.00	0.00	0.00	0.00
Total	< 0.005	< 0.005	0.02	0.01	< 0.005	< 0.005	< 0.005	< 0.005	< 0.005	< 0.005	< 0.005	—	12.4	12.4	< 0.005	< 0.005	0.01	13.0

4.2. Energy

4.2.1. Electricity Emissions By Land Use - 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)	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
General Light Industry	—	—	—	—	—	—	—	—	—	—	—	—	312	312	0.03	< 0.005	—	314
Other Asphalt Surfaces	—	—	—	—	—	—	—	—	—	—	—	—	0.00	0.00	0.00	0.00	—	0.00
Other Non-Asphalt Surfaces	—	—	—	—	—	—	—	—	—	—	—	—	0.00	0.00	0.00	0.00	—	0.00
Total	—	—	—	—	—	—	—	—	—	—	—	—	312	312	0.03	< 0.005	—	314
Daily, Winter (Max)	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
General Light Industry	—	—	—	—	—	—	—	—	—	—	—	—	312	312	0.03	< 0.005	—	314
Other Asphalt Surfaces	—	—	—	—	—	—	—	—	—	—	—	—	0.00	0.00	0.00	0.00	—	0.00

Other Non-Asphalt Surfaces	—	—	—	—	—	—	—	—	—	—	—	—	0.00	0.00	0.00	0.00	—	0.00
Total	—	—	—	—	—	—	—	—	—	—	—	—	312	312	0.03	< 0.005	—	314
Annual	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
General Light Industry	—	—	—	—	—	—	—	—	—	—	—	—	51.6	51.6	< 0.005	< 0.005	—	51.9
Other Asphalt Surfaces	—	—	—	—	—	—	—	—	—	—	—	—	0.00	0.00	0.00	0.00	—	0.00
Other Non-Asphalt Surfaces	—	—	—	—	—	—	—	—	—	—	—	—	0.00	0.00	0.00	0.00	—	0.00
Total	—	—	—	—	—	—	—	—	—	—	—	—	51.6	51.6	< 0.005	< 0.005	—	51.9

4.2.3. Natural Gas Emissions By Land Use - 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)	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
General Light Industry	0.00	0.00	0.00	0.00	0.00	0.00	—	0.00	0.00	—	0.00	—	0.00	0.00	0.00	0.00	—	0.00
Other Asphalt Surfaces	0.00	0.00	0.00	0.00	0.00	0.00	—	0.00	0.00	—	0.00	—	0.00	0.00	0.00	0.00	—	0.00
Other Non-Asphalt Surfaces	0.00	0.00	0.00	0.00	0.00	0.00	—	0.00	0.00	—	0.00	—	0.00	0.00	0.00	0.00	—	0.00
Total	0.00	0.00	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)	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
General Light Industry	0.00	0.00	0.00	0.00	0.00	0.00	—	0.00	0.00	—	0.00	—	0.00	0.00	0.00	0.00	—	0.00
Other Asphalt Surfaces	0.00	0.00	0.00	0.00	0.00	0.00	—	0.00	0.00	—	0.00	—	0.00	0.00	0.00	0.00	—	0.00
Other Non-Asphalt Surfaces	0.00	0.00	0.00	0.00	0.00	0.00	—	0.00	0.00	—	0.00	—	0.00	0.00	0.00	0.00	—	0.00
Total	0.00	0.00	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	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
General Light Industry	0.00	0.00	0.00	0.00	0.00	0.00	—	0.00	0.00	—	0.00	—	0.00	0.00	0.00	0.00	—	0.00
Other Asphalt Surfaces	0.00	0.00	0.00	0.00	0.00	0.00	—	0.00	0.00	—	0.00	—	0.00	0.00	0.00	0.00	—	0.00
Other Non-Asphalt Surfaces	0.00	0.00	0.00	0.00	0.00	0.00	—	0.00	0.00	—	0.00	—	0.00	0.00	0.00	0.00	—	0.00
Total	0.00	0.00	0.00	0.00	0.00	0.00	—	0.00	0.00	—	0.00	—	0.00	0.00	0.00	0.00	—	0.00

4.3. Area Emissions by Source

4.3.1. Unmitigated

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

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

Consumer Product	0.04	0.04	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Architectural Coatings	0.01	0.01	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Landscape Equipment	0.01	0.01	< 0.005	0.06	< 0.005	< 0.005	—	< 0.005	< 0.005	—	< 0.005	—	0.26	0.26	< 0.005	< 0.005	—	0.26
Total	0.06	0.06	< 0.005	0.06	< 0.005	< 0.005	—	< 0.005	< 0.005	—	< 0.005	—	0.26	0.26	< 0.005	< 0.005	—	0.26
Daily, Winter (Max)	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Consumer Products	0.04	0.04	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Architectural Coatings	0.01	0.01	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Total	0.05	0.05	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Annual	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Consumer Products	0.01	0.01	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Architectural Coatings	< 0.005	< 0.005	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Landscape Equipment	< 0.005	< 0.005	< 0.005	0.01	< 0.005	< 0.005	—	< 0.005	< 0.005	—	< 0.005	—	0.03	0.03	< 0.005	< 0.005	—	0.03
Total	0.01	0.01	< 0.005	0.01	< 0.005	< 0.005	—	< 0.005	< 0.005	—	< 0.005	—	0.03	0.03	< 0.005	< 0.005	—	0.03

4.4. Water Emissions by Land Use

4.4.1. 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)	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
General Light Industry	—	—	—	—	—	—	—	—	—	—	—	0.64	2.15	2.79	0.07	< 0.005	—	4.90
Other Asphalt Surfaces	—	—	—	—	—	—	—	—	—	—	—	0.00	0.00	0.00	0.00	0.00	—	0.00
Other Non-Asphalt Surfaces	—	—	—	—	—	—	—	—	—	—	—	0.00	0.00	0.00	0.00	0.00	—	0.00
Total	—	—	—	—	—	—	—	—	—	—	—	0.64	2.15	2.79	0.07	< 0.005	—	4.90
Daily, Winter (Max)	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
General Light Industry	—	—	—	—	—	—	—	—	—	—	—	0.64	2.15	2.79	0.07	< 0.005	—	4.90
Other Asphalt Surfaces	—	—	—	—	—	—	—	—	—	—	—	0.00	0.00	0.00	0.00	0.00	—	0.00
Other Non-Asphalt Surfaces	—	—	—	—	—	—	—	—	—	—	—	0.00	0.00	0.00	0.00	0.00	—	0.00
Total	—	—	—	—	—	—	—	—	—	—	—	0.64	2.15	2.79	0.07	< 0.005	—	4.90
Annual	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—

General Light Industry	—	—	—	—	—	—	—	—	—	—	—	0.11	0.36	0.46	0.01	< 0.005	—	0.81
Other Asphalt Surfaces	—	—	—	—	—	—	—	—	—	—	—	0.00	0.00	0.00	0.00	0.00	—	0.00
Other Non-Asphalt Surfaces	—	—	—	—	—	—	—	—	—	—	—	0.00	0.00	0.00	0.00	0.00	—	0.00
Total	—	—	—	—	—	—	—	—	—	—	—	0.11	0.36	0.46	0.01	< 0.005	—	0.81

4.5. Waste Emissions by Land Use

4.5.1. 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)	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
General Light Industry	—	—	—	—	—	—	—	—	—	—	—	0.96	0.00	0.96	0.10	0.00	—	3.37
Other Asphalt Surfaces	—	—	—	—	—	—	—	—	—	—	—	0.00	0.00	0.00	0.00	0.00	—	0.00
Other Non-Asphalt Surfaces	—	—	—	—	—	—	—	—	—	—	—	0.00	0.00	0.00	0.00	0.00	—	0.00
Total	—	—	—	—	—	—	—	—	—	—	—	0.96	0.00	0.96	0.10	0.00	—	3.37
Daily, Winter (Max)	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—

General Light Industry	—	—	—	—	—	—	—	—	—	—	—	0.96	0.00	0.96	0.10	0.00	—	3.37
Other Asphalt Surfaces	—	—	—	—	—	—	—	—	—	—	—	0.00	0.00	0.00	0.00	0.00	—	0.00
Other Non-Asphalt Surfaces	—	—	—	—	—	—	—	—	—	—	—	0.00	0.00	0.00	0.00	0.00	—	0.00
Total	—	—	—	—	—	—	—	—	—	—	—	0.96	0.00	0.96	0.10	0.00	—	3.37
Annual	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
General Light Industry	—	—	—	—	—	—	—	—	—	—	—	0.16	0.00	0.16	0.02	0.00	—	0.56
Other Asphalt Surfaces	—	—	—	—	—	—	—	—	—	—	—	0.00	0.00	0.00	0.00	0.00	—	0.00
Other Non-Asphalt Surfaces	—	—	—	—	—	—	—	—	—	—	—	0.00	0.00	0.00	0.00	0.00	—	0.00
Total	—	—	—	—	—	—	—	—	—	—	—	0.16	0.00	0.16	0.02	0.00	—	0.56

4.6. Refrigerant Emissions by Land Use

4.6.1. 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)	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
General Light Industry	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	0.37	0.37
Total	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	0.37	0.37

Daily, Winter (Max)	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
General Light Industry	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	0.37	0.37
Total	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	0.37	0.37
Annual	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
General Light Industry	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	0.06	0.06
Total	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	0.06	0.06

4.7. Offroad Emissions By Equipment Type

4.7.1. Unmitigated

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

Equipment Type	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	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—

4.8. Stationary Emissions By Equipment Type

4.8.1. Unmitigated

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

Equipment Type	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	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—

4.9. User Defined Emissions By Equipment Type

4.9.1. Unmitigated

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

Equipment Type	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. 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)

Vegetation	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
Site Preparation	Site Preparation	5/1/2026	5/22/2026	5.00	16.0	—
Decommissioning	Site Preparation	4/8/2028	4/27/2028	5.00	14.0	—
Grading/Excavation	Grading	5/23/2026	7/2/2026	5.00	29.0	—
Infrastructure Installation/Building Construction	Building Construction	7/3/2026	3/20/2028	5.00	447	—
Nighttime Construction	Building Construction	7/3/2026	3/20/2028	6.00	537	—
Paving/Site Restoration	Paving	3/21/2028	4/7/2028	5.00	14.0	—

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
Site Preparation	Tractors/Loaders/Backhoes	Diesel	Average	1.00	7.00	84.0	0.37
Site Preparation	Scrapers	Diesel	Average	1.00	8.00	423	0.48
Decommissioning	Cranes	Diesel	Average	1.00	8.00	367	0.29

Decommissioning	Bore/Drill Rigs	Diesel	Average	1.00	8.00	83.0	0.50
Grading/Excavation	Tractors/Loaders/Backhoes	Diesel	Average	1.00	7.00	84.0	0.37
Grading/Excavation	Plate Compactors	Diesel	Average	1.00	8.00	8.00	0.43
Infrastructure Installation/Building Construction	Cranes	Diesel	Average	1.00	8.00	367	0.29
Infrastructure Installation/Building Construction	Tractors/Loaders/Backhoes	Diesel	Average	1.00	6.00	84.0	0.37
Infrastructure Installation/Building Construction	Plate Compactors	Diesel	Average	1.00	8.00	8.00	0.43
Infrastructure Installation/Building Construction	Air Compressors	Diesel	Average	1.00	8.00	37.0	0.48
Nighttime Construction	Cranes	Diesel	Average	1.00	8.00	367	0.29
Nighttime Construction	Tractors/Loaders/Backhoes	Diesel	Average	1.00	8.00	84.0	0.37
Nighttime Construction	Plate Compactors	Diesel	Average	1.00	8.00	8.00	0.43
Nighttime Construction	Air Compressors	Diesel	Average	1.00	8.00	37.0	0.48
Paving/Site Restoration	Pavers	Diesel	Average	1.00	8.00	81.0	0.42
Paving/Site Restoration	Paving Equipment	Diesel	Average	1.00	8.00	89.0	0.36
Paving/Site Restoration	Rollers	Diesel	Average	2.00	8.00	36.0	0.38
Paving/Site Restoration	Air Compressors	Diesel	Average	1.00	8.00	37.0	0.48

5.3. Construction Vehicles

5.3.1. Unmitigated

Phase Name	Trip Type	One-Way Trips per Day	Miles per Trip	Vehicle Mix
Site Preparation	—	—	—	—
Site Preparation	Worker	5.00	18.5	LDA,LDT1,LDT2
Site Preparation	Vendor	—	10.2	HHDT,MHDT
Site Preparation	Hauling	0.00	20.0	HHDT
Site Preparation	Onsite truck	—	—	HHDT
Grading/Excavation	—	—	—	—
Grading/Excavation	Worker	5.00	18.5	LDA,LDT1,LDT2
Grading/Excavation	Vendor	—	10.2	HHDT,MHDT
Grading/Excavation	Hauling	0.34	20.0	HHDT
Grading/Excavation	Onsite truck	—	—	HHDT
Infrastructure Installation/Building Construction	—	—	—	—
Infrastructure Installation/Building Construction	Worker	0.60	18.5	LDA,LDT1,LDT2
Infrastructure Installation/Building Construction	Vendor	0.24	10.2	HHDT,MHDT
Infrastructure Installation/Building Construction	Hauling	0.00	20.0	HHDT
Infrastructure Installation/Building Construction	Onsite truck	—	—	HHDT
Nighttime Construction	—	—	—	—
Nighttime Construction	Worker	0.60	18.5	LDA,LDT1,LDT2
Nighttime Construction	Vendor	0.24	10.2	HHDT,MHDT
Nighttime Construction	Hauling	0.00	20.0	HHDT
Nighttime Construction	Onsite truck	—	—	HHDT
Paving/Site Restoration	—	—	—	—
Paving/Site Restoration	Worker	12.5	18.5	LDA,LDT1,LDT2
Paving/Site Restoration	Vendor	—	10.2	HHDT,MHDT

Paving/Site Restoration	Hauling	0.00	20.0	HHDT
Paving/Site Restoration	Onsite truck	—	—	HHDT
Decommissioning	—	—	—	—
Decommissioning	Worker	5.00	18.5	LDA,LDT1,LDT2
Decommissioning	Vendor	—	10.2	HHDT,MHDT
Decommissioning	Hauling	0.00	20.0	HHDT
Decommissioning	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 (cy)	Material Exported (cy)	Acres Graded (acres)	Material Demolished (sq. ft.)	Acres Paved (acres)
Site Preparation	—	—	16.0	0.00	—
Decommissioning	—	—	0.00	0.00	—
Grading/Excavation	20.0	60.0	0.00	0.00	—
Paving/Site Restoration	0.00	0.00	0.00	0.00	2.65

5.6.2. Construction Earthmoving Control Strategies

Control Strategies Applied	Frequency (per day)	PM10 Reduction	PM2.5 Reduction
Water Exposed Area	2	61%	61%

5.7. Construction Paving

Land Use	Area Paved (acres)	% Asphalt
General Light Industry	0.00	0%
Other Asphalt Surfaces	1.23	100%
Other Non-Asphalt Surfaces	1.41	0%

5.8. Construction Electricity Consumption and Emissions Factors

kWh per Year and Emission Factor (lb/MWh)

Year	kWh per Year	CO2	CH4	N2O
2026	0.00	346	0.03	< 0.005
2027	0.00	346	0.03	< 0.005
2028	0.00	346	0.03	< 0.005

5.9. Operational Mobile Sources

5.9.1. Unmitigated

Land Use Type	Trips/Weekday	Trips/Saturday	Trips/Sunday	Trips/Year	VMT/Weekday	VMT/Saturday	VMT/Sunday	VMT/Year
General Light Industry	2.29	2.29	2.29	836	28.6	28.6	28.6	10,430
Other Asphalt Surfaces	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
Other Non-Asphalt Surfaces	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00

5.10. Operational Area Sources

5.10.1. Hearths

5.10.1.1. Unmitigated

5.10.2. Architectural Coatings

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)
0	0.00	2,160	720	6,918

5.10.3. Landscape Equipment

Season	Unit	Value
Snow Days	day/yr	0.00
Summer Days	day/yr	250

5.11. Operational Energy Consumption

5.11.1. Unmitigated

Electricity (kWh/yr) and CO2 and CH4 and N2O and Natural Gas (kBTU/yr)

Land Use	Electricity (kWh/yr)	CO2	CH4	N2O	Natural Gas (kBTU/yr)
General Light Industry	328,667	346	0.0330	0.0040	0.00
Other Asphalt Surfaces	0.00	346	0.0330	0.0040	0.00
Other Non-Asphalt Surfaces	0.00	346	0.0330	0.0040	0.00

5.12. Operational Water and Wastewater Consumption

5.12.1. Unmitigated

Land Use	Indoor Water (gal/year)	Outdoor Water (gal/year)
General Light Industry	333,000	0.00
Other Asphalt Surfaces	0.00	0.00
Other Non-Asphalt Surfaces	0.00	0.00

5.13. Operational Waste Generation

5.13.1. Unmitigated

Land Use	Waste (ton/year)	Cogeneration (kWh/year)
General Light Industry	1.79	—
Other Asphalt Surfaces	0.00	—
Other Non-Asphalt Surfaces	0.00	—

5.14. Operational Refrigeration and Air Conditioning Equipment

5.14.1. Unmitigated

Land Use Type	Equipment Type	Refrigerant	GWP	Quantity (kg)	Operations Leak Rate	Service Leak Rate	Times Serviced
General Light Industry	Other commercial A/C and heat pumps	R-410A	2,088	0.30	4.00	4.00	18.0

5.15. Operational Off-Road Equipment

5.15.1. Unmitigated

Equipment Type	Fuel Type	Engine Tier	Number per Day	Hours Per Day	Horsepower	Load Factor

5.16. Stationary Sources

5.16.1. Emergency Generators and Fire Pumps

Equipment Type	Fuel Type	Number per Day	Hours per Day	Hours per Year	Horsepower	Load Factor

5.16.2. Process Boilers

Equipment Type	Fuel Type	Number	Boiler Rating (MMBtu/hr)	Daily Heat Input (MMBtu/day)	Annual Heat Input (MMBtu/yr)

5.17. User Defined

Equipment Type	Fuel Type

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	24.0	annual days of extreme heat
Extreme Precipitation	7.50	annual days with precipitation above 20 mm

Sea Level Rise	—	meters of inundation depth
Wildfire	17.8	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	3	0	0	N/A
Extreme Precipitation	N/A	N/A	N/A	N/A
Sea Level Rise	1	0	0	N/A
Wildfire	1	0	0	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	0	0	0	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	3	1	1	3

Extreme Precipitation	N/A	N/A	N/A	N/A
Sea Level Rise	1	1	1	2
Wildfire	1	1	1	2
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	1	1	1	2

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	97.0
AQ-PM	51.0
AQ-DPM	38.4
Drinking Water	68.0
Lead Risk Housing	28.3
Pesticides	0.00
Toxic Releases	36.2
Traffic	92.3
Effect Indicators	—

CleanUp Sites	0.00
Groundwater	2.11
Haz Waste Facilities/Generators	16.6
Impaired Water Bodies	23.9
Solid Waste	0.00
Sensitive Population	—
Asthma	59.7
Cardio-vascular	58.7
Low Birth Weights	54.8
Socioeconomic Factor Indicators	—
Education	59.3
Housing	31.7
Linguistic	23.8
Poverty	50.9
Unemployment	67.5

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	56.39676633
Employed	56.93571154
Median HI	63.40305402
Education	—
Bachelor's or higher	42.93596818
High school enrollment	17.07943026
Preschool enrollment	64.57076864
Transportation	—

Auto Access	89.83703323
Active commuting	11.22802515
Social	—
2-parent households	25.45874503
Voting	52.05954061
Neighborhood	—
Alcohol availability	52.47016553
Park access	4.38855383
Retail density	43.42358527
Supermarket access	43.51340947
Tree canopy	64.23713589
Housing	—
Homeownership	21.01886308
Housing habitability	43.69305787
Low-inc homeowner severe housing cost burden	15.57808289
Low-inc renter severe housing cost burden	93.76363403
Uncrowded housing	23.82907738
Health Outcomes	—
Insured adults	37.31553959
Arthritis	71.8
Asthma ER Admissions	61.2
High Blood Pressure	89.6
Cancer (excluding skin)	45.0
Asthma	61.7
Coronary Heart Disease	77.0
Chronic Obstructive Pulmonary Disease	71.2
Diagnosed Diabetes	78.0
Life Expectancy at Birth	12.4

Cognitively Disabled	43.0
Physically Disabled	80.2
Heart Attack ER Admissions	23.4
Mental Health Not Good	57.3
Chronic Kidney Disease	79.8
Obesity	50.5
Pedestrian Injuries	69.2
Physical Health Not Good	65.0
Stroke	80.6
Health Risk Behaviors	—
Binge Drinking	7.9
Current Smoker	56.8
No Leisure Time for Physical Activity	76.1
Climate Change Exposures	—
Wildfire Risk	51.4
SLR Inundation Area	0.0
Children	9.0
Elderly	91.2
English Speaking	67.5
Foreign-born	33.1
Outdoor Workers	45.7
Climate Change Adaptive Capacity	—
Impervious Surface Cover	44.5
Traffic Density	81.3
Traffic Access	23.0
Other Indices	—
Hardship	58.6
Other Decision Support	—

2016 Voting	25.8

7.3. Overall Health & Equity Scores

Metric	Result for Project Census Tract
CalEnviroScreen 4.0 Score for Project Location (a)	48.0
Healthy Places Index Score for Project Location (b)	48.0
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
Land Use	Project details provided by the applicant
Construction: Construction Phases	Based on applicant provided information
Construction: Off-Road Equipment	Based on applicant provided information
Operations: Vehicle Data	Daily staff visits, weekly chemical deliveries, and resin change outs once per year would occur.
Operations: Fleet Mix	Conservatively assume HHD truck for weekly chemical deliveries and resign change outs activites, and LDA vehicles for daily staff visits

Operations: Energy Use	Electricity estimate based on 12-month billing period for a similar SCV Water groundwater treatment and disinfection facility for the N Wells. The proposed project has 1/3 its treatment capacity

Appendix B

Biological Resources Assessment

Rincon Consultants, Inc.
250 East 1st Street, Suite 1400
Los Angeles, California 90012
213-788-4842

March 17, 2025
Project No: 24-16743

Mark Aumentado, PE, Engineer
Santa Clarita Valley Water Agency
26515 Summit Circle
Santa Clarita, California 91350
Via email: maumentado@scvwa.org

Subject: Biological Resources Assessment for the Lost Canyon 2A and Sand Canyon Groundwater Treatment Improvements Project, Santa Clarita, Los Angeles County, California

Dear Mr. Aumentado:

This Biological Resource Assessment (BRA) documents the findings of a biological reconnaissance survey conducted by Rincon Consultants, Inc. (Rincon) for Santa Clarita Valley Water Agency's (SCV Water) Lost Canyon 2A and Sand Canyon Groundwater Treatment Improvements Project (project). The project is located in Santa Clarita, California. The assessment was completed to document existing site conditions via desktop analysis and field survey and to evaluate potential impacts to regulated biological resources based on current project plans. Rincon understands the BRA is intended to support review of the project under the California Environmental Quality Act (CEQA). As such, the BRA has been prepared in accordance with the CEQA Guidelines Appendix G Checklist for Biological Resources. All materials reviewed for this report are identified in the **Error! Reference source not found.** section.

Project Location and Description

Project Location/Study Area

The project site is comprised of an approximately 2.7-acre impact area spanning the following properties and public right-of-way in Santa Clarita, California (Attachment 1: Figure 1 and Figure 2):

- **Assessor's Parcel Number (APN) 2840-006-901:** This property is an approximately 10.0-acre parcel owned by SCV Water. Within this property are the existing Lost Canyon 2, the Lost Canyon 2A, and Sand Canyon wells. The Santa Clara River also runs through the northern portion of this property. Approximately 1.5 acres of the project site is within the southern portion of this property. This property is approximately 250 feet west of the intersection of Sand Canyon Road and Lost Canyon Road and immediately north of Lost Canyon Road.
- **APN 2840-002-901:** This property is an approximately 1.1-acre parcel owned by SCV Water. Within this property is the existing Mitchell 5B well. Approximately 0.02 acre of the project site is within the southeastern portion of this property. This property is approximately 210 feet west of the northern terminus of Sawtooth Lane within the Vista Canyon Specific Plan development.
- **Public Right-of-Way of Lost Canyon Road:** The project site includes approximately 1,700 linear feet of the public right-of-way of Lost Canyon Road between La Veda Drive and a point approximately 390 feet northeast of the intersection of Humphreys Parkway and Lincoln Place. The portion of the project site within the public right-of-way of Lost Canyon Road totals approximately 1.2 acres.

The study area includes the project site and an approximately 100-foot buffer beyond the limits of the project site to address potential indirect project effects. For the purposes of this report, the "western portion of the study area" refers to the portion associated with APN 2840-002-901, and the "eastern portion of the study area" refers to the portion associated with APN 2840-006-901 and Lost Canyon Road.

Project Description

The project involves the construction of a groundwater treatment facility and associated pipelines to treat per- and polyfluorinated alkyl substances (PFAS) to levels below the federal Maximum Contaminant Level, restore the use of the Lost Canyon 2A and Sand Canyon wells, and reduce SCV Water's dependency on imported water.

Existing Well Decommissioning

The project involves decommissioning the Mitchell 5B and Lost Canyon 2 wells. All equipment would be removed from each well site using a drill rig or crane and stored for future use at SCV Water's existing yards, and the wells would be sealed with a lockable well cover for potential future use.[1] In addition, the electrical service to the Mitchell 5B well would be disconnected and removed.

Centralized Groundwater Treatment Facility

The proposed project includes construction of a centralized groundwater treatment facility at the location of the existing Lost Canyon 2A well at APN 2840-006-901. The facility would include two cartridge filters, one set of ion-exchange vessels (or equivalent technology), yard piping, and a building to house chemical feed and storage, controls, and electrical equipment. The facility would also have space for future installation of additional cartridge filters and ion-exchange vessels to provide treatment for other sources, such as the Lost Canyon 2 well (if brought back online in the future); however, those future components are not part of the proposed project. To dechlorinate water that may be used for rinsing each new set of resin media for the proposed ion-exchange vessels, sodium bisulfite would be used. The facility would include a sodium bisulfite bulk storage tank and an approximately 65-foot groundwater discharge pipeline for routine well flushing between the facility and the Santa Clara River (SCR). Rip-rap or other energy-dissipating features would be installed at the terminus of the discharge pipeline, which would not exceed an area of 20 by 20 feet.

The proposed cartridge filters and ion-exchange vessels would be installed outside within the treatment facility. The remaining components would be installed within an enclosed treatment building. All elements of the treatment facility would be enclosed within a wall with gates for vehicle and pedestrian access. New lighting would be installed around the treatment facility building and site ingress/egress, and lighting would be downcast to minimize glare. The treatment facility would result in the addition of approximately 5,000 square feet of impervious surfaces to the project site. Existing pole-mounted transformers would be replaced with a pad-mounted transformer located adjacent to the treatment facility. In addition, new underground conduits and wires would be routed to the existing Lost Canyon 2A and Sand Canyon well pump sites.

Existing Well Improvements

The project involves upgrades to the Sand Canyon and Lost Canyon 2A wells to enhance their functionality and efficiency, including installation of new well pumps, variable frequency drives,

[1] The potential future use of the Mitchell 5B and Lost Canyon 2 wells is not part of the proposed project.

sunshades, and additional well sounding tubes and removal of existing chemical feed equipment. A new wall would be constructed around the Sand Canyon well, and an approximately 40-foot-long groundwater discharge pipeline for routine well flushing would be installed between the Sand Canyon well and the SCR. Rip-rap or other energy-dissipating features would be installed at the terminus of the discharge pipeline, which would not exceed an area of 20 by 20 feet. The Lost Canyon 2A well would be enclosed within the groundwater treatment facility.

Pipelines

The proposed project includes the replacement of approximately 1,700 linear feet of 14-inch a pipeline within Lost Canyon Road with a new 14-inch pipeline. The proposed groundwater treatment facility would connect to this replacement pipeline, and the existing pipeline would be abandoned in place. In addition, several portions of the existing pipelines that currently connect the Lost Canyon 2A and Sand Canyon wells to the distribution system would be abandoned in place. A new pipeline would be installed between the Sand Canyon well and the proposed groundwater treatment facility to convey groundwater from the well to the facility.

Construction

Construction of the proposed project would occur between November 2025 and June 2027. Construction of the proposed project would typically take place during daytime hours; however, nighttime construction may be required to install the proposed pipeline along Lost Canyon Road. Temporary lighting may be used during nighttime construction of the pipeline, and lighting would be directed downward towards the working area. The maximum depth of excavation for construction for the proposed project would be 12 feet. Approximately 20 cubic yards of soil would be imported to the study area, and approximately 60 cubic yards of soil would be exported from the study area.

Construction access to the eastern portion of the project site would be provided by Lost Canyon Road. Construction access to the Mitchell 5B well would be provided by unpaved roads leading from the eastern terminus of Humphreys Parkway (south of the Mitchell 5B well).[2] Construction materials would be staged within the project site. Construction personnel would park along Lost Canyon Road, on disturbed areas adjacent to the Mitchell 5B well, or within the project site. No trees would be removed during project construction.

Project construction is not anticipated to require groundwater dewatering. However, if groundwater is unexpectedly encountered during excavations, SCV Water would obtain coverage under the appropriate National Pollutant Discharge Elimination System (NPDES) Permit for discharge to surface water bodies (i.e., SCR) and would comply with the water quality requirements outlined in the permit, which may necessitate treatment prior to discharge to be protective of surface water quality.

Following completion of project construction, the Sand Canyon and Lost Canyon 2A wells would be flushed, and water produced during flushing would be discharged to the SCR. This discharge would be subject to compliance with SCV Water's existing coverage under Waste Discharge Requirements Order WQ 2014-0194-DWQ/General Order No. CAG140001 (ID: 4DW0430), which is the Statewide NPDES Permit for Drinking Water System Discharges to Waters of the United States.

Operation and Maintenance

Under the proposed project, the Lost Canyon 2A and Sand Canyon wells would be reactivated, and the proposed groundwater treatment facility would be brought online. It is anticipated that up to

[2] Construction access via Vista Canyon Boulevard would be conducted in coordination with the City of Santa Clarita's ongoing Vista Canyon Bridge and Road Improvements project, as necessary.

approximately 3,226 acre-feet per year of groundwater would be pumped, depending on hydrologic year type and in consideration of the implementation constraints of the Santa Clara River Valley East Groundwater Subbasin Groundwater Sustainability Plan (GSP). Annual groundwater pumping rates under this project for the two wells would be consistent with historical pumping rates for the Lost Canyon 2A and Sand Canyon wells and would not exceed the pumping quantities provided in the groundwater level simulations used in the GSP. Routine flushing of the Lost Canyon 2A and Sand Canyon wells would be required with each event lasting approximately 30 minutes. This activity would be generally consistent with raw water discharges from the Lost Canyon 2A and Sand Canyon wells to the SCR that previously occurred approximately twice a year for approximately 20 minutes per event when the wells were operational, resulting in a discharge of approximately 9,000 gallons per event. Water used for routine flushing would be treated and discharged to the SCR and would be subject to compliance with SCV Water's existing coverage under Waste Discharge Requirements Order WQ 2014-0194-DWQ/General Order No. CAG140001 (ID: 4DW0430), which is the Statewide NPDES Permit for Drinking Water System Discharges to Waters of the United States.

Methodology

Regulatory Overview

Regulated biological resources studied and analyzed herein include special-status plant and wildlife species, nesting birds and raptors, sensitive plant communities and riparian habitat, United States Fish and Wildlife Service (USFWS)-designated critical habitat, jurisdictional waters and wetlands, wildlife movement, locally protected resources (such as protected trees), and conservation plans.

Environmental Statutes

For the purpose of this report, potential impacts to biological resources were analyzed based on the following statutes:

Federal

- Federal Endangered Species Act (ESA)
- Clean Water Act (CWA)
- Migratory Bird Treaty Act (MBTA)
- Bald and Golden Eagle Protection Act

State

- California Environmental Quality Act (CEQA)
- California Endangered Species Act (CESA)
- California Fish and Game Code (CFGC)
- Porter-Cologne Water Quality Control Act

Local

- City of Santa Clarita (City) General Plan (2011)
- Santa Clarita Municipal Code

Guidelines for Determining CEQA Significance

The following threshold criteria, as defined by the CEQA Guidelines Appendix G Initial Study Checklist, were used to evaluate potential environmental effects. Based on these criteria, the proposed project would have a significant effect on biological resources if it would:

a. Have a substantial adverse effect, either directly or through habitat modifications, on any species identified as a candidate, sensitive or special-status species in local or regional plans, policies, or regulations or by the California Department of Fish and Wildlife (CDFW) or USFWS.
b. Have a substantial adverse effect on any riparian habitat or other sensitive natural community identified in local or regional plans, policies, and regulations or by CDFW or USFWS.
c. Have a substantial adverse effect on state or federally protected wetlands (including, but not limited to, marshes, vernal pools, coastal areas, 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.

Literature and Database Review

A literature review was conducted to establish the environmental and regulatory setting of the proposed project. Specific literature reviewed is provided in the **Error! Reference source not found.** section and included the City's General Plan Conservation and Open Space Element, the Vista Canyon Environmental Impact Report, Rincon's BRA for the Sand Canyon Sewer Relocation Project, aerial imagery (Google Earth Pro 2025), topographic maps, and soil survey maps.

Queries of relevant biological resources databases were conducted to obtain comprehensive information regarding regulated biological resources known to occur or considered to have potential to occur in the vicinity of the study area. Databases reviewed included the USFWS Environmental Conservation Online System: Information for Planning and Consultation Official Species List (USFWS 2025a), USFWS Critical Habitat Portal (USFWS 2025b), USFWS National Wetlands Inventory (NWI) (USFWS 2025c), United States Geological Survey (USGS) National Hydrography Dataset (USGS 2025), CDFW California Natural Diversity Database (CNDDB) (CDFW 2025a), CDFW Biogeographic Information and Observation System (BIOS) (CDFW 2025b), California Native Plant Society (CNPS) Online Inventory of Rare, Threatened and Endangered Plants of California (CNPS 2025), and United States Department of Agriculture, Natural Resources Conservation Service (USDA NRCS) Web Soil Survey (USDA NRCS 2025a).

Field Reconnaissance Survey

The field reconnaissance surveys were limited to providing an overview of biological constraints and the potential presence of regulated biological resources within the study area. Rincon Biologist/Botanist Kyle Gern and Biologist Austin LeVesque conducted a field reconnaissance survey of the study area on January 28, 2025 from 8:00 a.m. to 1:00 p.m. Weather conditions during the survey included an average temperature of 51.5 degrees Fahrenheit with winds less than one mile per hour and cloud cover ranging from approximately five percent in the early hours to ten percent by the afternoon.

The survey was performed by walking the study area, where accessible, to characterize the existing biological resources present (e.g., vegetation communities, potential presence of special-status species and/or habitats, and jurisdictional water boundaries).

Vegetation mapping and classification during the surveys followed *Protocols for Surveying and Evaluating Impacts to Special Status Native Plant Populations and Sensitive Natural Communities* (CDFW 2018) and was based on the classification system provided in *A Manual of California Vegetation* (Sawyer et al. 2009). Vegetation communities or land cover types not described in *A Manual of California Vegetation, Second Edition* were classified using conventional naming practices (i.e., developed) or were defined by the dominant species.

Existing Conditions

This section summarizes the existing conditions of the study area based on the results of the literature review and field reconnaissance surveys. Brief discussions regarding the general physical characteristics within the study area, the watershed and drainages, soils, vegetation and land cover types, and general wildlife species are presented below. Representative photographs of the study area are provided in Attachment 2, and complete lists of all plant and wildlife species observed within the study area are presented in Attachment 3.

Physical Characteristics

The study area is situated in a region that is characterized by a Mediterranean climate with warm, dry summers and cool, wet winters. Average high temperatures range from 77 to 89°F, and average low temperatures range from 61 to 68°F. The average annual precipitation in the region is 15 inches with the majority falling in February (Western Regional Climate Center 2025).

The southern portion of the study area is comprised of a mixture of developed and disturbed areas such as institutional buildings, the paved roadway of Lost Canyon Road, and compacted dirt parking lots along Lost Canyon Road. The portion of the study area north of Lost Canyon Road, including the Lost Canyon 2A and Sand Canyon wells and area surrounding the Mitchell 5B well, are comprised of the naturally vegetated terraces, lower slopes, and downward slopes of the SCR. The study area is largely surrounded by industrial, residential, and institutional uses to the south, west, and east and the SCR to the north.

Elevations within the study area range from approximately 1,500 to 1,530 feet above mean sea level (amsl). The Cortina sandy loam, 2 to 9 percent slope soil map unit comprises the entirety of the eastern portion of the study area with areas to the east, including Sand Canyon Creek and its connection to the SCR, mapped as riverwash. The western portion of the study area is divided into two distinct soil types with riverwash to the north and sandy alluvial land to the south. Riverwash and sandy alluvial land are considered hydric soil types by the USDA NRCS (2025b).

The NWI maps the area surrounding the western portion of the study area and the area north of the eastern portion of the study area as a freshwater forested/shrub wetland, which is mapped as a palustrine system with a scrub-shrub classification and temporarily flooded water regime (PSSA) in the NWI (USFWS 2025c). Sand Canyon Creek to the east of the study area and its connection with SCR is mapped as an intermittent excavated riverine wetland (R4SBAx) (USFWS 2025c).

Vegetation Communities and Land Cover Types

Seven vegetation communities and two land cover types were identified within the study area and are described below and depicted in Attachment 1: Figure 3a and Figure 3b. A list of plant species encountered during the field reconnaissance survey is provided in Attachment 3.

Vegetation Communities

Thick-leaved Yerba Santa Scrub

Thick-leaved yerba santa scrub (*Lotus scoparius – Lupinus albifrons – Eriodictyon spp.* Shrubland Alliance) is characterized by dominant thick-leaved yerba santa (*Eriodictyon crassifolium*), which accounts for greater than 50 percent relative cover in the shrub canopy, with other native species present as well. The shrub canopy is intermittent and sometimes two-tiered. This alliance can be found between 2,700 and 5,675 feet amsl (Sawyer et al. 2009). This vegetation community is unranked and is not classified as sensitive (CDFW 2025c).

Thick-leaved yerba santa scrub occurs in the eastern portion of the study area on the eastern terrace of Sand Canyon Creek, as well north and northeast of the Sand Canyon well within the floodplain of the SCR. Within the study area, the shrub layer is dominated by thick-leaved yerba santa, with tree tobacco (*Nicotiana glauca*) and California buckwheat (*Eriogonum fasciculatum*) present as subdominant species. The herbaceous layer includes summer mustard (*Hirschfeldia incana*), tocalote (*Centaurea melitensis*), and sacred datura (*Datura wrightii*). The tree layer is absent.

Big Sagebrush Scrub

Big sagebrush scrub (*Artemisia tridentata* Shrubland Alliance) is typically found within plains, alluvial fans, bajadas, pediments, lower slopes, valley bottoms, hills, ridges, seasonal and perennial stream channels, and dry washes between 984 and 9,840 feet amsl. Big sagebrush (*Artemisia tridentata*) constitutes at least two percent absolute cover in the shrub layer with no other single species with greater cover. Vegetation reaches approximately 6.5 feet (two meters) in height. The alliance forms large, continuous stands on mid-elevation mountain slopes and foothills. Sites are variable and range from flats to steep slopes to ridgetops with deep to shallow rocky soil (Sawyer et al. 2009). This vegetation community most closely aligns with the *Artemisia tridentata* association, which is ranked G5S5 by CDFW and is not considered sensitive (CDFW 2025c).

Big sagebrush scrub occurs in the eastern portion of the study area between the existing Lost Canyon 2A well and Sand Canyon well, extending north into the SCR, and is the largest vegetation community found within the study area. Sparse patches of big sagebrush scrub also exist within the study area directly east of the existing Lost Canyon 2A well and north of Lost Canyon Road along the southern bank of the SCR. The shrub layer is dominated by big sagebrush, with California buckwheat, scale broom (*Lepidospartum squamatum*), black sage (*Salvia mellifera*), and thick-leaved yerba santa present as subdominant shrub species. The herbaceous layer includes a variety of species, including but not limited to branching phacelia (*Phacelia ramosissima*), white horehound (*Marrubium vulgare*), and wild tarragon (*Artemisia dracunculus*).

Scale Broom – California Buckwheat Scrub

Scale broom – California buckwheat scrub (*Lepidospartum squamatum* Shrubland Alliance) is typically found along intermittently or rarely flooded, low-gradient alluvial deposits along streams, washes, and fans, between 165 and 4,920 feet amsl. This community is characterized by dominant, co-dominant, or conspicuous scale broom in a shrub canopy that is open to continuous, with emergent plants in low cover and a variable herbaceous layer. Scale broom contributes to at least one percent absolute vegetation cover in alluvial environments (Sawyer et al. 2009). Within the study area, the habitat characterized as scale broom-California buckwheat scrub (ranked G3S3 at the alliance level by CDFW) most closely aligns with the characteristics of the *Lepidospartum Squamatum – Eriogonum fasciculatum* association, which is not assigned a sensitivity ranking by CDFW and is considered sensitive (CDFW 2025c).

This vegetation community comprises the entire naturally occurring vegetation within the western portion of the study area outside the project site. The shrub layer is co-dominated by scale broom and California buckwheat, with shrubby ragwort (*Senecio flaccidus*), golden aster (*Heterotheca sessiliflora*), and thick-leaved yerba santa present as subdominant shrub species. The herb layer is dominated by mediterranean grass (*Schismus barbatus*) with giant eriastrum (*Eriastrum densifolium*), narrowleaf cottonrose *(Logfia gallica*), and summer mustard present as subdominant herbs.

Fremont Cottonwood Forest and Woodland

Fremont cottonwood forest and woodland (*Populus fremontii – Fraxinus velutina – Salix gooddingii* Forest and Woodland Alliance) may be dominated by Fremont cottonwood (*Populus fremontii*) or have a mixed canopy with other riparian tree species such as box elder (*Acer negundo*), northern California black walnut (*Juglans hindsii*), and several willow species (*Salix spp.*). The canopy is continuous to open, and the shrub layer is intermittent to open. The herbaceous layer is variable. Fremont cottonwood forest and woodland is found on floodplains; along low-gradient rivers, perennial or seasonally intermittent streams, and springs; in lower canyons in desert mountains; in alluvial fans; and in valleys with a dependable subsurface water supply that varies considerably during the year (Sawyer et al. 2009). This vegetation community most closely aligns with the *Populus fremontii* association, which is ranked G2Q and is considered sensitive (CDFW 2025c).

A small patch of Fremont cottonwood forest is found within the eastern portion of the study area, south of Lost Canyon Road and along the western bank of Sand Canyon Creek. The shrub layer is dominated by California buckwheat, and the herb layer is dominated by mediterranean grass, with sweet alyssum *(Lobularua maritima*) present as a subdominant species. Of important note, it appears that the understory of this vegetation community is subject to frequent disturbance (i.e., mowing).

Rubber Rabbitbrush Scrub

Rubber rabbitbrush scrub (*Ericameria nauseosa* Shrubland Alliance) occurs in all topographic settings and especially in disturbed settings. Soils are typically well drained sand and gravels. This alliance is generally found between sea level and 10,500 feet amsl. Rubber rabbitbrush scrub is characterized by an open to intermittent shrub canopy and a sparse herbaceous layer. Rubber rabbitbrush (*Ericameria nauseosa*) has over two percent absolute cover or more than 25 percent relative cover in the shrub layer (Sawyer et al. 2009). This vegetation community is ranked G5S5 and is not considered sensitive (CDFW 2025c).

Rubber rabbitbrush scrub occurs throughout the eastern portion of the study area to the north and adjacent to existing development south of the SCR. The dominant shrub present for this vegetation community in the study area is rubber rabbitbrush, with big sagebrush present as a subdominant species. Tocalote is dominant in the herbaceous layer, with summer mustard present as a subdominant species. The tree layer is absent.

Mulefat Thickets

Mulefat thickets (*Baccharis salicifolia* Shrubland Alliance) are characterized by a moderately open shrub layer, dominated by mulefat (*Baccharis salicifolia*). Mulefat thickets are typically found in canyon bottoms, floodplains, irrigation ditches, lake margins, and stream channels. Soils are mixed alluvium (Sawyer et al. 2009). This vegetation alliance is ranked G4S4 and is not considered sensitive (CDFW 2025c).

Mulefat thickets are present within the eastern portion of the study area, north of the existing Sand Canyon well, and are situated between big sagebrush scrub communities and the southern portion of the SCR. Within this vegetation community, mulefat is dominant in the shrub layer, with thick-leaved

yerba santa, big sagebrush, and tree tobacco present as subdominant shrub species. The herb layer is dominated by wild tarragon with redstem filaree (*Erodium cicutarium*), arundo (*Arundo donax*), Ladie's tobacco (*Psuedognaphalium californicum*), tocalote, and cattails (*Typha* spp.) present as subdominant species. The tree layer is absent.

Upland Mustards

Upland mustards (*Brassica nigra - Centaurea* [*solstitialis, melitensis*] Herbaceous Semi-Natural Alliance) are widespread and can be found in fallow fields, rangelands, grasslands, roadsides, levee slopes, disturbed coastal scrub, riparian areas, cleared roadsides, and waste places at elevations between 0 and 9,186 feet amsl. Mustards and other non-native plant species make up over 80 percent of relative cover, and mustard species are dominant (Sawyer et al. 2009). This vegetation community is ranked GNASNA due to the dominance of non-native species and is not considered sensitive (CDFW 2025c).

Upland mustards are found in disturbed portions of the study area, located between the compacted dirt lot and service road located west of the Sand Canyon well site. Within the study area, summer mustard is overwhelmingly dominant in the herbaceous layer, with redstem filaree and tocalote present as subdominant herbaceous species. Scattered rubber rabbitbrush occur within the sparse shrub layer. The tree layer is absent.

Land Cover Types

Developed/Disturbed

The developed/disturbed land cover type includes buildings (e.g., all of the existing wells within the study area), other infrastructure, paved areas (e.g., Lost Canyon Road), unpaved access roads, disturbed road shoulders, and ornamental landscaping associated with existing development. Developed/disturbed areas are present throughout the southern section of the eastern portion of the study area and include paved surfaces and buildings along Lost Canyon Road, a dirt lot with compacted soils south of the Lost Canyon 2/2A and Sand Canyon wells, and areas immediately north of the Lost Canyon 2A well and immediately northeast of the Sand Canyon well . The developed/disturbed land cover type also occurs within western portion of the study area along existing unpaved access roads and includes the existing Mitchell 5B well.

Vegetation is largely absent from the developed/disturbed land cover type, particularly within paved and dirt roads. Where vegetation is present, it consists of sparsely scattered non-native and invasive plant species (e.g., tocalote, summer mustard), or it consists of ornamental vegetation associated with existing development to the south of the study area. Ornamental vegetation includes a variety of landscaped, usually non-native plant species. Two coast live oaks (*Quercus agrifolia*) occur in this land cover type. One occurs within the compacted dirt parking lot north of Lost Canyon Road, and one occurs to the south within the parking lot associated with the Sulphur Springs Elementary School.

Riverwash

Riverwash occurs in the bed of the SCR and Sand Canyon Creek. This land cover type consists of sandy soil with little to no vegetation present. Riverwash is a naturally dynamic landform and may shift and change position depending on flood volumes and regularity.

General Wildlife Observations

A total of 13 avian species were observed during the field reconnaissance survey including Anna's hummingbird (*Calypte anna*), blue-gray gnatcatcher (*Polioptila caerulea*), bushtit (*Psaltriparus*

minimus), California towhee (*Melozone crissalis*), and cliff swallow (*Petrochelidon pyrrhonota*). For a complete compendium of observed wildlife, please refer to Attachment 3. These species have the potential to utilize the study area for foraging, nesting, and/or shelter, specifically within the naturally occurring vegetation communities and ornamental trees and shrubs within the developed/disturbed land cover type.

Regulated Biological Resources Impacts Analysis

Based on a review of aerial photographs, literature, and databases as well as the field reconnaissance survey, Rincon evaluated the potential presence of regulated biological resources on and adjacent to the study area. This section also evaluates the potential adverse impacts to biological resources that may occur from implementation of the project and recommends appropriate measures to incorporate into the project.

Special Status Species

Special-status species are those plants and animals listed, proposed for listing, or candidates for listing as Threatened or Endangered by USFWS under the ESA; those listed or candidates for listing as Rare, Threatened, or Endangered by CDFW under the CESA or Native Plant Protection Act; animals designated as "Fully Protected" by the CFGC; animals listed as "Watch List" or "Species of Special Concern" (SSC) by CDFW; and CDFW Special Plants, specifically those with California Rare Plant Ranks (CRPR) of 1B, 2B, and 4 in the CNPS's Inventory of Rare and Endangered Vascular Plants of California (CNPS 2025).

Local, state, and federal agencies regulate special-status species and may require an assessment of their presence or potential presence to be conducted on site prior to the approval of proposed development on a property. A list of special-status plant and wildlife species with potential to occur on site was developed based on a review of a nine-quadrangle search of the CNDDB (CDFW 2025a) and the CNPS online Inventory of Rare and Endangered Vascular Plants of California (CNPS 2025).

Assessments for the potential occurrence of special-status species are based on known ranges, habitat preferences for the species, species occurrence records from the CNDDB, species occurrence records from other sites in the vicinity of the study area, and previous reports for the study area. The potential for each special-status species to occur in the study area was evaluated according to the following criteria:

- **Not Expected.** Habitat on and adjacent to the study area is clearly unsuitable for the species requirements (foraging, breeding, cover, substrate, elevation, hydrology, plant community, site history, disturbance regime).
- **Low Potential.** Few of the habitat components meeting the species' requirements are present, and/or the majority of habitat on and adjacent to the study area is unsuitable or of very poor quality. The species is not likely to be found in the study area.
- **Moderate Potential.** Some of the habitat components meeting the species' requirements are present, and/or only some of the habitat on or adjacent to the study area is unsuitable. The species has a moderate probability of being found in the study area.
- **High Potential.** All of the habitat components meeting the species' requirements are present and/or most of the habitat on or adjacent to the study area is highly suitable. The species has a high probability of being found in the study area.
- **Present.** Species is observed on the site or has been recorded (e.g., CNDDB, other reports) in the study area recently (within the last five years).

The literature and database review identified 43 special-status plant species and 42 special-status wildlife species that are documented within a nine-quadrangle search area of the study area (Attachment 4).

Special-Status Plant Species

Rincon evaluated 43 special-status plant species tracked by CNDDB and CNPS for their potential to occur (Attachment 4). The assessment is based on the presence of suitable habitat as identified during the reconnaissance survey and existing knowledge of species occurrences and distributions in the region. Of the 43 special-status plant species evaluated, none have a moderate or high potential to occur within the study area based on incompatible habitat conditions (e.g., vegetation assemblage, soils, topography, hydrology, and prior disturbances) and/or the absence of observations of readily-identifiable species (e.g., perennial herbs, shrubs, and/or trees) during the field reconnaissance survey. The study area largely occurs within the developed/disturbed land cover type, but also contains big sagebrush scrub, thick-leaved yerba santa scrub, and upland mustards vegetation communities. The big sagebrush scrub and thick-leaved yerba santa scrub vegetation communities occur along the southern terrace of the SCR; are well established and frequently disturbed; and do not have the potential to support special-status plant species identified as part of the literature review. Moreover, the upland mustards vegetation community is dominated by non-native plant species and occurs in a disturbed setting adjacent to the parking lot north of Lost Canyon Road. Therefore, the project would not result in direct or indirect impacts to special-status plant species, and no avoidance or minimization measures are recommended.

Special-Status Wildlife Species

Rincon evaluated 42 special-status wildlife species tracked by CNDDB and CNPS for their potential to occur. The assessment is based on the presence of suitable habitat as identified during the field survey and existing knowledge of species occurrences and distributions in the region. Of the 43 special-status wildlife species evaluated, three species were identified to have a high potential to occur within the study area - California legless lizard (*Anniella* spp.; CDFW SSC), coastal whiptail (*Aspidoscelis tigris stejnegeri*; CDFW SSC) and coast horned lizard (*Rhyrnosoma blainvillii*; CDFW SSC). The remaining 40 special-status species either have a low potential to occur or are not expected to occur in the study area due to limited habitat components meeting the species' requirements and/or because the majority of the habitat on and adjacent to the study area is deemed unsuitable to meet the species requirements.

Suitable habitat that could support California legless lizard, coastal whiptail, and coast horned lizard occur within the scrub habitat in the study area, including the big sagebrush scrub, thick-leaved yerba santa scrub, and scale broom – California buckwheat scrub vegetation communities. Development of the proposed project would primarily be limited to the developed/disturbed land cover type, which does not provide suitable habitat for California legless lizard, coastal whiptail, and coast horned lizard. The project would result in approximately 0.73 acre of temporary impact and approximately 0.19 acre of permanent impact to the big sagebrush scrub vegetation community, as well as approximately 0.01 acre of temporary impact and approximately 0.01 acre of permanent impact to the thick-leaved yerba santa scrub vegetation community. If these California legless lizard, coastal whiptail, and/or coast horned lizard are present in these areas during project construction, direct impacts could occur via direct strikes to individuals by construction equipment, or entrapment of individuals in excavation trenches. In addition, indirect impacts could occur through vibrations and dust, which could alter behavioral patterns of these wildlife species and cause them to become exposed to predators. Based on the abundance of CNDDB occurrence records of California legless lizard (29 occurrences), coastal whiptail (14 occurrences), and coast horned lizard (31 occurrences) within a nine-quadrangle search

area of the project site, the proposed project is not expected to result in population-level impacts to these species (CDFW 2025a). However, the proximity of the closest occurrences of these species to the project site (0.14 mile for California legless lizard, 0.04 mile for coastal whiptail, four miles for coast horned lizard within the SCR) indicate that potential direct impacts to individuals could occur as a result of construction. Therefore, impacts to California legless lizard, coastal whiptail, and/or coast horned lizard are conservatively considered potentially significant, and implementation of AMMs BIO-1 through BIO-3 are recommended to reduce potential impacts to special-status wildlife species to a less-than-significant level.

Nesting Birds

While common birds are not designated as special-status species, destruction of their eggs, nests, and nestlings is prohibited by federal and state law. CFGC Section 3503.5 specifically protects birds of prey and their nests and eggs against take, possession, or destruction. CFGC Section 3513 also incorporates restrictions imposed by the federal MBTA with respect to migratory birds (which consist of most native bird species).

Migratory or other common nesting birds have the potential to nest within the study area. All vegetation communities (excluding upland mustards) as well as ornamental trees and shrubs in the developed/disturbed land cover type have the potential to support nesting birds and raptors. Therefore, construction of the project has the potential to directly (by destroying a nest) or indirectly (through construction noise, dust, and other human disturbances that may cause a nest to fail) impact nesting birds protected under the CFGC and MBTA. Therefore, implementation of AMM-4 is recommended to achieve compliance with CFGC Section 3503.5 and the MBTA.

Recommended Avoidance and Minimization Measures

AMM BIO-1 Worker Environmental Awareness Program Training

Prior to initiation of construction activities (including staging and mobilization), all personnel associated with project construction should attend a Worker Environmental Awareness Program training, conducted by a qualified biologist, to aid workers in recognizing special-status biological resources potentially occurring in the project footprint. This training should include information about the three special-status species with potential to occur (California legless lizard, coastal whiptail, and coast horned lizard) and focus on the identification of special-status species and habitats, a description of the regulatory status and general ecological characteristics of special-status resources, and a review of the limits of construction, regulatory compliance measures, best management practices, and avoidance and minimization measures pertaining to biological resources within the work area. A fact sheet conveying this information should also be prepared for distribution to all contractors, their employees, and other personnel involved with construction of the project. All employees working at the project site should sign a form provided by the trainer documenting they have attended the Worker Environmental Awareness Program training and understand the information presented to them. The crew foreman should be responsible for ensuring crew members adhere to the guidelines and restrictions designed to avoid impacts to special-status species.

AMM BIO-2 Construction Site Best Management Practices

The following general construction site best management practices should be implemented during project construction:

- The contractor should clearly delineate the construction limits and prohibit any construction-related traffic outside those boundaries.
- All open trenches or excavations should be fenced and/or sloped to prevent entrapment of wildlife species.
- Materials should be stored on impervious surfaces or plastic ground covers to prevent any spills or leakage and should be at least 50 feet from drainage features. Construction materials and spoils should be protected from stormwater runoff using temporary perimeter sediment barriers such as berms, silt fences, fiber rolls, covers, sand/gravel bags, and straw bale barriers, as appropriate.
- All food-related trash items such as wrappers, cans, bottles, and food scraps generated during project construction should be disposed of in closed containers only and removed daily from the study area.
- No deliberate feeding of wildlife should be allowed.
- No pets should be allowed on the project site.
- All lighting should be shielded and directed downward to minimize the potential for glare or spillover onto adjacent properties and to reduce impacts on local wildlife.
- All vehicles and equipment should be in good working condition and free of leaks. The contractor should prevent oil, petroleum products, or any other pollutants from contaminating the soil or entering a watercourse (dry or otherwise). When vehicles or equipment are stationary, mats or drip pans should be placed below vehicles to contain fluid leaks.
- All re-fueling, cleaning, and maintenance of equipment should occur in designated areas at least 50 feet from potentially jurisdictional waters.
- Adequate spill prevention and response equipment should be maintained on-site and readily available to implement to ensure minimal impacts to the aquatic and marine environments.
- While encounters with special-status species are not anticipated, any worker who inadvertently injures or kills a special-status species or finds one dead, injured, or entrapped should immediately report the incident to the construction foreman or qualified biologist. The construction foreman or qualified biologist should immediately notify SCV Water. SCV Water should follow up with written notification to USFWS and/or CDFW (depending on the species' special-status designation) within five working days of the incident. A qualified biologist with necessary permits to handle the special-status species should relocate the individual(s) to suitable undisturbed habitat outside the areas directly and indirectly affected by project-related ground disturbance activities. All observations of special-status species should be recorded on CNDDB field sheets and sent to CDFW by SCV Water or the qualified biologist.

AMM BIO-3 Pre-Activity Surveys

Prior to commencement of ground or vegetation disturbing activities within the delineated work area, a qualified biologist should conduct two surveys for special-status wildlife species. The first survey should be conducted no more than 14 days prior to commencement of project activities, and the second survey should be conducted no more than three days prior to the commencement of project activities. The surveys should incorporate methods to detect the special-status wildlife species that

could potentially occur at the site, including California legless lizard, coastal whiptail, and coast horned lizard.

If the aforementioned special-status species are encountered, a qualified biologist should capture and transfer the individual(s) to a suitable habitat location outside of the delineated work area where it would not be harmed by project activities. The biologist should hold the requisite permits for the capture and handling of the species, if applicable. Prior to commencement of ground or vegetation disturbing activities, a letter report documenting the methods and results of the surveys and any measures to be employed to avoid impacts to special-status species, if observed, should be submitted to SCV Water.

AMM BIO-4 Nesting Bird Surveys

Project-related activities should occur outside of the bird breeding season (generally February 1 to August 31) to the extent practicable. If construction must occur within the bird breeding season, then no more than three days prior to initiation of ground disturbance and/or vegetation removal, a nesting bird pre-construction survey should be conducted by a qualified biologist within the disturbance footprint plus a 100-foot buffer (300-foot buffer for raptors), where feasible. If the proposed project is phased or construction activities stop for more than one week, a subsequent pre-construction nesting bird survey should be required prior to each phase of construction during the nesting season.

Pre-construction nesting bird surveys should be conducted during the time of day when birds are active. A report of the nesting bird survey results, if applicable, should be submitted to SCV Water for review and approval prior to ground and/or vegetation disturbance activities.

If no nesting birds are observed during pre-construction surveys, no further action is necessary. If nests are found, their locations should be flagged. An appropriate avoidance buffer ranging in size from 25 to 100 feet for passerines and up to 300 feet for raptors, depending on the species and the proposed work activity, should be determined and demarcated by a qualified biologist with bright orange construction fencing or other suitable flagging. If work activities within the established avoidance buffer is unavoidable, the active nests should be monitored by the qualified biologist at a minimum of once per week until it has been determined the nest is no longer being used by either the young or adults. No ground or vegetation disturbance should occur within this buffer until the qualified biologist confirms the breeding/nesting is completed and all the young have fledged. The nesting bird buffer zones may also be extended at the discretion of the qualified biologist based on field observations of nesting bird behavior.

Sensitive Natural Communities

The CDFW California Sensitive Natural Communities List identifies sensitive natural communities throughout California, based in part on global and state rarity ranks (CDFW 2025c). Natural communities with a rank of 1 to 3 are generally considered sensitive, although some communities with other ranks may also be considered sensitive. CDFW-designated sensitive vegetation communities found within the study area include Fremont cottonwood forest and woodland (ranked G4S3 at the alliance level and G2Q at the association level) and scale broom – California buckwheat scrub (ranked G3S3 at the alliance level, unranked at the association level) (CDFW 2025c). A small stand of Fremont cottonwood forest and woodland is located adjacent to Sand Canyon Creek on the south side of Lost Canyon Road but outside the project footprint, and scale broom scrub-California buckwheat occupies much of the western portion of the study area but is outside the project footprint. No other sensitive natural communities occur within the study area. Because neither sensitive natural community is within the project site, the proposed project would result in no impacts to sensitive natural communities, and no avoidance and minimization measures are recommended.

USFWS Critical Habitat

The presence of USFWS-designated critical habitat for federally listed plant or wildlife species was reviewed using the USWFS Critical Habitat Online Mapper. No USFWS-designated critical habitat for federally listed plant or wildlife species occurs within the study area (USFWS 2025b). As a result, no direct or indirect impacts to critical habitat would occur, and no avoidance and minimization measures are recommended.

Riparian Habitat and Jurisdictional Waters and Wetlands

In accordance with CFGC Section 1602, CDFW takes jurisdiction over lakes and streambeds (including adjacent riparian resources). CDFW regulates wetland areas only to the extent that those wetlands are part of a river, stream, or lake. The Los Angeles Regional Water Quality Control Board (RWQCB) also has jurisdiction over "waters of the State" pursuant to the Porter-Cologne Water Quality Control Act and has responsibility to issue CWA Section 401 Water Quality Certifications (WQC) for proposed discharges of dredged or fill material to waters of the State that are also considered waters of the United States. The United States Army Corps of Engineers (USACE) under CWA Section 404 also takes jurisdiction of waters of the United States.

The potential jurisdiction of USACE within the SCR is limited to the northern portions of the SCR occurring outside of the study area. Portions of the SCR and Sand Canyon Creek that occur within the study area are potentially under jurisdiction of both CDFW and the Los Angeles RWQCB. The extent of CDFW jurisdiction is defined by the top of bank or outer extent of riparian vegetation, and the extent of RWQCB jurisdiction is defined by the Ordinary High Water Mark associated with the SCR and Sand Canyon Creek within the study area. The SCR runs parallel to the north of the eastern portion of the study area, and the western portion of the study area is completely within the jurisdictional boundaries of the SCR. Sand Canyon Creek occurs within the eastern portion of the study area but outside of the project footprint (Attachment 1: Figure 4a and Figure 4b). These features are described in more detail in the following sections. Total acreages of potentially jurisdictional features corresponding to their overseeing agencies (i.e., Los Angeles RWQCB, CDFW) within the study area are presented in Table 1.

Table 1 Potentially Jurisdictional Resources within the Study Area

	USACE Waters of the U.S.		RWQCB Waters of the State		CDFW Jurisdiction
Feature	Non-wetland Waters of the U.S. (acres [linear feet])	Wetland Waters of the U.S. (acres)	Non-wetland Waters of the State (acres [linear feet])	Wetland Waters of the State (acres)	CDFW Streambed (acres [linear feet])
Santa Clara River	-	-	2.23 (1,003)	-	2.55 (998)
Sand Canyon Creek	–	–	0.28 (330)	-	0.45 (330)
Total	**-**	**-**	**2.51 (1,333)**	**-**	**3.00 (1,328)**

USACE = United States Army Corps of Engineers; RWQCB = Regional Water Quality Control Board; CDFW = California Department of Fish and Wildlife

Santa Clara River

The SCR flows from east to west in the northern portion of the study area. The SCR is an intermittent system; the riverbed surface is dry for most of the year except for during and following storm events. The riverbed is wide and characterized by a braided active channel. The southern bank of the SCR occurs approximately 20 feet north of the eastern portion of the study area and runs approximately 811 feet along the northern boundary of the eastern portion of the study area. The portion of the bank within the study area begins with a steep terrace that gradually declines into the larger portion of the SCR. The steep terrace is considered atypical and disturbed and shows signs of recent and historic disturbance, including piles of concrete and cement blocks littered along the terrace. This portion of the SCR, including its southern bank, consists of vegetation communities such as big sagebrush scrub, thick-leaved yerba santa scrub, and mulefat thickets. A portion of the study area located approximately 80 feet north of the existing Sand Canyon well, within the SCR, contained trace amounts of hydrophytic vegetation. A sample point (SP01; Attachment 1: Figure 5a) was taken to determine the presence or absence of wetlands. While hydrophytic vegetation was present, hydric soils and wetland hydrology indicators were not. Therefore, wetlands were determined to be absent from the study area. The western portion of the study area is also located entirely within the lower terraces of the SCR.

Sand Canyon Creek

The portion of Sand Canyon Creek located within the eastern portion of the study area flows from south to north into the SCR. This feature is an intermittent system; the low-flow channel is dry for most of the year, except during and after storm events. The eastern bank of Sand Canyon Creek occurs within the eastern section of the eastern portion of the study area, outside the project footprint, and runs south underneath Lost Canyon Road. The portion of Sand Canyon Creek that occurs within the study area is characterized by a single active channel. The width of the channel spans approximately 60 feet in the northern section of the eastern portion of the study area and tapers down to approximately 40 feet in areas surrounding the Lost Canyon Road bridge. The bed of the drainage contains unvegetated sandy sediment. The eastern and western bank of the segment of Sand Canyon Creek within the study area are characterized by similar disturbance patterns to those of the SCR's steep terrace and have steep banks with developed/disturbed land cover on the eastern bank and thick-leaved yerba santa scrub on the western bank (Attachment 1: Figure 3a). Flowing or standing water was absent from the creek during the field reconnaissance survey conducted on January 28, 2025. Wetlands were determined to be absent in the portion of Sand Canyon Creek within the study area due to the absence of hydrophytic vegetation and the absence of primary indicators of wetland hydrology.

Impact Analysis

Both permanent and temporary impacts to the SCR are expected to occur as a result of the project. New well discharge pipelines would be installed in the eastern portion of the study area and would include installation of two, approximately 40-square-foot areas of rip-rap. These project components would run through the upper terrace and bank of the SCR (Attachment 1: Figure 5a). Temporary project impacts would result from the temporary use of construction equipment adjacent to these proposed pipelines as well as for decommissioning of the Mitchell 5B well. Permanent impacts would be confined to the installation of rip-rap or other energy-dissipating features within the southern bank of the SCR. Both temporary and permanent impacts would occur to non-wetland Waters of the State potentially under RWQCB jurisdiction and streambed areas potentially under CDFW jurisdiction, as outlined in Table 2 and Table 3. Therefore, a Lake and Streambed Alteration Agreement (LSAA) from CDFW in accordance with CFGC Section 1602 and a WQC from the Los Angeles RWQCB pursuant to the Porter-Cologne Water Quality Control Act, are anticipated to be required prior to project work within areas subject to agency jurisdiction. In addition, implementation of AMMs BIO-5 and BIO-6 is

recommended to reduce potential direct impacts to jurisdictional areas of the SCR to a less-than-significant level. Adherence to conditions outlined in the CDFW LSAA and Los Angeles RWQCB WQC issued for the project, including mitigation for permanent impacts to jurisdictional resources, would also be required.

Table 2 Temporary Impacts to Jurisdictional Resources within the Study Area

	USACE Waters of the U.S.		RWQCB Waters of the State		CDFW Jurisdiction
Feature	Non-wetland Waters of the U.S. (acres [linear feet])	Wetland Waters of the U.S. (acres)	Non-wetland Waters of the State (acres [linear feet])	Wetland Waters of the State (acres)	CDFW Streambed (acres [linear feet])
Santa Clara River	-	-	0.02 (33)	-	0.03 (33)
Sand Canyon Creek	–	–	–	-	–
Total	**-**	**-**	**0.02 (33)**	**-**	**0.03 (33)**

USACE = United States Army Corps of Engineers; RWQCB = Regional Water Quality Control Board; CDFW = California Department of Fish and Wildlife

Table 3 Permanent Impacts to Jurisdictional Resources within the Study Area

	USACE Waters of the U.S.		RWQCB Waters of the State		CDFW Jurisdiction
Feature	Non-wetland Waters of the U.S. (acres [linear feet])	Wetland Waters of the U.S. (acres)	Non-wetland Waters of the State (acres [linear feet])	Wetland Waters of the State (acres)	CDFW Streambed (acres [linear feet])
Santa Clara River	–	–	0.04 (21)	–	0.03 (21)
Sand Canyon Creek	–	–	–	–	–
Total	–	–	**0.04 (21)**	–	**0.03 (21)**

USACE = United States Army Corps of Engineers; RWQCB = Regional Water Quality Control Board; CDFW = California Department of Fish and Wildlife

For all project construction activities, implementation of AMMs BIO-1 and BIO-2, described above, and standard BMPs required under the NPDES Construction General Permit (including installation of temporary perimeter sediment barriers such as berms, silt fences, fiber rolls, covers, sand/gravel bags, and straw bale barriers, as appropriate) is recommended to reduce temporary impacts to the bank of the SCR and other potentially jurisdictional resources associated with the SCR and Sand Canyon Creek to a less-than-significant level.

Following the completion of project construction, the Lost Canyon 2A and Sand Canyon wells would be flushed, and water produced during flush would be discharged into the SCR. This discharge would be subject to compliance with SCV Water's existing coverage under Waste Discharge Requirements Order WQ 2014-0194-DWQ/General Order No. CAG140001 (ID: 4DW0430), which is the Statewide NPDES Permit for Drinking Water System Discharges to Waters of the United States that establishes water quality standards for such discharges. In addition, the proposed rip-rap or other energy-dissipating features would minimize erosion at the discharge points. As required under the NPDES permit, SCV Water may also implement additional BMPs to minimize sediment discharge via use of erosion control measures such as use of flow diffusers or the construction of check dams to slow flows. The proposed energy-dissipating features as well as any additional BMPs required by this NPDES permit would thus minimize long-term impacts associated with well flushing discharges during project operation.

Therefore, operation of these discharge lines would not have a substantial adverse effect on state or federally protected wetlands, and impacts would be less than significant.

Upon project completion, the Lost Canyon 2A and Sand Canyon wells, which were taken offline in 2023, would be reactivated and resume groundwater pumping. The Lost Canyon 2A well extends to a depth of 126 feet and extracts groundwater from depths of 95 to 125 feet below ground surface. The Sand Canyon well extends to a depth of 140 feet below ground surface and extracts groundwater from depths of 60 to 140 feet below ground surface. Historical groundwater levels (1990-2020) at these locations have ranged from approximately 5 to 110 feet below ground surface with groundwater levels since 2010 ranging from 40 to 110 feet below ground surface (SCV GSA 2022). Annual groundwater pumping rates under this project for the two wells would be consistent with historical pumping rates for the Lost Canyon 2A and Sand Canyon wells and would not result in an increase in SCV Water's groundwater pumping at this location as compared to baseline conditions when the wells were operational in 2023. In addition, groundwater extraction would not exceed the pumping quantities provided in the groundwater level simulations used in the GSP. Moreover, groundwater extraction would be subject to the monitoring and management actions of the GSP to ensure operation of the wells would not lower groundwater levels beyond minimum thresholds for interconnected surface waters and groundwater-dependent ecosystems. Therefore, groundwater extraction under the proposed project would not have a substantial adverse effect on state or federally protected wetlands, and impacts would be less than significant.

Recommended Avoidance and Minimization Measures

AMM BIO-5 Restoration and Revegetation for Temporary Impacts to Jurisdictional Waters

All jurisdictional areas temporarily impacted by project activities should be restored to pre-project conditions. If native vegetation communities in jurisdictional areas of the Santa Clara River are temporarily impacted, a Habitat Revegetation, Restoration, and Monitoring Program should be developed and implemented for those areas. The program should include the following measures:

- **Invasive Species Control.** Where appropriate, the area to be disturbed should be treated to kill invasive exotic species and limit their seed production prior to initiating any earth-moving activity with the objectives of (1) preventing invasive species from spreading from the disturbance area and (2) removing weed sources from the salvaged topsoil. Herbicides should be used only by a licensed herbicide applicator and may require notification to property owners or resource agencies. The treatment should be completed in advance of the earth-moving in order for this activity to have its intended effect (i.e., the treatment would need to occur prior to target species setting seed).
- **Topsoil Salvage and Replacement.** In areas where vegetation and soil are to be removed, the topsoil should be salvaged and replaced. This may be accomplished using two lifts, the first to salvage the seed bank, and the second to salvage soil along with soil biota in the root zone. Soil should be stockpiled in two areas near the study area, with the seed bank labeled to identify it. Topsoil should be replaced in the proper layers after final reconfiguration of disturbed areas. Stockpiles should be covered if the soil is to be left for an extended period of time to prevent losses due to erosion and invasion of weeds.
- **Habitat Rehabilitation and Revegetation.** Plans and specifications for replanting areas disturbed by the project should be developed with native species propagated from locally-collected seed or cuttings, and, if applicable, should include seed of special-status species that would be impacted during construction activities. Monitoring procedures and performance criteria should be developed to address revegetation and erosion control. The performance criteria should consider the level of disturbance and the condition of adjacent habitats. Monitoring should continue for three to five years, or until performance criteria have been met, specifically the

restoration/revegetation of disturbed native habitat at a 1:1 ratio. Appropriate remedial measures, such as replanting, erosion control, or weed control, should be identified and implemented if it is determined that performance criteria are not being met.

AMM BIO-6 Compensatory Mitigation for Permanent Impacts to Jurisdictional Waters

Compensatory mitigation for permanent impacts to the Santa Clara River should be accomplished either through purchase of credits through an approved mitigation bank or through the completion of on-site restoration or off-site restoration by SCV Water. Compensatory mitigation should be completed at a minimum ratio of 1:1, unless a higher ratio is required by the Los Angeles RWQCB and/or CDFW.

If on-site or off-site mitigation is proposed, a Compensatory Mitigation Plan should be prepared that outlines the compensatory mitigation in coordination with the Los Angeles RWQCB and/or CDFW. If on-site mitigation is proposed, the Compensatory Mitigation Plan can be integrated with the Habitat Revegetation, Restoration, and Monitoring Program described in AMM BIO-5 and should identify those portions of the site that contain suitable characteristics (e.g., hydrology) for restoration. Determination of mitigation adequacy should be based on comparison of the restored habitat with similar, undisturbed habitat in the site vicinity. The Compensatory Mitigation Plan should include remedial measures if performance criteria are not met. If the Compensatory Mitigation Plan is not integrated with the Habitat Revegetation, Restoration, and Monitoring Program described in AMM BIO-5, the same reporting requirements should apply for monitoring and evaluation of Compensatory Mitigation Plan implementation as detailed in AMM BIO-5.

If off-site mitigation is proposed, off-site land should be preserved through a deed restriction or conservation easement and the Compensatory Mitigation Plan should identify an approach for funding assurance for the long-term management of the conserved land.

Wildlife Movement and Nursery Sites

Wildlife movement corridors can be both large- and small-scale. At the regional/landscape-level scale, the study area is included as a relatively less permeable Essential Connectivity Area in the California Essential Habitat Connectivity Project: A Strategy for Conserving a Connected California (Spencer et al. 2010). Habitat corridors are present within the study area, notably including the SCR. The SCR has headwaters in the San Gabriel Mountains and flows westward approximately 84 miles to the Oxnard Plain, where it discharges into the Pacific Ocean. The SCR is the largest river system in southern California that remains in a relatively natural state, and it connects highly diverse habitat types.

The SCR provides a valuable movement and migration corridor for many types of wildlife, including terrestrial, semi-aquatic, and aquatic species. Project components would largely occur within existing developed/disturbed areas. Project impacts to the big sagebrush scrub and thick-leaved yerba santa scrub vegetation communities would be relatively small in size and would occur along the southern margin of the SCR wildlife movement corridor. Therefore, project impacts to these vegetation communities are not expected to result in a decrease in the function of the corridor for wildlife movement because the optimal path for wildlife movement (i.e., the SCR) would remain intact. Migrating wildlife would have the ability to traverse around the work area throughout the entirety of the SCR during construction and would continue to migrate through the SCR. Therefore, project construction would not interfere substantially with the movement of any native resident or migratory fish or wildlife species or with established native resident or migratory wildlife corridors. Impacts would be less than significant, and avoidance and minimization measures are not recommended.

Project operation would not include activities that could impact wildlife movement beyond existing conditions. Therefore, project operation would not 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, and impacts would be less than significant.

Local Policies and Ordinances

City of Santa Clarita General Plan

Natural resources within Santa Clarita limits are regulated according to the City's General Plan, which includes policies regarding conservation of biological resources and ecosystems as well as protection of sensitive habitat (including wildlife corridors) and endangered species. The following objectives and policies related to biological resources are applicable to the proposed project based on its location and proposed activities (City of Santa Clarita 2011):

Objective CO 3.1: In review of development plans and projects, encourage conservation of existing natural areas and restoration of damaged natural vegetation to provide for habitat and biodiversity.

> *Policy CO 3.1.1: On the Land Use Map and through the development review process, concentrate development into previously developed or urban areas to promote infill development and prevent sprawl and habitat loss, to the extent feasible.*
>
> *Policy CO 3.1.2: Avoid designating or approving new development that will adversely impact wetlands, floodplains, threatened or endangered species and habitat, and water bodies supporting fish or recreational uses, and establish an adequate buffer area as deemed appropriate through site specific review.*
>
> *Policy CO 3.1.3: On previously undeveloped sites ("greenfields"), identify biological resources and incorporate habitat preservation measures into the site plan, where appropriate. (This policy will generally not apply to urban infill sites, except as otherwise determined by the reviewing agency).*
>
> *Policy CO 3.1.4: For new development on sites with degraded habitat, include habitat restoration measures as part of the project development plan, where appropriate.*
>
> *Policy CO 3.1.5: Promote the use of site-appropriate native or adapted plant materials and prohibit use of invasive or noxious plant species in landscape designs.*
>
> *Policy CO 3.1.6: On development sites, preserve and enhance natural site elements including existing water bodies, soil conditions, ecosystems, trees, vegetation and habitat, to the extent feasible.*
>
> *Policy CO 3.1.7: Limit the use of turf-grass on development sites and promote the use of native or adapted plantings to promote biodiversity and natural habitat.*
>
> *Policy CO 3.1.8: On development sites, require tree planting to provide habitat and shade to reduce the heat island effect caused by pavement and buildings.*
>
> *Policy CO 3.1.9: During construction, ensure preservation of habitat and trees designated to be protected through use of fencing and other means as appropriate, so as to prevent damage by grading, soil compaction, pollution, erosion or other adverse construction impacts.*
>
> *Policy CO 3.1.10: To the extent feasible, encourage the use of open space to promote biodiversity.*
>
> *Policy CO 3.1.11: Promote use of pervious materials or porous concrete on sidewalks to allow for planted area infiltration, allow oxygen to reach tree roots (preventing sidewalk lift-up from roots seeking oxygen), and mitigate tree-sidewalk conflicts, in order to maintain a healthy mature urban forest.*

Objective CO 3.2: Identify and protect areas which have exceptional biological resource value due to a specific type of vegetation, habitat, ecosystem, or location.

Policy CO 3.2.2: Ensure that development is located and designed to protect oak, and other significant indigenous woodlands.

Policy CO 3.2.3: Ensure protection of any endangered or threatened species or habitat, in conformance with State and federal laws.

Objective CO 3.6: Minimize impacts of human activity and the built environment on natural plant and wildlife communities.

Policy CO 3.6.1: Minimize light trespass, sky-glow, glare, and other adverse impacts on the nocturnal ecosystem by limiting exterior lighting to the level needed for safety and comfort; reduce unnecessary lighting for landscaping and architectural purposes and encourage reduction of lighting levels during nonbusiness nighttime hours.

Policy CO 3.6.2: Reduce impervious surfaces and provide more natural vegetation to enhance microclimates and provide habitat.

The project proposes new development, including upgrades to existing groundwater wells and construction of a new groundwater treatment facility. However, with implementation of AMM BIO-1 through BIO-6, impacts to biological resources would be less than significant and project activities would not conflict with policies protecting biological resources in the City of Santa Clarita General Plan. Impacts would therefore be less than significant with mitigation incorporated.

Vista Canyon Specific Plan

According to Government Code Section 53091, building and zoning ordinances of a county or city shall not apply to the location or construction of facilities for the production, generation, storage, treatment, or transmission of water. As such, the project would not be subject to the Vista Canyon Specific Plan, which establishes additional zoning regulations for the project area.

Parkway Trees Ordinance

Native trees within the City's public right-of-way, easement, or other public property and within 14 feet of those areas are protected under the City's Parkway Trees Ordinance (Santa Clarita Municipal Code Section 13.76). Pursuant to the ordinance, a tree permit must be obtained prior to damaging or removing any protected trees that are:

- "Exceptional specimen tree" means a tree considered an outstanding specimen of its species by reason of age, rarity, location, size, aesthetic quality, endemic status, or unique character, and so designated by resolution of the City Council.
- "Habitat tree" means a tree (or any group of trees) which has special importance as a wildlife habitat, and so designated by resolution of the City Council.
- "Historic tree" means a living tree in association with some event or person of historical significance to the community or because of special due to size, condition or aesthetic qualities, and so designated by resolution of the City Council.
- "Indigenous tree" means a tree which occurs naturally in the city, and so designated by resolution of the City Council.
- "Street tree" means any trees growing in street, park, public right-of-way, or easement or other public place within the City limits.

In addition, the ordinance defines a tree as a woody plant that has the potential of attaining a minimum height of 15 feet and has a canopy of foliage borne normally by a single trunk.

Two mature Fremont cottonwood trees, two coast live oaks, one golden wattle (*Acacia longifolia*), a blue elderberry (*Sambucus mexicana*), and one Peruvian pepper tree (*Schinus molle)* are within the study area. The blue elderberry and golden wattle are located within the project boundaries, adjacent to the existing pipelines that discharge from the Sand Canyon and Lost Canyon 2/2A wells (Attachment 1: Figure 3a). However, these trees are not located within the City's public right-of-way, easement, or other public property nor within 14 feet of those areas; therefore, the City's Parkway Trees Ordinance does not apply to these trees. The two oak trees within the study area are located within the City right-of-way associated with Lost Canyon Road; however, these trees are located outside the project site, and no impacts are proposed. Therefore, the project would not conflict with the City's Parkway Trees Ordinance, and no avoidance or minimization measures are recommended.

Oak Tree Preservation Ordinance

The City of Santa Clarita Oak Tree Preservation Ordinance (Santa Clarita Municipal Code Section 17.51.040) protects and preserves oak trees in the city and provides regulatory measures to accomplish this purpose. This policy applies to the removal, pruning, cutting, and/or encroachment into the protected zone of oak trees. The two coast live oaks within the study area would not be impacted during project construction. In addition, according to Government Code Section 53091, building and zoning ordinances of a county or city shall not apply to the location or construction of facilities for the production, generation, storage, treatment, or transmission of water. As such, the project would not be subject to the City's building and zoning ordinances (Santa Clarita Municipal Code Titles 17 and 18), which include the City of Santa Clarita Oak Tree Preservation Ordinance. Therefore, no impacts related to the Oak Tree Preservation Ordinance would occur.

Significant Ecological Areas

The City's General Plan and Municipal Code (Section 17.38.080) require treatment of the SEA Overlay Zone as among the habitat types within the city. SEAs are "defined as ecologically important land and water systems that are valuable as plant or animal communities, often important to the preservation of threatened and endangered species, and conversation of biological diversity in the County" (City of Santa Clarita 2011). Santa Clarita Municipal Code Section 17.38.080 requires a conformance review for development within the SEA Overlay Zone. However, as mentioned previously, the project would not be subject to the City's building and zoning ordinances (Santa Clarita Municipal Code Titles 17 and 18) pursuant Government Code Section 53091, which include Santa Clarita Municipal Code Section 17.38.080. Therefore, SCV Water would not be required to comply with its requirements.

Habitat Conservation Plans

The study area is not located within any Habitat Conservation Plans, Natural Community Conservation Plans, or other approved local, regional, or state habitat conservation plan area. Therefore, no impact would occur, and no avoidance or minimization measures are recommended.

Limitations, Assumptions and Use Reliance

This BRA has been performed in accordance with professionally accepted biological investigation practices conducted at this time and in this geographic area. The biological investigation is limited by the scope of work performed. Biological surveys for the presence or absence of certain taxa were not conducted as part of this assessment and were not performed during a particular blooming period, nesting period, or particular portion of the season when positive identification would be expected if

present, and therefore, cannot be considered definitive. The biological surveys are limited also by the environmental conditions present at the time of the surveys. In addition, general biological (or protocol) surveys do not guarantee the organisms are not present and will not be discovered in the future within the site. In particular, mobile wildlife species could occupy the site on a transient basis or re-establish populations in the future. Our field studies were based on current industry practices, which change over time and may not be applicable in the future. No other guarantees or warranties expressed or implied, are provided. The findings and opinions conveyed in this report are based on findings derived from site reconnaissance, jurisdictional areas, review of CNDDB RareFind5, and specified historical and literature sources. Standard data sources relied upon during the completion of this report, such as the CNDDB, may vary with regard to accuracy and completeness. In particular, the CNDDB is compiled from research and observations reported to CDFW that may or may not have been the result of comprehensive or site-specific field surveys. Although Rincon believes the data sources are reasonably reliable, Rincon cannot and does not guarantee the authenticity or reliability of the data sources it has used. In addition, pursuant to our contract, the data sources reviewed included only those that are practically reviewable without the need for extraordinary research and analysis.

Thank you for the opportunity to provide this BRA. Please contact the undersigned with any questions.

Sincerely,
Rincon Consultants, Inc.

Austin LeVesque	Kyle Gern	May Lau
Biologist	Senior Biologist/Botanist	Principal Regulatory Specialist

Attachments

Attachment 1 Figures
Attachment 2 Site Photographs
Attachment 3 Species Detected During Field Reconnaissance Survey
Attachment 4 Special-Status Species Potential to Occur Table
Attachment 5 Wetland Sample Point Form

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Attachment 1

Figures

Figure 1 Regional Location

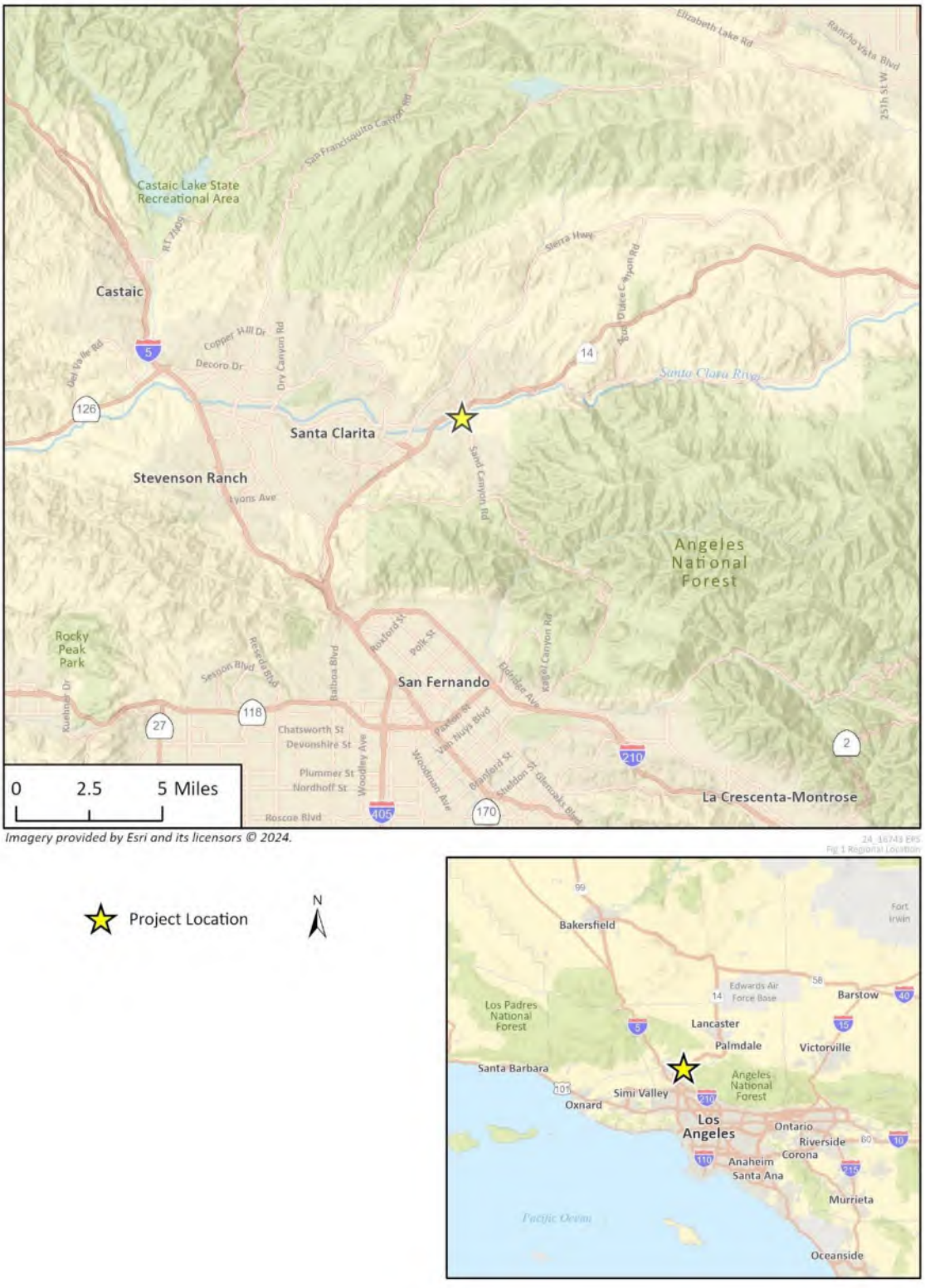


Figure 2 Study Area

Figure 3a Vegetation Communities and Land Cover Types – Eastern Portion of Study Area

Figure 3b Vegetation Communities and Land Cover Types – Western Portion of Study Area

Figure 4a Jurisdictional Resources within the Study Area – Eastern Portion

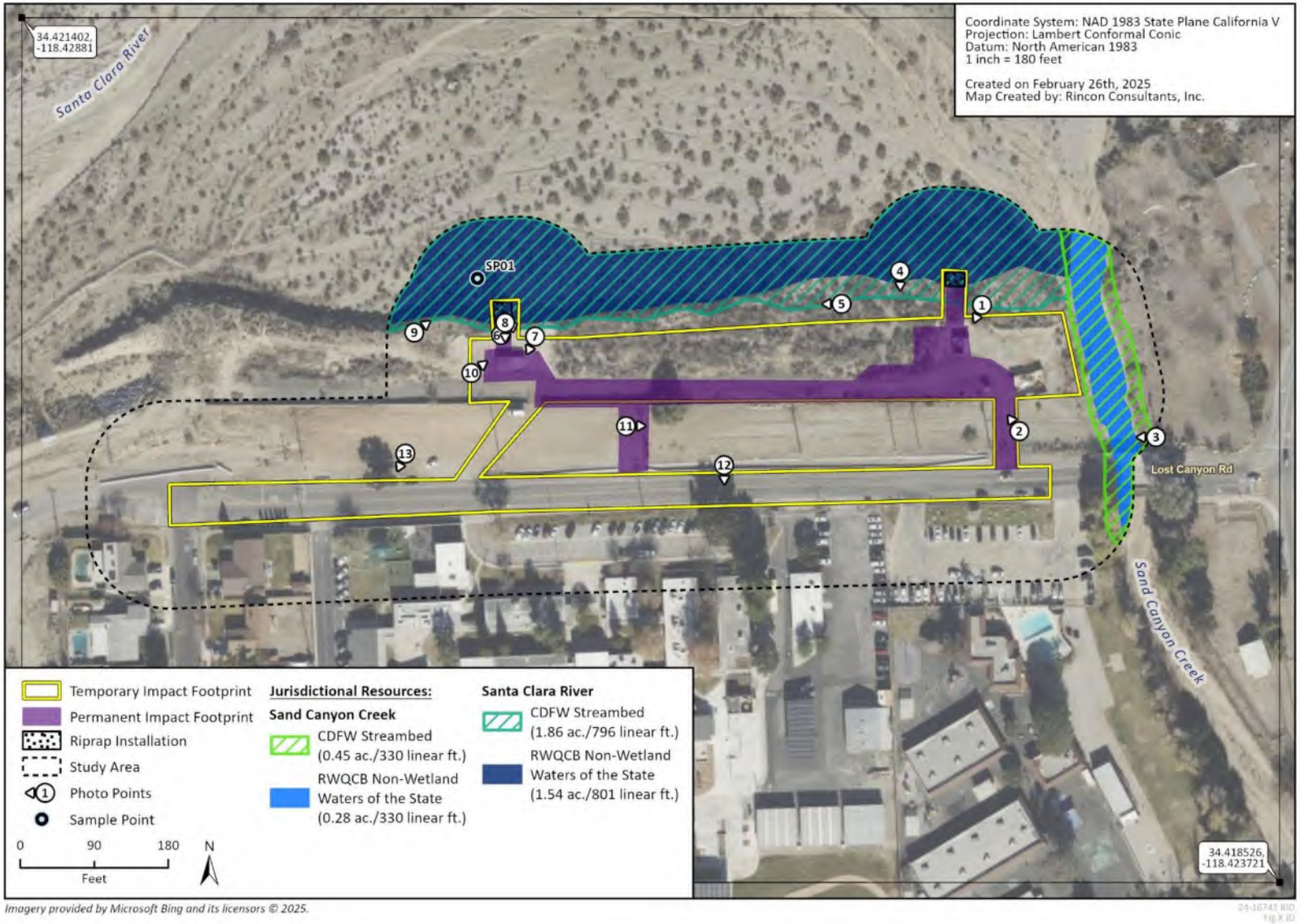


Figure 4b Jurisdictional Resources within the Study Area – Western Portion

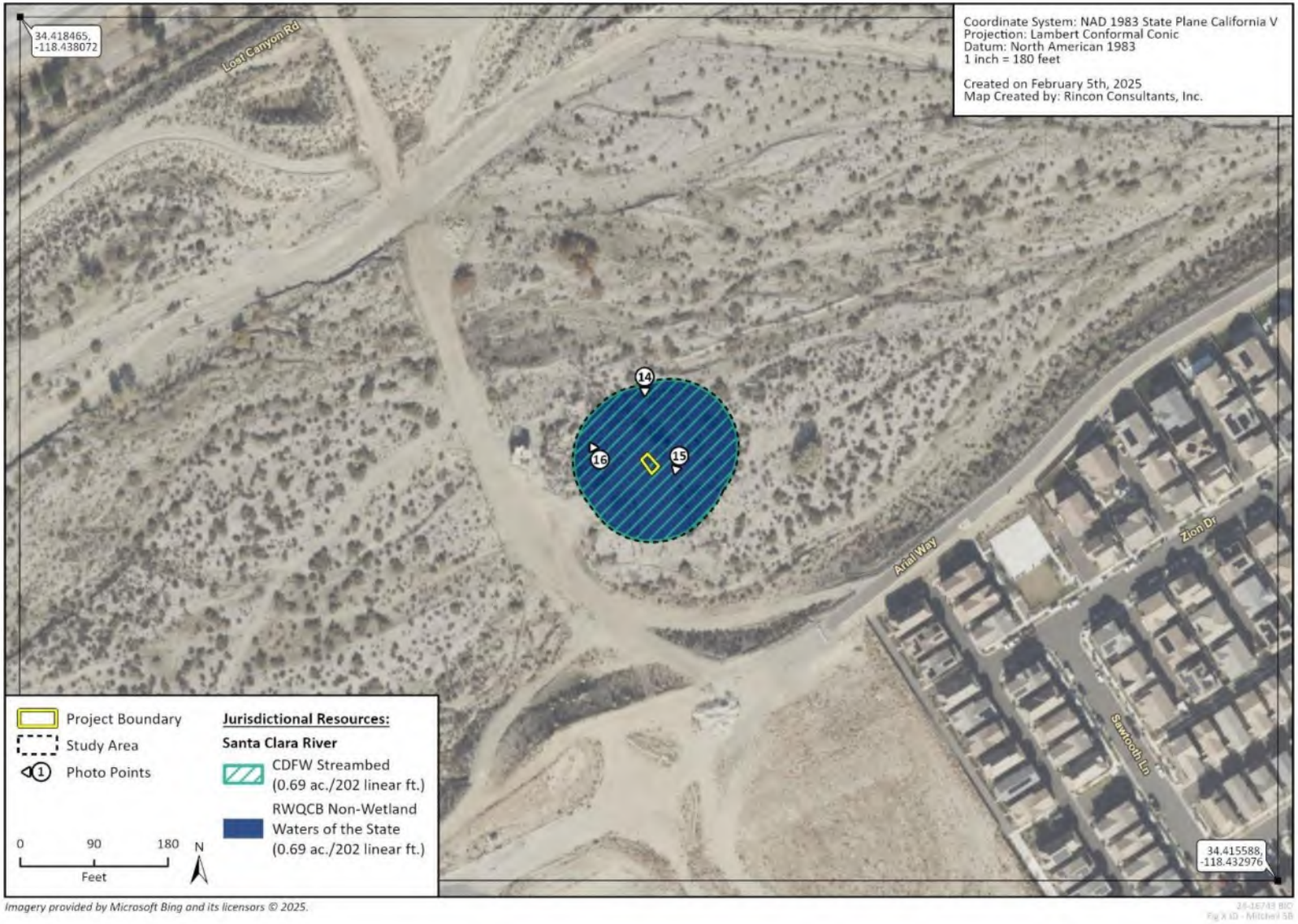


Figure 5a Jurisdictional Delineation Impacts – Eastern Portion of Study Area

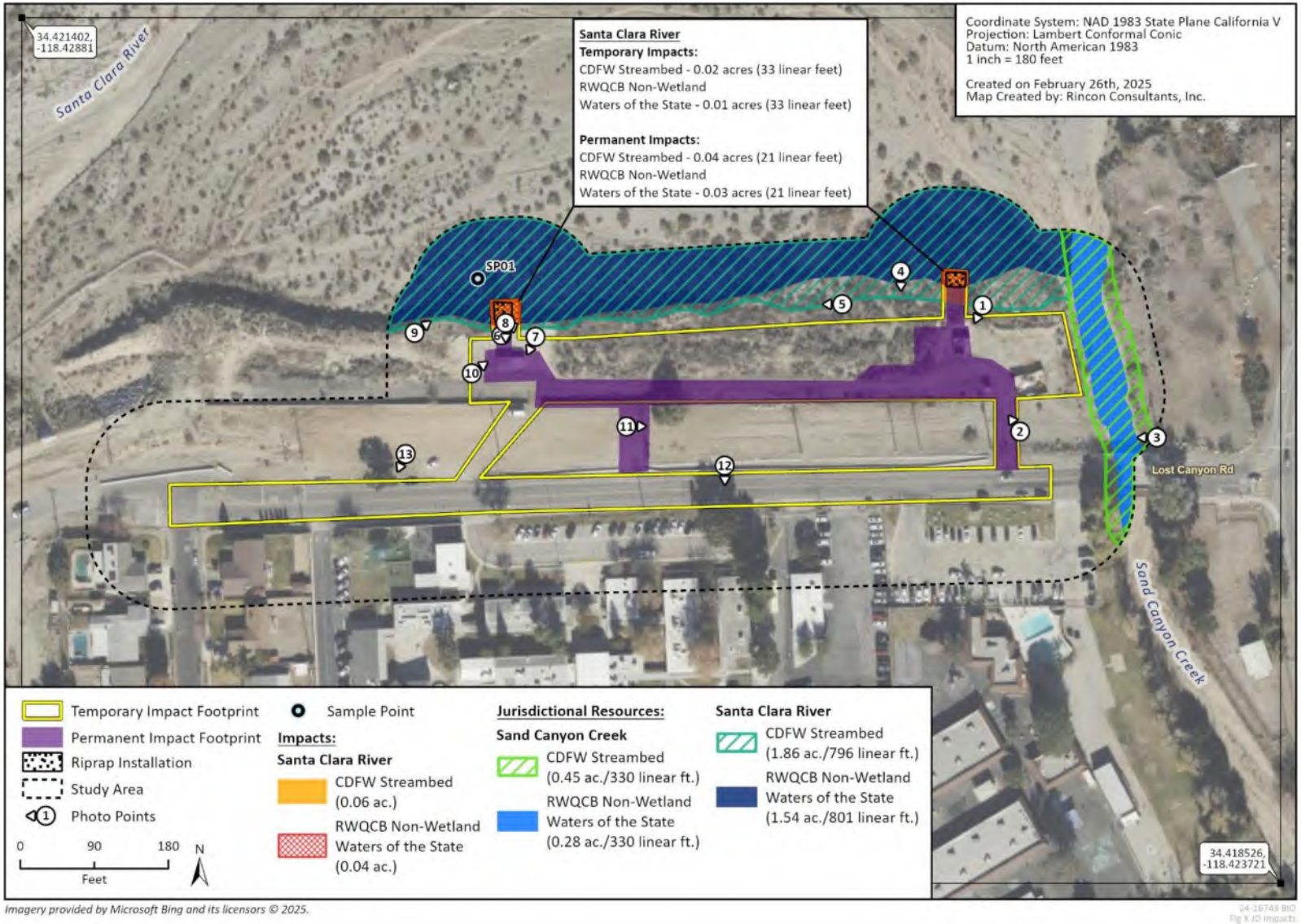
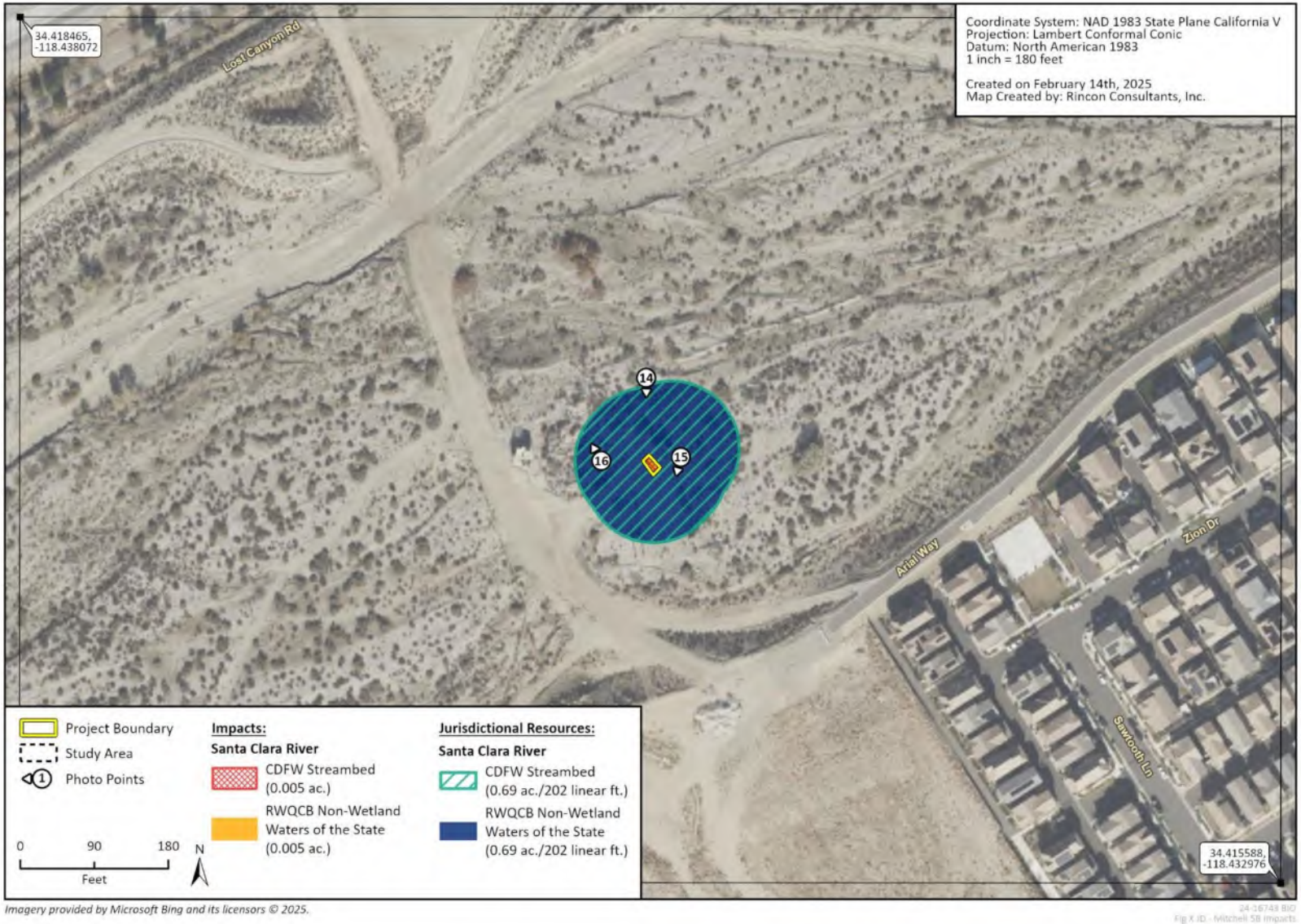


Figure 5b Jurisdictional Delineation Impacts – Western Portion of Study Area



Attachment 2

Site Photographs

Photo Point 1: View of the existing Lost Canyon 2A well within the study area. Taken January 28, 2025, facing southwest.

Photo Point 2: View of project site near the existing Lost Canyon 2A well with developed/disturbed land cover. Taken January 28, 2025 facing northwest.

Photo Point 3: View towards work area from eastern bank of Sand Canyon Creek. Taken January 28, 2025 facing west.

Photo Point 4: View of drainage feature and work area located north of the existing Lost Canyon 2A well. Taken January 28, 2025, facing south.

Photo Point 5: View of the steep terrace of Santa Clara River with cement and concrete debris within eastern portion of study area. Taken January 28, 2025, facing west.

Photo Point 6: View of the existing disturbance along the bank of the SCR located north of the Sand Canyon well. Taken January 28, 2025, facing northeast.

Photo Point 7: View of the work area located north of the existing Sand Canyon well. Taken January 28, 2025, facing southwest.

Photo Point 8: View of the existing Sand Canyon well discharge. Taken January 28, 2025, facing north.

Photo Point 9: View of the scrub and mulefat thickets within the banks of the SCR in the eastern portion of the study area. Taken January 28, 2025, facing northeast.

Photo Point 10: View of the eastern portion fo the study area near the existing Sand Canyon well with developed/disturbed land cover. Taken January 28, 2025, facing northeast.

Photo Point 11 View of the staging lot north of Lost Canyon Road with large Peruvian pepper tree present. Taken January 28, 2025, facing east.

Photo Point 12: View of a large coast live oak tree present alongside the south sidewalk of Lost Canyon Road. Taken January 28, 2025, facing south.

Photo Point 13: View of an additional large coast live oak tree present north alongside Lost Canyon Road. Taken January, 28, 2025, facing southwest.

Photo Point 14: View of the existing Mitchell 5B well with surrounding scrub habitat in the western portion of the study area. Taken January, 28, 2025, facing south.

Photo Point 15: View of the disturbed access routes leading to the western portion fo the study area. Taken January 28, 2025, facing southwest.

Photo Point 16: View of an ajdacent bridge construction site adjacent to the western portion of the study area. Taken January 28, 2025, facing northwest.

Attachment 3

Species Detected During Field Reconnaissance Surveys

Plant and Wildlife Species Detected in the Study Area

Scientific Name	Common Name	Status	Native or Introduced
Plants			
Acacia longifolia	golden wattle	Cal-IPC - Watch List	Introduced
Artemisia dracunculus	wild tarragon		Native
Artemisia tridentata	California sagebrush		Native
Arundo donax	giant reed	Cal-IPC - High	Introduced
Baccharis salicifolia	mulefat		Native
Brassica nigra	black mustard	Cal IPC - Moderate	Introduced
Bromus diandrus	ripgut brome	Cal-IPC - Moderate	Introduced
Bromus rubens	red brome	Cal-IPC - High	Introduced
Centaurea melitensis	tocalote	Cal IPC - Moderate	Introduced
Cupressus sempervirens	Italian cypress		Introduced
Cylindropuntia californica	California cholla		Native
Cynodon dactlyon	bermuda grass	Cal-IPC - Moderate	Introduced
Datura wrightii	sacred datura		Native
Eriastrum densifolium	giant eriastrum		Native
Ericameria nauseosa	rubber rabbitbrush		Native
Eriodictyon crassifolium	thick-leaved yerba santa		Native
Eriogonum fasciculatum	California buckwheat		Native
Erodium cicutarium	redstem filaree	Cal-IPC - Limited	Introduced
Euonymus japonicus	Japanese euonymus		Introduced
Festuca myuros	rattail fescue	Cal-IPC - Moderate	Introduced
Heterotheca grandiflora	telegraph weed		Native
Heterotheca sessiliflora	golden aster		Native
Hirschfeldia incana	summer mustard	Cal IPC - Moderate	Introduced
Juniperus horizontalis	creeping juniper		Introduced
Lepidospartum squamatum	scale broom		Native
Lobularua maritima	sweet alyssum	Cal-IPC - Limited	Introduced
Logfia gallica	narrowleaf cottonrose		Native
Lysimachai arvensis	scarlet pimpernel		Introduced
Marrubium vulgare	white horehound	Cal-IPC - Limited	Introduced
Medicago polymorpha	bur clover	Cal-IPC - Limited	Introduced
Melilotus indicus	yellow sweetclover		Introduced
Nicotiana glauca	tree tobacco	Cal-IPC - Moderate	Introduced
Phacelia ramosissima	branching phacelia		Native
Pinus halepensis	aleppo pine		Introduced
Platanus racemosa	western sycamore		Native
Pseudognaphalium californicum	Ladies' tobacco		Native
Quercus agrifolia	coast live oak		Native
Rosa spp.	ornamental rose		Introduced

Scientific Name	Common Name	Status	Native or Introduced
Salsola tragus	Russian thistle	Cal-IPC - Limited	Introduced
Salvia mellifera	black sage		Native
Schinus molle	Peruvian pepper	Cal-IPC - Limited	Introduced
Schismus barbatus	mediterranean grass	Cal-IPC - Limited	Introduced
Senecio flaccidus	shrubby ragwort		Native
Syagrus rommanzoffiana	queen palm	Cal-IPC - Limited	Introduced
Tamarix aphylla	athel tamarisk	Cal-IPC - Limited	Introduced
Typha spp.	cattails		Native
Wildlife			
Birds			
Buteo jamaicensis	red-tailed hawk	–	Native
Calypte anna	Anna's hummingbird	–	Native
Cathartes aura	turkey vulture	–	Native
Corvus brachyrhynchos	American crow	–	Native
Corvus corax	common raven	–	Native
Haemorhous mexicanus	house finch	–	Native
Melozone crissalis	California towhee	–	Native
Pipilo maculatus	spotted towhee	–	Native
Polioptila caerulea	blue-gray gnatcatcher	–	Native
Psaltriparus minimus	bushtit	–	Native
Sayornis nigricans	black phoebe	–	Native
Selasphorus sasin	Allen’s hummingbird	–	Native
Spinus tristis	American goldfinch	–	Native

Attachment 4

Special-Status Species Potential to Occur Table

Special-status Species Potential to Occur Table

Scientific Name Common Name	Status	Habitat Requirements	Potential to Occur in Study Area	Habitat Suitability/Observations
Plants and Lichens				
Berberis nevinii Nevin's barberry	FE/SE G1/S1 1B.1	Perennial evergreen shrub. Chaparral, cismontane woodland, coastal scrub, riparian scrub. Gravelly (sometimes), sandy (sometimes). Elevations: 230-2705ft. (70-825m.) Blooms (Feb)Mar-Jun.	Not Expected	Potentially suitable chaparral and scrub habitat occurs within the study area. However, this is a conspicuous perennial species that would have been identifiable during the field survey and was not observed.
Calochortus catalinae Catalina mariposa lily	None/None G3G4/S3S4 4.2	Perennial bulbiferous herb. Chaparral, cismontane woodland, coastal scrub, valley and foothill grassland. In heavy soils, open slopes, openings in brush. Elevations: 50-2295ft. (15-700m.) Blooms (Feb)Mar-Jun.	Low Potential	Potentially suitable chaparral, scrub, and grassland habitat occurs in the study area and areas along the northern bank of the SCR. However, there are no documented CNDDB records within the vicinity of the study area.
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 chaparral and scrub occurs within the study area. However, there are no documented CNDDB records within the vicinity of the study area.
Calochortus clavatus var. *gracilis* slender mariposa-lily	None/None G4T2T3/S2S3 1B.2	Perennial bulbiferous herb. Chaparral, coastal scrub, valley and foothill grassland. Shaded foothill canyons; often on grassy slopes within other habitat. Elevations: 1050-3280ft. (320-1000m.) Blooms Mar-Jun(Nov).	Not Expected	Some suitable habitat exists within the study area with known occurrences within less than one mile of the study area. However, no shaded foothill canyons or grassy slopes are present within the study area.
Calochortus palmeri var. *palmeri* Palmer's mariposa-lily	None/None G3T2/S2 1B.2	Perennial bulbiferous herb. Chaparral, lower montane coniferous forest, meadows and seeps. Mesic. Elevations: 2330-7840ft. (710-2390m.) Blooms Apr-Jul.	Not Expected	The study area is outside of the known elevation range of the species.
Calochortus plummerae Plummer's mariposa-lily	None/None G4/S4 4.2	Perennial bulbiferous herb. Chaparral, cismontane woodland, coastal scrub, lower montane coniferous forest, valley and foothill grassland. Granitic, rocky. Elevations: 330-5580ft. (100-1700m.) Blooms May-Jul.	Low Potential	Granitic, rocky areas are absent from the study area. The closest CNDDB record (Occurrence No. 188) is approximately 4.2 miles northeast of the study area.

Scientific Name Common Name	Status	Habitat Requirements	Potential to Occur in Study Area	Habitat Suitability/Observations
Calystegia peirsonii Peirson's morning-glory	None/None G4/S4 4.2	Perennial rhizomatous herb. Chaparral, chenopod scrub, cismontane woodland, coastal scrub, lower montane coniferous forest, valley and foothill grassland. Often in disturbed areas or along roadsides or in grassy, open areas. Elevations: 100-4920ft. (30-1500m.) Blooms Apr-Jun.	Low Potential	Potentially suitable chaparral and scrub habitat occurs within the study area. However, the only CNDDB records (Occurrence Nos. 5 and 8) within the vicinity of the study area are more than 30 years old, and this is a perennial species that was not observed during the field survey.
Canbya candida white pygmy-poppy	None/None G3G4/S3S4 4.2	Annual herb. Joshua tree woodland, mojavean desert scrub, pinyon and juniper woodland. Granitic, gravelly, sandy. Elevations: 1970-4790ft. (600-1460m.) Blooms Mar-Jun.	Not Expected	No suitable desert scrub habitat is present within the study area. Additionally, the study area is located outside of elevation range for the species.
Centromadia parryi ssp. *australis* southern tarplant	None/None G3T2/S2 1B.1	Annual herb. Marshes and swamps, valley and foothill grassland, vernal pools. Often in disturbed sites near the coast at marsh edges; also in alkaline soils sometimes with saltgrass. Sometimes on vernal pool margins. Elevations: 0-1575ft. (0-480m.) Blooms May-Nov.	Not Expected	Suitable soil conditions are not present within the study area. Suitable habitats such as marshes, swamps, and vernal pools are not present.
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.	Not Expected	Potentially suitable chaparral habitat is present within the study area. However, this is a conspicuous perennial species that would have been observed during the field survey.
Chorizanthe parryi var. *fernandina* San Fernando Valley spineflower	None/SE G3T1/S1 1B.1	Annual herb. Coastal scrub, valley and foothill grassland. Sandy soils. Elevations: 490-4005ft. (150-1220m.) Blooms Apr-Jul.	Not Expected	Potentially suitable scrub habitat occurs within the western portion of the study area; however, frequent vehicle disturbance and the general developed/disturbed land cover present within that portion of the study area would not serve as suitable habitat for the species. The species also rarely occurs within floodplains.
Chorizanthe parryi var. *parryi* Parry's spineflower	None/None G3T2/S2 1B.1	Annual herb. Chaparral, cismontane woodland, coastal scrub, valley and foothill grassland. Openings, Rocky (sometimes), sandy (sometimes). Elevations: 900-4005ft. (275-1220m.) Blooms Apr-Jun.	Low Potential	Potentially suitable chaparral habitat is present within the study area. However, there is an absence of grassland habitat and lack of CNDDB occurrences within the vicinity for the species.

Scientific Name Common Name	Status	Habitat Requirements	Potential to Occur in Study Area	Habitat Suitability/Observations
Deinandra minthornii Santa Susana tarplant	None/SR G2/S2 1B.2	Perennial deciduous shrub. Chaparral, coastal scrub. On sandstone outcrops and crevices, in shrubland. Elevations: 920-2495ft. (280-760m.) Blooms Jul-Nov.	Not Expected	Chaparral and scrub habitat are present within the study area. However, sandstone outcrops and crevices preferred by the species are not present.
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.	Not Expected	Vernally mesic sites within coastal scrub and/or grassland habitat are absent from the study area.
Delphinium parryi ssp. *purpureum* Mt. Pinos larkspur	None/None G4T4/S4 4.3	Perennial herb. Chaparral, mojavean desert scrub, pinyon and juniper woodland. Elevations: 3280-8530ft. (1000-2600m.) Blooms May-Jun.	Not Expected	Study area is not within the elevation range for the species.
Diplacus johnstonii Johnston's monkeyflower	None/None G4/S4 4.3	Annual herb. Lower montane coniferous forest. On scree, in rocky or gravelly sites. Also in disturbed areas. Elevations: 3200-9580ft. (975-2920m.) Blooms May-Aug.	Not Expected	Study area is not within the elevation range for the species.
Dodecahema leptoceras slender-horned spineflower	FE/SE G1/S1 1B.1	Annual herb. Chaparral, cismontane woodland, coastal scrub. Flood deposited terraces and washes; associates include Encelia, Dalea, Lepidospartum, etc. Sandy soils. Elevations: 655-2495ft. (200-760m.) Blooms Apr-Jun.	Low Potential	Marginally suitable habitat exists within the western portion of the study area; however the area is frequently disturbed by vehicle traffic and access road use. This species is unlikely to establish in frequently disturbed areas. In addition, two protocol surveys for the species were previously performed adjacent to the study area, and the species was determined to not be present (Rincon 2025; Impact Sciences 2010).
Harpagonella palmeri Palmer's grapplinghook	None/None G4/S3 4.2	Annual herb. Chaparral, coastal scrub, valley and foothill grassland. Clay soils; open grassy areas within shrubland. Elevations: 65-3135ft. (20-955m.) Blooms Mar-May.	Not Expected	Potentially suitable habitat occurs in the chaparral, scrub, and grassland habitat along the upper terrace to the north of the SCR outside the study area. CNDDB record (Occurrence No. 60) of this species recorded within the vicinity of the study area is a non-specific, undated record, and clay soils are absent from the study area.

Scientific Name Common Name	Status	Habitat Requirements	Potential to Occur in Study Area	Habitat Suitability/Observations
Helianthus inexpectatus Newhall sunflower	None/None G1/S1 1B.1	Perennial rhizomatous herb. Marshes and swamps, riparian woodland. Freshwater marshes, and seeps. Elevations: 1000-1000ft. (305-305m.) Blooms Aug-Oct.	Not Expected	Marshes, swamps, and seeps are not present within the study area.
Heuchera caespitosa urn-flowered alumroot	None/None G3/S3 4.3	Perennial rhizomatous herb. Cismontane woodland, lower montane coniferous forest, riparian forest, upper montane coniferous forest. Rocky sites. Elevations: 3790-8695ft. (1155-2650m.) Blooms May-Aug.	Not Expected	The study area is not within elevation range for the species.
Hordeum intercedens vernal barley	None/None G3G4/S3S4 3.2	Annual herb. Coastal dunes, coastal scrub, valley and foothill grassland, vernal pools. Vernal pools, dry, saline streambeds, alkaline flats. 5-. Elevations: 15-3280ft. (5-1000m.) Blooms Mar-Jun.	Not Expected	Vernal pools, dry saline streambeds, and alkaline flats are absent from the study area.
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).	Low Potential	Some suitable chaparral is present along with sandy or gravelly soils; however, no known CNDDB occurrences within the vicinity of the study area.
Hulsea vestita ssp. *gabrielensis* San Gabriel Mountains sunflower	None/None G5T3/S3 4.3	Perennial herb. Lower montane coniferous forest, upper montane coniferous forest. Rocky sites. Elevations: 4920-8205ft. (1500-2500m.) Blooms May-Jul.	Not Expected	Study area is not within the elevation range for the species.
Juglans californica Southern California black walnut	None/None G4/S4 4.2	Perennial deciduous tree. Chaparral, cismontane woodland, coastal scrub, riparian woodland. Slopes, canyons, alluvial habitats. Elevations: 165-2955ft. (50-900m.) Blooms Mar-Aug.	Not Expected	Suitable chaparral exists within the study area; however, this is a conspicuous perennial tree that would have been detected in the study area during the field survey.
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.	Not Expected	Marshes, swamps, and meadow seeps are not present within the study area. In addition, moist saline soils are not present within the freshwater riparian channel.
Lepechinia fragrans fragrant pitcher sage	None/None G3/S3 4.2	Perennial shrub. Chaparral. Elevations: 65-4300ft. (20-1310m.) Blooms Mar-Oct.	Not Expected	Chaparral is present within the study area; however, the species is a conspicuous shrub

Scientific Name Common Name	Status	Habitat Requirements	Potential to Occur in Study Area	Habitat Suitability/Observations
				that would have been identified within the study area during the field survey.
Lepechinia rossii Ross' pitcher sage	None/None G1/S1 1B.2	Perennial shrub. Chaparral. Soil derived from fine-grained, reddish sedimentary rock. Elevations: 1000-2590ft. (305-790m.) Blooms May-Sep.	Not Expected	Chaparral is present within the study area. However, there is an absence of soil preference (reddish sedimentary rock, fine-grain) within the study area. Moreover, there is a conspicuous shrub species that would have been identified during the field survey.
Lepidium virginicum var. *robinsonii* Robinson's pepper-grass	None/None G5T3/S3 4.3	Annual herb. Chaparral, coastal scrub. Dry soils, shrubland. 4-. Elevations: 5-2905ft. (1-885m.) Blooms Jan-Jul.	Low Potential	Potentially suitable chaparral and coastal scrub habitat occurs above the northern bank of the SCR outside of the study area. However, there are no documented CNDDB records within the vicinity of the study area.
Lilium humboldtii ssp. *ocellatum* ocellated Humboldt lily	None/None G4T4?/S4? 4.2	Perennial bulbiferous herb. Chaparral, cismontane woodland, coastal scrub, lower montane coniferous forest, riparian woodland. Yellow-pine forest or openings, oak canyons. Elevations: 100-5905ft. (30-1800m.) Blooms Mar-Jul(Aug).	Not Expected	Wetted portions of intermittent streams above SCR may provide suitable habitat; however, wetted areas of the SCR are not within study area.
Lupinus paynei Payne's bush lupine	None/None G1Q/S1 1B.1	Perennial shrub. Coastal scrub, riparian scrub, valley and foothill grassland. Sandy. Elevations: 720-1380ft. (220-420m.) Blooms Mar-Apr(May-Jul).	Not Expected	Some suitable scrub habitat is present within the study area; however, there are no foothill grasslands present within the study area.
Malacothamnus davidsonii Davidson's bushmallow	None/None GNR/S2 1B.2	Perennial deciduous shrub. Chaparral, cismontane woodland, coastal scrub, riparian woodland. Sandy washes. Elevations: 605-3740ft. (185-1140m.) Blooms Jun-Jan.	Not Expected	Potentially suitable chaparral and coastal scrub habitat occurs in the study area. However, this is a conspicuous shrub species that would have been identified during the field survey and was not observed.
Monardella exilis Mojave monardella	None/None G3?/S3 4.2	Chenopod scrub, Desert dunes, Great Basin scrub, Joshua tree "woodland", Lower montane coniferous forest, Mojavean desert scrub, Pinyon and juniper woodland. Sandy 600-2050m. Blooms Apr-Sep.	Not Expected	Montane coniferous forest, desert scrub, and pinyon/juniper woodland are not present within the study area.
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.	Not Expected	Potentially suitable chaparral and scrub habitat are present within the study area. However, there are no documented CNDDB records within the vicinity of the study area.

Scientific Name Common Name	Status	Habitat Requirements	Potential to Occur in Study Area	Habitat Suitability/Observations
		Elevations: 0-4595ft. (0-1400m.) Blooms Mar-Jul(Aug).		
Navarretia fossalis spreading navarretia	FT/None G2/S2 1B.1	Annual herb. Chenopod scrub, marshes and swamps, playas, vernal pools. San Diego hardpan and San Diego claypan vernal pools; in swales and vernal pools, often surrounded by other habitat types. Elevations: 100-2150ft. (30-655m.) Blooms Apr-Jun.	Not Expected	Hardpan, vernal pools are not present within study area.
Navarretia setiloba Piute Mountains navarretia	None/None G2/S2 1B.1	Annual herb. Cismontane woodland, pinyon and juniper woodland, valley and foothill grassland. Red clay soils, or on gravelly loam. Elevations: 935-6890ft. (285-2100m.) Blooms Apr-Jul.	Not Expected	Limited annual grassland habitat is present in proximity to study area; moreover, the preferred soil selection is not present within study area.
Opuntia basilaris var. *brachyclada* short-joint beavertail	None/None G5T3/S3 1B.2	Perennial stem. Chaparral, Joshua tree woodland, mojavean desert scrub, pinyon and juniper woodland. Sandy soil or coarse, granitic loam. Elevations: 1395-5905ft. (425-1800m.) Blooms Apr-Jun(Aug).	Not Expected	Potentially suitable chaparral habitat occurs in the study area. However, this is a conspicuous perennial species that would have been identifiable during the field survey and was not observed.
Orcuttia californica California Orcutt grass	FE/SE G1/S1 1B.1	Annual herb. Vernal pools. Elevations: 50-2165ft. (15-660m.) Blooms Apr-Aug.	Not Expected	Vernal pools are not present within the study area.
Phacelia mohavensis Mojave phacelia	None/None G4Q/S4 4.3	Annual herb. Cismontane woodland, lower montane coniferous forest, meadows and seeps, pinyon and juniper woodland. Sandy or gravelly soils, dry streambeds. Elevations: 4595-8205ft. (1400-2500m.) Blooms Apr-Aug.	Not Expected	The study area is not within elevation range for the species.
Pseudognaphalium leucocephalum white rabbit-tobacco	None/None G4/S2 2B.2	Perennial herb. Chaparral, cismontane woodland, coastal scrub, riparian woodland. Sandy, gravelly sites. Elevations: 0-6890ft. (0-2100m.) Blooms (Jul)Aug-Nov(Dec).	Not Expected	Potentially suitable chaparral and scrub habitat occurs in the banks of the SCR in the study area to support this species. However, this is a conspicuous perennial species that would have been identifiable during the field survey and was not observed.

Scientific Name Common Name	Status	Habitat Requirements	Potential to Occur in Study Area	Habitat Suitability/Observations
Quercus durata var. *gabrielensis* San Gabriel oak	None/None G4T3/S3 4.2	Perennial evergreen shrub. Chaparral, cismontane woodland. Elevations: 1475-3280ft. (450-1000m.) Blooms Apr-May.	Not Expected	Potentially suitable chaparral and scrub habitat occurs in the study area to support this species. However, this is a conspicuous perennial species that would have been identifiable during the field survey and was not observed.
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).	Not Expected	Alkaline areas within coastal scrub habitat are not present within the study area.
Streptanthus campestris southern jewelflower	None/None G3/S3 1B.3	Perennial herb. Chaparral, lower montane coniferous forest, pinyon and juniper woodland. Open, rocky areas. Elevations: 2955-7545ft. (900-2300m.) Blooms (Apr)May-Jul.	Not Expected	The study area is not within elevation range for the species.
Symphyotrichum greatae Greata's aster	None/None G2/S2 1B.3	Perennial rhizomatous herb. Broadleafed upland forest, chaparral, cismontane woodland, lower montane coniferous forest, riparian woodland. Mesic canyons. Elevations: 985-6595ft. (300-2010m.) Blooms Jun-Oct.	Not Expected	No suitable mesic habitat occurs within the study area. This is a conspicuous perennial that would have been identified during the field survey.
Invertebrates				
Bombus crotchii Crotch's bumble bee	None/SCE G2/S2	Coastal California east to the Sierra-Cascade crest and south into Mexico. Food plant genera include Antirrhinum, Phacelia, Clarkia, Dendromecon, Eschscholzia, and Eriogonum.	Low Potential	While limited food plant genera exist within the study area, there are no CNDDB occurrences of this species in the last 25 years within three miles of the study area. All recent nearby occurrences occur within the foothills of the Santa Susana Mountains where coastal scrub habitat and floral resources for the species are more abundant.
Branchinecta lynchi vernal pool fairy shrimp	FT/None G3/S3	Endemic to the grasslands of the Central Valley, Central Coast mountains, and South Coast mountains, in astatic rain-filled pools. Inhabit small, clear-water sandstone-depression pools and grassed swale, earth slump, or basalt-flow depression pools.	Not Expected	Vernal pools are not present in study area.

Scientific Name Common Name	Status	Habitat Requirements	Potential to Occur in Study Area	Habitat Suitability/Observations
Danaus plexippus plexippus pop. 1 monarch - California overwintering population	FPT/None G4T1T2Q/S2	Winter roost sites extend along the coast from northern Mendocino to Baja California, Mexico. Roosts located in wind-protected tree groves (eucalyptus, Monterey pine, cypress), with nectar and water sources nearby.	Not Expected	Suitable eucalyptus trees are not present within study area.
Euphydryas editha quino quinto checkerspot butterfly	FE/None G4G5T1T2/S1S2	Sunny openings within chaparral and coastal sage shrublands in parts of Riverside and San Diego counties. Hills and mesas near the coast. Need high densities of food plants Plantago erecta, P. insularis, and Orthocarpus purpurescens.	Not Expected	The study area is outside of the known range for the species. In addition, suitable food plants are absent from study area.
Fish				
Catostomus santaanae Santa Ana sucker	FT/None G1/S1 SSC	Endemic to Los Angeles Basin south coastal streams. Habitat generalists, but prefer sand-rubble-boulder bottoms, cool, clear water, and algae.	Not Expected	No suitable habitat or flowing water are present within the study area. Surface water is not continuous for extended periods, even after storm events.
Gasterosteus aculeatus williamsoni unarmored threespine stickleback	FE/SE G5T1/S1 FP	Weedy pools, backwaters, and among emergent vegetation at the stream edge in small Southern California streams. Cool (<24 C), clear water with abundant vegetation.	Not Expected	No suitable habitat or flowing water is present within the study area. Surface water is not continuous for extended periods, even after storm events.
Gila orcuttii arroyo chub	None/None G1/S2 SSC	Native to streams from Malibu Creek to San Luis Rey River basin. Introduced into streams in Santa Clara, Ventura, Santa Ynez, Mojave and San Diego river basins. Slow water stream sections with mud or sand bottoms. Feeds heavily on aquatic vegetation and associated invertebrates.	Not Expected	No suitable habitat or flowing water is present within the study area. Surface water is not continuous for extended periods, even after storm events.
Rhinichthys gabrielino Santa Ana speckled dace	FPT/None G5T1/S1 SSC	Headwaters of the Santa Ana and San Gabriel rivers. May be extirpated from the Los Angeles River system. Requires permanent flowing streams with summer water temps of 17-20 C. Usually inhabits shallow cobble and gravel riffles.	Not Expected	This species is not associated with this riparian system.

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Amphibians				
Anaxyrus californicus arroyo toad	FE/None G2G3/S2 SSC	Semi-arid regions near washes or intermittent streams, including valley-foothill and desert riparian, desert wash, etc. Rivers with sandy banks, willows, cottonwoods, and sycamores; loose, gravelly areas of streams in drier parts of range.	Low Potential	Only one CNDDB record for this species exists within five miles of the study area and is located approximately four miles upstream (Occurrence No. 48). There is a low probability of the species migrating through the study area because the SCR lacks sufficient water flow in this stretch of the SCR to support arroyo toad breeding.
Rana draytonii California red-legged frog	FT/None G2G3/S2S3 SSC	Lowlands and foothills in or near permanent sources of deep water with dense, shrubby or emergent riparian vegetation. Requires 11-20 weeks of permanent water for larval development. Must have access to estivation habitat.	Not Expected	No extended permanent water is found within this region of the SCR or within the study area.
Rana muscosa southern mountain yellow-legged frog	FE/SE G1/S2 WL	Disjunct populations known from southern Sierras (northern DPS) and San Gabriel, San Bernardino, and San Jacinto Mtns (southern DPS). Found at 1,000 to 12,000 ft in lakes and creeks that stem from springs and snowmelt..	Not Expected	No known occurrences within the watershed. Moreover, there is a lack of suitable water flow, and the study area is not within the typical elevation range for the species.
Spea hammondii western spadefoot	FPT/None G2G3/S3S4 SSC	Occurs primarily in grassland habitats, but can be found in valley-foothill hardwood woodlands. Vernal pools are essential for breeding and egg-laying.	Not Expected	Vernal pools and valley-foothill woodlands are not present within the study area.
Taricha torosa Coast Range newt	None/None G4/S4 SSC	Coastal drainages from Mendocino County to San Diego County. Lives in terrestrial habitats and will migrate over 1 km to breed in ponds, reservoirs and slow moving streams.	Not Expected	There is an absence of permanent water within the study area. In addition, there are no known occurrences within the SCR watershed.
Reptiles				
Actinemys pallida southwestern pond turtle	FPT/None G2G3/SNR SSC	A thoroughly aquatic turtle of ponds, marshes, rivers, streams and irrigation ditches, usually with aquatic vegetation, below 6000 ft elevation. Needs basking sites and suitable (sandy banks or grassy open fields) upland habitat up to 0.5 km from water for egg-laying.	Not Expected	No suitable habitat is present for the species, no surface water is present, and water is only present for short durations after storm events.

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Anniella spp. California legless lizard	None/None G3G4/S3S4 SSC	Contra Costa County south to San Diego, within a variety of open habitats. This element represents California records of Anniella not yet assigned to new species within the Anniella pulchra complex. Variety of habitats; generally in moist, loose soil. They prefer soils with a high moisture content.	High Potential	This species is identified as a generalist species with a preference for loose soil with potentially high moisture content, which may be present in the study area after seasonal rains or infrequent storm events. In addition, there is a known occurrence approximately 0.14 mile north of the study area along the northern bank of the SCR (Occurrence No. 68).
Arizona elegans occidentalis California glossy snake	None/None G5T2/S2 SSC	Patchily distributed from the eastern portion of San Francisco Bay, southern San Joaquin Valley, and the Coast, Transverse, and Peninsular ranges, south to Baja California. Generalist reported from a range of scrub and grassland habitats, often with loose or sandy soils.	Low Potential	Suitable open habitat with sandy soils is present within the banks of the SCR in the study area. However, all three CNDDB records within five miles of the study area are more than 60 years old.
Aspidoscelis tigris stejnegeri coastal whiptail	None/None G5T5/S3 SSC	Found in deserts and semi-arid areas with sparse vegetation and open areas. Also found in woodland and riparian areas. Ground may be firm soil, sandy, or rocky.	High Potential	This species is identified as a generalist species, and there are semi-arid areas with limited vegetation present within SCR and areas surrounding the western portion of the study area. In addition, the closest CNDDB record is approximately 0.04 mile southeast of the western portion of the study area (Occurrence No. 117).
Phrynosoma blainvillii coast horned lizard	None/None G4/S4 SSC	Frequents a wide variety of habitats, most common in lowlands along sandy washes with scattered low bushes. Open areas for sunning, bushes for cover, patches of loose soil for burial, and abundant supply of ants and other insects.	High Potential	This species is identified as a generalist species, and there are semi-arid areas with scrub vegetation present within SCR and areas surrounding the western portion of the study area. The closest CNDDB record is approximately four miles east of the study area in the SCR (Occurrence No. 445).
Thamnophis hammondii two-striped gartersnake	None/None G4/S3S4 SSC	Coastal California from vicinity of Salinas to northwest Baja California. From sea to about 7,000 ft elevation. Highly aquatic, found in or near permanent fresh water. Often along streams with rocky beds and riparian growth.	Low Potential	Riparian habitat does occur but is seasonal in nature. Permanent sources of fresh water are not present within the study area.

Scientific Name Common Name	Status	Habitat Requirements	Potential to Occur in Study Area	Habitat Suitability/Observations
Thamnophis sirtalis pop. 1 south coast gartersnake	None/None G5T1T2/S1S2 SSC	Southern California coastal plain from Ventura County to San Diego County, and from sea level to about 850 m. Marsh and upland habitats near permanent water with good strips of riparian vegetation.	Not Expected	Riparian habitat is not present within the study area. Marsh habitats near permanent water are also not present within the study area.
Birds				
Accipiter cooperii Cooper's hawk	None/None G5/S4 WL	Woodland, chiefly of open, interrupted or marginal type. Nest sites mainly in riparian growths of deciduous trees, as in canyon bottoms on river flood-plains; also, live oaks.	Low Potential	Low-quality nesting habitat is present in the Fremont cottonwood forest and woodland vegetation community in the study area. This vegetation community consists of a relatively small patch of trees (less than 0.03 acre), which is subject to frequent disturbance in the understory (i.e., landscaping activities). Therefore, this species has a low potential to nest in the study area. In addition, the study area occurs in a dry segment of the SCR reach and occurs adjacent to existing development. Therefore, foraging habitat is considered low quality.
Agelaius tricolor tricolored blackbird	None/ST G1G2/S2 SSC	Highly colonial species, most numerous in Central Valley and vicinity. Largely endemic to California. Requires open water, protected nesting substrate, and foraging area with insect prey within a few km of the colony.	Not Expected	No open water or protected nesting substrate are present within the study area for nesting. Foraging habitat within proximity of open water also is not present for the species.
Aimophila ruficeps canescens southern California rufous-crowned sparrow	None/None G5T3/S4 WL	Resident in Southern California coastal sage scrub and sparse mixed chaparral. Frequents relatively steep, often rocky hillsides with grass and forb patches.	Low Potential	Some suitable habitat is present (sage scrub, sparse mixed chaparral); however, there is an absence of rocky hillsides with grass and forbs.
Ammodramus savannarum grasshopper sparrow	None/None G5/S3 SSC	Dense grasslands on rolling hills, lowland plains, in valleys and on hillsides on lower mountain slopes. Favors native grasslands with a mix of grasses, forbs and scattered shrubs. Loosely colonial when nesting.	Not Expected	Native grasslands are absent from the study area, and the study area lacks rolling hills and lower mountain foothills within the study area.

Scientific Name Common Name	Status	Habitat Requirements	Potential to Occur in Study Area	Habitat Suitability/Observations
Artemisiospiza belli belli Bell's sparrow	None/None G5T2T3/S3 WL	Nests in chaparral dominated by fairly dense stands of chamise. Found in coastal sage scrub in south of range. Nest located on the ground beneath a shrub or in a shrub 6-18 inches above ground. Territories about 50 yds apart.	Not Expected	Dense chamise chaparral habitat is not present within the study area.
Athene cunicularia burrowing owl	None/SCE G4/S2 SSC	Open, dry annual or perennial grasslands, deserts, and scrublands characterized by low-growing vegetation. Subterranean nester, dependent upon burrowing mammals, most notably, the California ground squirrel.	Not Expected	There is limited suitable habitat present for the species, and dry desert and soil communities are absent. Burrowing mammal communities were not identified within the field survey.
Buteo swainsoni Swainson's hawk	None/ST G5/S4	Breeds in grasslands with scattered trees, juniper-sage flats, riparian areas, savannahs, and agricultural or ranch lands with groves or lines of trees. Requires adjacent suitable foraging areas such as grasslands, or alfalfa or grain fields supporting rodent populations.	Not Expected	There is limited suitable habitat present for nesting within the study area. In addition, there is an absence of suitable habitat such as riparian areas, savannahs, or agricultural lands within the study area for foraging.
Coccyzus americanus occidentalis western yellow-billed cuckoo	FT/SE G5T2T3/S1	Riparian forest nester, along the broad, lower flood-bottoms of larger river systems. Nests in riparian jungles of willow, often mixed with cottonwoods, with lower story of blackberry, and nettles.	Not Expected	There are no riparian forests present within the study area, and this species highly unlikely to utilize the small fragmented grouping of Fremont cottonwood located within the study area. There are no CNDDB occurrences within five miles of the study area, and the study area is not located within USFWS-designated critical habitat for the species.
Empidonax traillii extimus southwestern willow flycatcher	FE/SE G5T2/S3	Riparian woodlands in Southern California.	Not Expected	Riparian woodlands are absent from the study area. The species is highly unlikely to utilize the small, fragmented grouping of Fremont cottonwood located within the study area. There are no CNDDB occurrences within five miles of the study area. The study area is not located within USFWS-designated critical habitat. The closest designated critical habitat is more than eight miles downstream (west) of the study area.

Scientific Name Common Name	Status	Habitat Requirements	Potential to Occur in Study Area	Habitat Suitability/Observations
Eremophila alpestris actia California horned lark	None/None G5T4Q/S4 WL	Coastal regions, chiefly from Sonoma County to San Diego County. Also main part of San Joaquin Valley and east to foothills. Short-grass prairie, "bald" hills, mountain meadows, open coastal plains, fallow grain fields, alkali flats.	Low Potential	Short-grass prairies, bald hills, and mountain meadows are absent from the study area. It is highly unlikely for the species to utilize the study area for nesting.
Falco mexicanus prairie falcon	None/None G5/S4 WL	Inhabits dry, open terrain, either level or hilly. Breeding sites located on cliffs. Forages far afield, even to marshlands and ocean shores.	Low Potential	Suitable breeding habitat (i.e., cliffsides) is absent from the study area. Some open habitat is present but relatively disturbed. Foraging habitat within the study area is low quality. Only one historic CNDDB record from 1980 occurs approximately 2.8 miles east of the study area.
Lanius ludovicianus loggerhead shrike	None/None G4/S4 SSC	Broken woodlands, savannah, pinyon-juniper, Joshua tree, and riparian woodlands, desert oases, scrub and washes. Prefers open country for hunting, with perches for scanning, and fairly dense shrubs and brush for nesting.	Low Potential	One CNDDB occurrence almost five miles northwest of the study area. There is a lack of open country, riparian woodlands, and desert scrubland within the study area.
Polioptila californica californica coastal California gnatcatcher	FT/None G4G5T3Q/S2 SSC	Obligate, permanent resident of coastal sage scrub below 2500 ft in Southern California. Low, coastal sage scrub in arid washes, on mesas and slopes. Not all areas classified as coastal sage scrub are occupied.	Low Potential	Marginally suitable sage scrub habitat exists along the fringes of the northern study area. The sage scrub habitat within the study area includes sparsely scattered shrubs (e.g., California sagebrush, California buckwheat). One CNDDB record overlaps the study area (Occurrence No. 998) but is more than 80 years old and is a non-specific occurrence that overlaps Mint Canyon and Forest Park. The closest recent CNDDB record (Occurrence No. 845) is approximately 2.5 miles southwest. The study area is not located within USFWS-designated critical habitat for the species.

Scientific Name Common Name	Status	Habitat Requirements	Potential to Occur in Study Area	Habitat Suitability/Observations
Vireo bellii pusillus least Bell's vireo	FE/SE G5T2/S3	Summer resident of Southern California in low riparian in vicinity of water or in dry river bottoms; below 2000 ft. Nests placed along margins of bushes or on twigs projecting into pathways, usually willow, Baccharis, mesquite.	Low Potential	Some suitable habitat occurs north of the study area within the flowing regions of the SCR where riparian vegetation has grown rapidly. There are no CNDDB occurrences within five miles of the study area, and the study area is not located within USWFS-designated critical habitat for the species.
Mammals				
Antrozous pallidus pallid bat	None/None G4/S3 SSC	Found in a variety of habitats including deserts, grasslands, shrublands, woodlands, and forests. Most common in open, dry habitats with rocky areas for roosting. Roosts in crevices of rock outcrops, caves, mine tunnels, buildings, bridges, and hollows of live and dead trees which must protect bats from high temperatures. Very sensitive to disturbance of roosting sites.	Low Potential	There is a high degree of human disturbance along the boundaries of the study area. The species is unlikely to utilize the frequently disturbed buildings present adjacent to the study area. If present, the species would likely only utilize the area for foraging
Corynorhinus townsendii Townsend's big-eared bat	None/None G4/S2 SSC	Occurs throughout California in a wide variety of habitats. Most common in mesic sites, typically coniferous or deciduous forests. Roosts in the open, hanging from walls & ceilings in caves, lava tubes, bridges, and buildings. This species is extremely sensitive to human disturbance.	Low Potential	There is a high degree of human disturbance and development along the boundaries of the study area. The species is unlikely to utilize the frequently disturbed buildings present adjacent to the study area. If present, the species would likely only utilize the area for foraging.
Euderma maculatum spotted bat	None/None G4/S3 SSC	Occupies a wide variety of habitats from arid deserts and grasslands through mixed conifer forests. Typically forages in open terrain; over water and along washes. Feeds almost entirely on moths. Roosts in rock crevices in cliffs or caves. Occasionally roosts in buildings.	Low Potential	Identified as a generalist species, it would likely utilize the area for foraging exclusively if present. Suitable roosting habitat is not present within the study area.

Scientific Name Common Name	Status	Habitat Requirements	Potential to Occur in Study Area	Habitat Suitability/Observations
Eumops perotis californicus western mastiff bat	None/None G4G5T4/S3S4 SSC	Occurs in open, semi-arid to arid habitats, including coniferous and deciduous woodlands, coastal scrub, grasslands, and chaparral. Roosts in crevices in cliff faces and caves, and buildings. Roosts typically occur high above ground.	Low Potential	Suitable roosting habitat (rock crevices in cliffs and caves) is absent from the study area. While existing structures are present in the study area, they are frequently disturbed/occupied by humans and do not provide suitable roosting habitat. Use of the study area by this species would be for foraging only.
Macrotus californicus California leaf-nosed bat	None/None G3G4/S3 SSC	Occurs in desert riparian, desert wash, desert scrub, desert succulent scrub, alkali scrub and palm oasis habitats. Needs rocky, rugged terrain with abandoned mines or caves for roosting.	Not Expected	Preferred desert habitat is not present within the study area for the species to occur.
Neotoma lepida intermedia San Diego desert woodrat	None/None G5T3T4/S3S4 SSC	Occurs in scrub habitats of southern California from San Luis Obispo County to San Diego County.	Not Expected	Some open scrub habitat is present on the upper terrace of SCR. There are no known occurrences within five miles of the study area.
Onychomys torridus ramona southern grasshopper mouse	None/None G5T3/S3 SSC	Desert areas, especially scrub habitats with friable soils for digging. Prefers low to moderate shrub cover. Feeds almost exclusively on arthropods, especially scorpions and orthopteran insects.	Not Expected	Desert habitat is not present within the study area.
Taxidea taxus American badger	None/None G5/S3 SSC	Most abundant in drier open stages of most shrub, forest, and herbaceous habitats, with friable soils. Needs sufficient food, friable soils and open, uncultivated ground. Preys on burrowing rodents. Digs burrows.	Low Potential	Suitable habitat exists within the study area given that this is a generalist species with sufficiently large range. However, there are no known occurrences of the species within five miles of the study area.

Attachment 5

Wetland Sample Point Form

WETLAND DETERMINATION DATA FORM – Arid West Region

Project/Site: Lost Canyon/Sand Canyon Wells City/County: Santa Clarita Sampling Date: January 28, 2025
Applicant/Owner: SCV Water State: CA Sampling Point: SP01
Investigators(s): Kyle Gern, Austin LeVesque Section, Township, Range: S23, T04N, R15W
Landform (hillslope, terrace, etc): Alluvial Plain Local relief (concave, convex, none): None Slope (%): 2
Subregion (LRR): C- Mediterranean California Lat/Long: , 34.420540, -118.426982 Datum: WGS84
Soil Map Unit Name: Cortina sandy loam, 2 to 9 percent slopes NWI classification: None

Are climatic / hydrologic conditions on the site typical for this time of year? Yes ☑ No ☐ (If no, explain in Remarks)

Are Vegetation ☐ , Soil ☐ , or Hydrology ☐ significantly disturbed? Are "Normal Circumstances" present? Yes ☑ No ☐

Are Vegetation ☐ , Soil ☐ , or Hydrology ☐ naturally problematic? (If needed, explain any answers in Remarks.)

SUMMARY OF FINDINGS – Attach site map showing sampling point locations, transects, important features, etc.

Hydrophytic Vegetation Present? Yes ☑ No ☐ Hydric Soil Present? Yes ☐ No ☑ Wetland Hydrology Present? Yes ☐ No ☑	**Is the Sampled Area within a Wetland? Yes ☐ No ☑**
Remarks:	

VEGETATION – Use scientific names of plants.

	Absolute % Cover	Dominant Species?	Indicator Status
Tree Stratum (Plot size:)			
Schinus molle	15	Yes	FACU
	15% = Total Cover		
Sapling/Shrub Stratum (Plot size:)			
Salix lasiolepis	1	No	FACW
Baccharis salicifolia	45	Yes	FAC
Artemisia tridentata	1	No	No Indicator
	47% = Total Cover		
Herb Stratum (Plot size:)			
Typha latifolia	10	Yes	OBL
Artemisia dracunculus	10	Yes	FACU
Juncus bufonius	5	Yes	FACW
	25% = Total Cover		
Woody Vine Stratum (Plot size: 5 feet)			
	0% = Total Cover		

% Bare Ground in Herb Stratum: 30 % Cover of Biotic Crust: 0

Dominance Test worksheet:

Number of Dominant Species That Are OBL, FACW, or FAC: 3 (A)

Total Number of Dominant Species Across All Strata: 5 (B)

Percent of Dominant Species That Are OBL, FACW, or FAC: 60% (A/B)

Prevalence Index worksheet:

Total % Cover of:		Multiply by:	
OBL species	10	x 1 =	10
FACW species	6	x 2 =	12
FAC species	45	x 3 =	135
FACU species	25	x 4 =	100
UPL species	0	x 5 =	0
Column Totals:	86 (A)		257 (B)

Prevalence Index = B/A = 2.99

Hydrophytic Vegetation Indicators:

☑ Dominance Test is >50%

☐ Prevalence Index is ≤3.0[1]

☐ Morphological Adaptations[1] (Provide supporting data in Remarks or on a separate sheet)

☐ Problematic Hydrophytic Vegetation[1] (Explain)

[1]Indicators of hydric soil and wetland hydrology must be present, unless disturbed or problematic.

Hydrophytic Vegetation Present? Yes ☑ No ☐

Remarks: Within mulefat thickets vegetation community

WETLAND DETERMINATION DATA FORM – Arid West Region

SOIL

Sampling Point: SP01

Profile Description: (Describe to the depth needed to document the indicator or confirm the absence of indicators.)

Depth (inches)	Matrix Color (moist)	Matrix %	Redox Features Color (moist)	Redox Features %	Type[1]	Loc[2]	Texture	Remarks
0-5	2.5Y 3/2	100	N/A	N/A	N/A	N/A	Clay loam	
5-10	10YR 4/4	100	N/A	N/A	N/A	N/A	Sandy clay loam	
10-20	10YR 5/3	100	N/A	N/A	N/A	N/A	Sand	

[1]Type: C = Concentration, D – Depletion, RM = Reduced Matrix, CS = Covered or Coated Sand Grains. [2]Location: PL = Pore Lining, M = Matrix

Hydric Soil Indicators: (Applicable to all LRRs, unless otherwise noted.)

- ☐ Histosol (A1)
- ☐ Histic Epipedon (A2)
- ☐ Black Histic (A3)
- ☐ Hydrogen Sulfide (A4)
- ☐ Stratified Layers (A5) (LRR C)
- ☐ 1 cm Muck (A9) (LRR D)
- ☐ Depleted Below Dark Surface (A11)
- ☐ Thick Dark Surface (A12)
- ☐ Sandy Mucky Mineral (S1)
- ☐ Sandy Gleyed Matrix (S4)
- ☐ Sandy Redox (S5)
- ☐ Stripped Matrix (S6)
- ☐ Loamy Mucky Mineral (F1)
- ☐ Loamy Gleyed Matrix (F2)
- ☐ Depleted Matrix (F3)
- ☐ Redox Dark Surface (F6)
- ☐ Depleted Dark Surface (F7)
- ☐ Redox Depressions (F8)
- ☐ Vernal Pools (F9)

Indicators for Problematic Hydric Soils[3]:

- ☐ 1 cm Muck (A9) (LRR C)
- ☐ 2 cm Muck (A10) (LRR B)
- ☐ Reduced Vertic (F18)
- ☐ Red Parent Material (TF2)
- ☐ Other (Explain in Remarks)

Restrictive Layer (if present):

Type: N/A

Depth (inches):

Hydric Soil Present? Yes ☐ No ☑

Remarks: No evidence of hydric soils

HYDROLOGY

Wetland Hydrology Indicators:

Primary Indicators (minimum of one required; check all that apply)

- ☐ Surface Water (A1)
- ☐ High Water Table (A2)
- ☐ Saturation (A3)
- ☐ Water Marks (B1) (**Nonriverine**)
- ☐ Sediment Deposits (B2) (**Nonriverine**)
- ☐ Drift Deposits (B3) (**Nonriverine**)
- ☐ Surface Soil Cracks (B6)
- ☐ Inundation Visible on Aerial Imagery (B7)
- ☐ Water-Stained Leaves (B9)
- ☐ Salt Crust (B11)
- ☐ Biotic Crust (B12)
- ☐ Aquatic Invertebrates (B13)
- ☐ Hydrogen Sulfide Odor (C1)
- ☐ Oxidized Rhizospheres along Living Roots (C3)
- ☐ Presence of Reduced Iron (C4)
- ☐ Recent Iron Reduction in Tilled Soils (C6)
- ☐ Thin Muck Surface (C7)
- ☐ Other (Explain in Remarks)

Indicators for Problematic Hydric Soils

- ☐ Water Marks (B1) (**Riverine**)
- ☐ Sediment Deposits (B2) (**Riverine**)
- ☐ Drift Deposits (B3) (**Riverine**)
- ☑ Drainage Patterns (B10)
- ☐ Dry-Season Water Table (C2)
- ☐ Crayfish Burrows (C8)
- ☐ Saturation Visible on Aerial Imagery (C9)
- ☐ Shallow Aquitard (D3)
- ☐ FAC-Neutral Test (D5)

Field Observations:

Surface Water Present? Yes ☐ No ☑ Depth (inches):

Water Table Present? Yes ☐ No ☑ Depth (inches):

Saturation Present? (includes capillary fringe) Yes ☐ No ☑ Depth (inches):

Wetland Hydrology Present? Yes ☐ No ☑

Describe Recorded Data (stream gauge, monitoring well, aerial photos, previous inspections), if available:

Remarks: No evidence of wetland hydrology

Appendix C

Cultural Resources Assessment

Rincon Consultants, Inc.
250 East 1st Street, Suite 1400
Los Angeles, California 90012
213-788-4842

February 28, 2025
Project No: 24-16743

Mark Aumentado, PE, Engineer
Santa Clarita Valley Water Agency
26515 Summit Circle
Santa Clarita, California 91350
Via email: maumentado@scvwa.org

Subject: Cultural Resources Assessment for the Lost Canyon 2A and Sand Canyon Groundwater Treatment Improvements Project, Santa Clarita, Los Angeles County, California

Dear Mr. Aumentado:

Santa Clarita Valley Water Agency (SCV Water) retained Rincon Consultants, Inc. (Rincon) to prepare a cultural resources assessment in support of the Lost Canyon 2A and Sand Canyon Groundwater Treatment Improvements Project (project) in Santa Clarita, Los Angeles County, California. This letter report documents the results of the assessment and tasks conducted by Rincon, including a California Historical Resources Information System (CHRIS) records search, a Native American Heritage Commission (NAHC) Sacred Lands File (SLF) search, archival and background research including a desktop geoarchaeological review, and a pedestrian field survey. This study has been completed pursuant to the requirements of the California Environmental Quality Act (CEQA). SCV Water is the lead agency for the purposes of CEQA.

Project Location

The project site is in the city of Santa Clarita in northern Los Angeles County, within Sections 22, and 23 of Township 4 North, Range 15 West on the *Mint Canyon, CA* 7.5-minute topographic quadrangle (Attachment 1: Figure 1). More specifically, the project site is located within:

- **Assessor's Parcel Number (APN) 2840-006-901:** This property is an approximately 10.0-acre parcel owned by SCV Water. Within this property are the existing Lost Canyon 2, Lost Canyon 2A, and Sand Canyon wells. The Santa Clara River also runs through the northern portion of this property. Approximately 1.5 acres of the project site is within the southern portion of this property. This property is approximately 250 feet west of the intersection of Sand Canyon Road and Lost Canyon Road and immediately north of Lost Canyon Road (Attachment 1: Figure 2a).
- **APN 2840-002-901:** This property is an approximately 1.1-acre parcel owned by SCV Water. Within this property is the existing Mitchell 5B well. Approximately 0.02 acre of the project site is within the southeastern portion of this property. This property is approximately 210 feet west of the northern terminus of Sawtooth Lane within the Vista Canyon Specific Plan development (Attachment 1: Figure 2b).
- **Public Right-of-Way of Lost Canyon Road:** The project site includes approximately 1,700 linear feet of the public right-of-way of Lost Canyon Road between La Veda Drive and a point approximately 390 feet northeast of the intersection of Humphreys Parkway and Lincoln Place. The portion of the project site within the public right-of-way of Lost Canyon Road totals approximately 1.2 acres (Attachment 1: Figure 2a).

Project Description

The project involves the construction of a groundwater treatment facility and associated pipelines to treat per- and polyfluorinated alkyl substances (PFAS) to levels below the federal Maximum Contaminant Level, restore the use of the Lost Canyon 2A and Sand Canyon wells, and reduce SCV Water's dependency on imported water. The following sections describe the project components:

Existing Well Decommissioning

The project involves decommissioning the Mitchell 5B and Lost Canyon 2 wells. All equipment would be removed from each well site using a drill rig or crane and stored for future use at SCV Water's existing yards, and the wells would be sealed with a lockable well cover for potential future use.[1] In addition, the electrical service to the Mitchell 5B well would be disconnected and removed.

Centralized Groundwater Treatment Facility

The proposed project includes construction of a centralized groundwater treatment facility at the location of the existing Lost Canyon 2A well at APN 2840-006-901. The facility would include two cartridge filters, one set of ion-exchange vessels (or equivalent technology), yard piping, and a building to house chemical feed and storage, controls, and electrical equipment. Each of the cartridge filters (including aboveground piping) would be approximately seven feet in height. The ion-exchange vessels (including appurtenances) would be approximately 14 feet in height. The facility would also have space for future installation of additional cartridge filters and ion-exchange vessels to provide treatment for other sources, such as the Lost Canyon 2 well (if brought back online in the future); however, those future components are not part of the proposed project.

The proposed project also involves installation of several chemical feed systems that would include water softeners, a brine tank, a skid-mounted electrolytic cell, a sodium hypochlorite storage tank, skid-mounted metering pumps, a liquid ammonium sulfate bulk storage tank, a sodium bisulfite bulk storage tank, and an approximately 65-foot groundwater discharge pipeline between the facility and the Santa Clara River. The proposed cartridge filters and ion-exchange vessels would be installed outside within the treatment facility. The chemical feed systems would be installed within a concrete masonry unit treatment building with steel roof trusses, a metal roof, and a 12-foot rollup door. All elements of the treatment facility would be enclosed within a concrete masonry unit wall with gates for vehicle and pedestrian access. New lighting would be installed around the treatment facility building and site ingress/egress, and the facility would also include a new supervisory control and data acquisition system. The treatment facility would result in the addition of approximately 5,000 square feet of impervious surfaces to the project site.

Electrical Upgrades

To accommodate increased load demand for the new well pumps and PFAS treatment equipment, existing pole-mounted transformers would be replaced with a pad-mounted transformer located adjacent to the treatment facility. In addition, new underground conduits and wires would be routed to the existing Lost Canyon 2A and Sand Canyon well pump sites.

[1] The potential future use of the Mitchell 5B and Lost Canyon 2 wells is not part of the proposed project.

Existing Well Improvements

The project involves upgrades to the Sand Canyon and Lost Canyon 2A wells to enhance their functionality and efficiency. For both wells, a new well pump and variable frequency drive as well as an additional well sounding tube would be installed. In addition, the existing chemical feed equipment would be removed, a new sunshade would be installed at each well site, and each well's pump pedestal would be modified and elevated. A new concrete masonry unit wall would be constructed around the Sand Canyon well, and an approximately 40-foot-long groundwater discharge pipeline would be installed between the Sand Canyon well and the Santa Clara River. The Lost Canyon 2A well would be enclosed within the groundwater treatment facility.

Pipelines

The proposed project includes replacement of approximately 1,700 linear feet of 14-inch pipeline within Lost Canyon Road with a new 14-inch pipeline. The proposed groundwater treatment facility would connect to this replacement pipeline, and the existing pipeline would be abandoned in place. In addition, several portions of the existing pipelines that currently connect the Lost Canyon 2A and Sand Canyon wells to the distribution system would be abandoned in place. A new pipeline would be installed between the Sand Canyon well and the proposed groundwater treatment facility to convey groundwater from the well to the facility.

Construction

Construction of the proposed project would occur between May 2026 and May 2028. Approximately 20 cubic yards of soil would be imported to the project site, and approximately 60 cubic yards of soil would be exported from the project site. The maximum depth of excavation for construction for the proposed project would be 12 feet below ground surface.

Methods

This section presents the methods for each task completed during the preparation of this assessment.

Background Research

California Historical Resources Information System Records Search

On January 14, 2025, Rincon staff conducted a CHRIS records search at the South Central Coastal Information Center (SCCIC) located at California State University, Fullerton. The SCCIC is the official state repository for cultural resources records and reports for Los Angeles County, where the project site is located. The records search included a review of all previously conducted cultural resources studies and previously recorded cultural resources within the project site and a 0.5-mile radius. Rincon also reviewed the National Register of Historic Places, the California Register of Historical Resources (CRHR), and the California Historical Landmarks list, and the Built Environment Resources Directory as well as its predecessor the California State Historic Property Data File. In addition, Rincon reviewed the Archaeological Determination of Eligibility list.

Sacred Lands File Search and Native American Outreach

Rincon contacted the NAHC on December 17, 2024, to request a search of the SLF and a contact list of Native Americans culturally affiliated with the project site. SCV Water is responsible for conducting AB 52 consultation for the project.

Geoarchaeological Review

A geoarchaeological review was conducted to assess the potential for subsurface archaeological resources to be present within the project site. Sources reviewed as part of this assessment include historical topographic maps, historical aerial photographs, geologic maps, and soil survey maps. The intent of the review was to provide a development history of the project site and its vicinity as well as to assess the likelihood for the project site to contain subsurface archaeological deposits.

Field Survey

Rincon Archaeologist Andrea Ogaz, M.A., Registered Professional Archaeologist, conducted a pedestrian survey of the project site on January 28, 2025. The survey was conducted using transect intervals spaced 5 to 10 meters (approximately 16 to 33 feet) apart and oriented generally from east to west, where safe and feasible. Exposed ground surfaces were examined for artifacts (e.g., flaked stone tools, tool-making debris, stone milling tools), ecofacts (marine shell and bone), soil discoloration that might indicate the presence of a cultural midden, historical debris (e.g., metal, glass, ceramics), and features indicative of the former presence of structures or buildings (e.g., standing exterior walls, foundations). Survey accuracy was maintained using a handheld Global Positioning Satellite unit and a georeferenced map of the project site. Project site characteristics and survey conditions were documented using field records and a digital camera. Copies of the survey notes and digital photographs are maintained at Rincon's Los Angeles office.

Findings

This section presents the findings of each task completed during the preparation of this assessment.

California Historical Resources Information System Records Search

Previous Cultural Resources Studies

The CHRIS records search results indicate 20 cultural resources studies have been previously conducted within the 0.5-mile records search radius. Of the 20 studies, three partially overlap the project site or include areas within the project site (LA-03840, LA-6942, and LA-10560). The three studies are summarized below. The full list of previous cultural resources studies is provided in Attachment 2.

LA 03840

Study LA-03840 is a Phase I Archeological Study prepared by Robert Wlodarski in 1996 in support of the Santa Clarita Water Company application 29898 for 13 existing well site locations (Wlodarski 1996). The study summarizes the methods and results of a records search, a historical map review, and a reconnaissance field survey of 13 well sites including the Mitchell 5B well, Lost Canyon well, Lost Canyon 2A well sites within the current project footprint. No cultural resources were identified within the current project site as a result of this study.

LA-06942

Study LA-06942 is a Historic Property Survey Report and Archaeological Survey Report prepared by Mckenna and Brunzell in 2003 in support of the Lost Canyon pedestrian bridge and sidewalk development located within the eastern portion of the current project site (Mckenna 2003). The study summarizes the methods and results of a records search, field survey, and Native American consultation. Approximately 40 percent of the eastern portion of the current project site was surveyed for this study. No cultural resources were identified within the current project site, and the Historic Property Survey Report was completed with negative results.

LA-10560

Study LA-10560 is a cultural resource study prepared in 2005 by SWCA Environmental Consultants (SWCA) as part of a Programmatic Environmental Impact Report prepared for an arundo and tamarisk removal plan covering 2,405 acres along the Santa Clara River watershed (Hunt and Schultz 2005). The study included a records search through the SCCIC, an SLF search through the NAHC, and Native American consultation. The study did not include a field survey. SWCA's study identified six previously recorded cultural resources within or adjacent to their study area. The resources include three prehistoric sites and three historic-period resources, two of which are associated with the Los Angeles Aqueduct and one of which is a segment of the South Pacific Railroad. None of the cultural resources identified as part of SWCA's study are located within or immediately adjacent to the project site. The study overlaps the central portion of the current project site.

Known Cultural Resources

The records search results indicate four cultural resources have been previously recorded within the 0.5-mile records search radius including: one prehistoric archaeological resource (P-19-001077); one multicomponent resource (P-19-004355); and two historic-period archaeological resources (P-19-004356 and P-19-004605). No cultural resources were identified within or immediately adjacent to the project site. Resources within the 0.5-mile buffer are described in further detail in Table 1.

Table 1 Previously Recorded Cultural Resources

Primary No. (P-19-)	Permanent Trinomial (CA-LAN-)	Description	Dates Recorded	NRHP/CRHR Eligibility	Relationship to Project Site
001077	1077	Prehistoric archaeological site: midden soils with associated lithic and groundstone artifacts	1980, 2023	Recommended NRHP and CRHR eligible	Outside
004355	4355/H	Multicomponent resource: prehistoric archaeological site comprised of lithic and groundstone artifacts; historic-period cemetery	2008, 2013, 2015, 2023	Recommended NRHP and CRHR eligible	Outside
004356	4356H	Historic-period archaeological site: refuse scatter and structural remnants	2008, 2015	Not evaluated	Outside
004605	4605H	Historic-period archaeological site: structural remnants	2011	Not evaluated	Outside

NRHP = National Register of Historic Places; CRHR = California Register of Historical Resources
Source: SCCIC 2025

Sacred Lands File Search

On January 8, 2025, the NAHC responded to Rincon's SLF request, stating the results of the SLF search were negative, meaning no sacred lands have been reported in the vicinity of the project site. See Attachment 3 for the NAHC response letter. SCV Water is responsible for conducting Assembly Bill 52 consultation for the project.

Geoarchaeological Review

Historical Topographic Map and Aerial Imagery Review

Historical topographic maps reviewed include the 1900 *Fernando, CA* 15-minute topographic quadrangle, the 1932 *Humphreys* 7.5-minute topographic quadrangle, the 1940 and 1945 *San Fernando* 15-minute quadrangles, and the 1960 and 1995 *Mint Canyon* 7.5-minute quadrangles (United States Geological Survey 2025). Historical aerial photographs of the project site were available for years 1947, 1952, 1959, 1969, 1974, 1978, 1985, 1986, 1996, 1999, 2002, 2005, 2016, 2018, 2020, and 2022 (NETROnline 2025).

The 1900 topographic map shows the project site located along the Santa Clara River's southern margin. No development is depicted within the project site, but an east-west oriented road analogous to present-day Lost Canyon Road is depicted south of the project site on the south side of the Santa Clara River. The 1940 and 1945 maps show a north-south oriented road analogous to present-day Sand Canyon Road adjacent to the eastern portion of the project site. The 1960 map shows Sulphur Springs Elementary School south of the eastern portion of the project site, south of Lost Canyon Road. The 1995 map shows State Route 14 directly north of the project site, and a structure present within the eastern portion of the project site.

The 1947, 1952, and 1959 aerial photographs depict present-day Lost Canyon Road and present-day Sand Canyon Road adjacent to the project site, with agricultural fields and a structure visible immediately south of the eastern portion of the project site. The 1959 aerial photograph also depicts a road where present day State Route 14 exists. A 1969 aerial photograph depicts an unpaved road adjacent to the western portion of the project site. Aerial photography from 1974 depicts the agricultural field and structure south of the eastern portion of the project site as no longer extant with Sulfur Springs School present. The 1980s aerial photographs depict no change in conditions. By 1992, aerial photographs show the present Mitchell 5B, Sand Canyon, and Lost Canyon 2 and 2A wells within the project site. Aerial photographs from 1985, 1986, 1996, 1999, 2002, and 2005 show increased development surrounding the project site, including State Route 14 north of the project site, a mobile home park northeast of the project site, and residences south of the project site. An aerial photograph from 2005 depicts several unpaved roads adjacent to and intersecting with the eastern portion of the project site. Aerial photographs from 2016, 2018, and 2020 depict development south of the western portion of the project site and an unpaved road is present west of the western portion of the project site. Aerial photography from 2022 depicts the aboveground equipment for the Mitchell 5B well within the western portion of the project site, and the Sand Canyon and Lost Canyon 2 and 2A wells are within the eastern portion of the project site. The area between the wells is vacant with the southern edge of the project site along Lost Canyon Road used as an unpaved parking area.

Geologic and Soils Map Review

Geologic mapping indicates two geologic units are mapped at surface in the project site including: Pleistocene-age (2.58 million to 11,700 years ago) older surficial sediments (map unit Qoa) in the eastern portion of the project site and gravel and Holocene-age (11,650 years ago to present) sand of

major stream channels (map unit Qg) in the western portion of the project site (Dibblee and Ehrenspeck 1996). The Pleistocene-age sediments in the eastern portion of the project site were deposited in an era that largely pre-dates human occupation of the region and are generally not conducive to the natural burial and preservation of archaeological deposits (Waters 1992). The Holocene-age alluvium in the western portion of the project site was deposited during a period that entirely encompasses human occupation of the region and is conducive to the natural burial and preservation of archaeological deposits.

The Natural Resources Conservation Service Web Soil Survey (United States Department of Agriculture [USDA] 2025) mapped two soil series within the project site, Cortina sandy loam and Sandy Alluvial Land. Cortina Series soils form on alluvial fans and floodplains and have a typical soil profile consisting of topsoil disturbed by agricultural activities (Ap-horizon) from depths of 0 to 8 inches below ground surface followed by sedimentary parent material (C-horizon) from depths of 8 to 60 inches below ground surface (USDA 1997). The Sandy Alluvial Land deposits are comprised of sands and gravels deposited along the margins of drainages and have a typical profile consisting of sand from the ground surface to a depth of 6 inches, followed by stratified coarse sand to sandy loam from 6 to 60 inches below the ground surface (USDA 2022). Neither soil mapped within the project site contains buried topsoil (Ab horizon), which would elevate the potential for the presence of subsurface archaeological deposits.

Summary

The geoarchaeological review indicates the project site has been subject to previous disturbances associated with road development and the construction of the existing Mitchell 5B well, Lost Canyon 2 and 2A wells, Sand Canyon well, pipelines, and equipment within the project site. The CHRIS records search, the NAHC SLF search, background research and field survey did not identify any known archaeological resources within or immediately adjacent to the project site. The geoarchaeological research indicates Holocene-age valley alluvial gravel underlays the western portion of the project site within the project limits for the Mitchell 5B well. Holocene-age sediments have the potential to for natural burial and preservation of archaeological deposits; however, no new construction is planned for this portion of the project site. Given the degree of previous disturbances in these areas, it is unlikely that intact subsurface archaeological resources are present within the eastern portion of the project site.

Survey Results

Ground visibility ranged greatly throughout the project site with approximately 30 percent exposure. Within the eastern portion of the project site, visibility ranged from poor (0 to 25 percent) to very good (76 to 90 percent) (Attachment 1: Photograph 1 and Photograph 2). Parts of the eastern portion of the project site were paved, graded, and/or contained imported gravels and are used as active access routes. Visible soils within the eastern portion of the project site consist of light tan, coarse-grained sand with volcanic sub-angular and sub-rounded pebbles and rocks. Disturbances observed within the project site include periodic vegetation removal and clearing of modern refuse. Push piles (i.e., piles of soil, gravel, and modern refuse) were present within the eastern portion of the project site (Attachment 1: Photograph 3). Vegetation present within the project site consisted of grasses and shrubs, including buckwheat, sagebrush, and wildflowers (Attachment 1: Photograph 1 and Photograph 3). Modern refuse was visible throughout the eastern portion of the project site.

The western portion of the project site contained very good visibility (76 to 90 percent) with approximately 90 percent exposure (Attachment 1: Photograph 4). The western portion of the project

site is located within the Santa Clara River floodplain; the area has been graded and is located adjacent to active construction. Soil consisted of light tan, coarse-grained sand with sub-angular volcanic and granitic rocks and pebbles. Vegetation consisted of native grasses and shrubs including buckwheat, sagebrush, and wildflowers. No cultural resources were identified during the field survey.

Summary and Conclusions

Historical Built Environment Resources

No built environment resources were identified within or immediately adjacent to the project site as a result of the CHRIS records search and field survey. The existing Mitchell 5B well, Sand Canyon well, and Lost Canyon 2 and 2A wells were constructed during the 1990s; therefore, the project site does not contain buildings or structures that are 45 years of age or older. Therefore, the proposed project would not result in a substantial adverse change to historical resources as defined in CEQA Guidelines Section 15064.5(b). Rincon recommends a finding of **no impact to historical built environment resources** under CEQA.

Historical or Unique Archaeological Resources

No prehistoric or historic-period archaeological resources were identified within the project site as a result of the CHRIS records search, NAHC SLF search, or pedestrian survey. Based on the existing conditions of the proposed project site and the findings of this study, the project site has low potential to support intact archaeological deposits due to previous disturbances associated with road development and construction of the existing wells. As such, the potential for encountering intact archaeological deposits that may qualify as historical resources pursuant to CEQA is low. However, although unlikely, unanticipated discoveries remain a possibility during ground disturbance. Rincon recommends implementation of standard conditions for unanticipated discoveries during construction, outlined below. With implementation of these standard conditions for unanticipated finds, Rincon recommends a finding of **less-than-significant impact to archaeological resources with mitigation** under CEQA.

Unanticipated Discovery of Cultural Resources

In the event an archaeological resource is unexpectedly encountered during ground-disturbing activities, work within 50 feet of the find should halt and an archaeologist meeting the Secretary of the Interior's Professional Qualifications Standards for Archaeology (National Park Service 1983) shall be contacted immediately to evaluate the resource. If the resource is determined by the qualified archaeologist to be prehistoric, then a Native American representative should also be contacted to participate in the evaluation of the resource. If the resource cannot be avoided by project redesign and if the qualified archaeologist and/or Native American representative determines it to be appropriate, archaeological testing for CRHR eligibility should be completed. If the resource proves to be eligible for the CRHR and significant impacts to the resource cannot be avoided via project redesign, a qualified archaeologist should prepare a data recovery plan tailored to the physical nature and characteristics of the resource, pursuant to the requirements of the CEQA Guidelines Section 15126.4(b)(3)(C). The data recovery plan should identify data recovery excavation methods, measurable objectives, and data thresholds to reduce any significant impacts to the cultural resource. Pursuant to the data recovery plan, the qualified archaeologist and Native American representative, as appropriate, should recover and document the scientifically consequential information that justifies the resource's significance. SCV Water should review and approve the treatment plan and archaeological testing as appropriate,

and the resulting documentation should be submitted to the SCCIC, pursuant to CEQA Guidelines Section 15126.4(b)(3)(C).

Human Remains

No human remains are known to be present within the project site. However, the discovery of human remains is always a possibility during ground disturbing activities. If human remains are unexpectedly found, California Health and Safety Code Section 7050.5 states no further disturbance shall occur until the County Coroner has made a determination of origin and disposition pursuant to Public Resources Code Section 5097.98. In the event of an unanticipated discovery of human remains, the County Coroner must be notified immediately. If the human remains are determined to be of Native American origin, the Coroner will notify the NAHC, which will determine and notify a 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 landowner shall reinter the remains in an area of the property secure from subsequent disturbance. With adherence to existing regulations, Rincon recommends a finding of **less than significant impact to human remains** under CEQA.

Should you have any questions concerning this study, please do not hesitate to contact Kholood Abdo at 951-405-2351 or kabdo@rinconconsultants.com.

Sincerely,
Rincon Consultants, Inc.

Andrea Ogaz, MA, RPA
Archaeologist/Project Manager

Kholood Abdo, MA.RPA
Senior Supervising Archaeologist

Shannon Carmack
Cultural Resources Principal

Attachments

Attachment 1 Figures and Photographs
Attachment 2 California Historical Resources Information System Records Search Results
Attachment 3 Sacred Lands File Search Results and Native American Outreach

References

Dibblee, T.W., and H.E. Ehrenspeck

1996 Geologic map of the *Mint Canyon* quadrangle, Los Angeles County, California. Dibblee Geological Foundation.

Hunt, Kevin and Richard Schultz

2005 Final Confidential: Cultural Resources Study for the Upper Santa Clara River Watershed Arundo and Tamarisk Removal Program Long-Term Implementation Plan, Program Environmental Impact Report/Environmental Assessment, Los Angeles County, California. Report on file at the South Central Coastal Information Center, California State University, Fullerton.

Mckenna, Jeanette

2003 The Lost Canyon Pedestrian Bridge and Sidewalk Project Located on the South Side of Los Canyon Road Between Sand Canyon Road and the Terminus of the Existing Asphalt Sidewalk. On file at the South Central Coastal Information Center, California State University Fullerton.

National Park Service

1983 *Archaeology and Historic Preservation: Secretary of the Interior's Standards and Guidelines*. https://www.nps.gov/subjects/historicpreservation/upload/standards-guidelines-archeology-historic-preservation.pdf, accessed January 2025.

NETROnline

2025 Historic Aerial Photographs for the Years 1947, 1952, 1959, 1969, 1974, 1985, 1996, 2005, and 2016. Electronic resource, https://www.historicaerials.com/viewer, accessed January 2025.

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1997 Cortina Series. Electronic resource, https://casoilresource.lawr.ucdavis.edu/sde/?series=cortina#osd. accessed February 2025.

2022 Sandy alluvial land. Electronic resource, https://websoilsurvey.sc.egove.usda.gove/WssProjduct/vpm3r2430dhfm343legudfkg/20230501_17533005412_5_Map_Unit_Description_Sandy_alluvial_land, accessed February 2025.

2025 Natural Resources Conservation Service Web Soil Survey. https://websoilsurvey.sc.egov.usda.gov/App/HomePage.htm, accessed February 2025.

United States Geological Survey

2025 National Geologic Map Database Project. Topographic Maps for the Project Site. https://ngmdb.usgs.gov/topoview/viewer/#4/40.01/-100.06, accessed January 2025.

Waters, Michael R.

1992 Principles of Geoarchaeology. Tucson: The University of Arizona Press.

Wlodarski, Robert J.

1996 A Phase I Archaeological Study: Santa Clarita Water Company Application 29898 for 13 Existing Well Site Locations, Los Angeles County, California. On file at the South Central Coastal Information Center, California State University, Fullerton.

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Attachment 1

Figures and Photographs

Figure 1 Project Location

Imagery provided by Esri and its licensors © 2024.

Project Location

N

Figure 2a Project Site - Eastern Extent

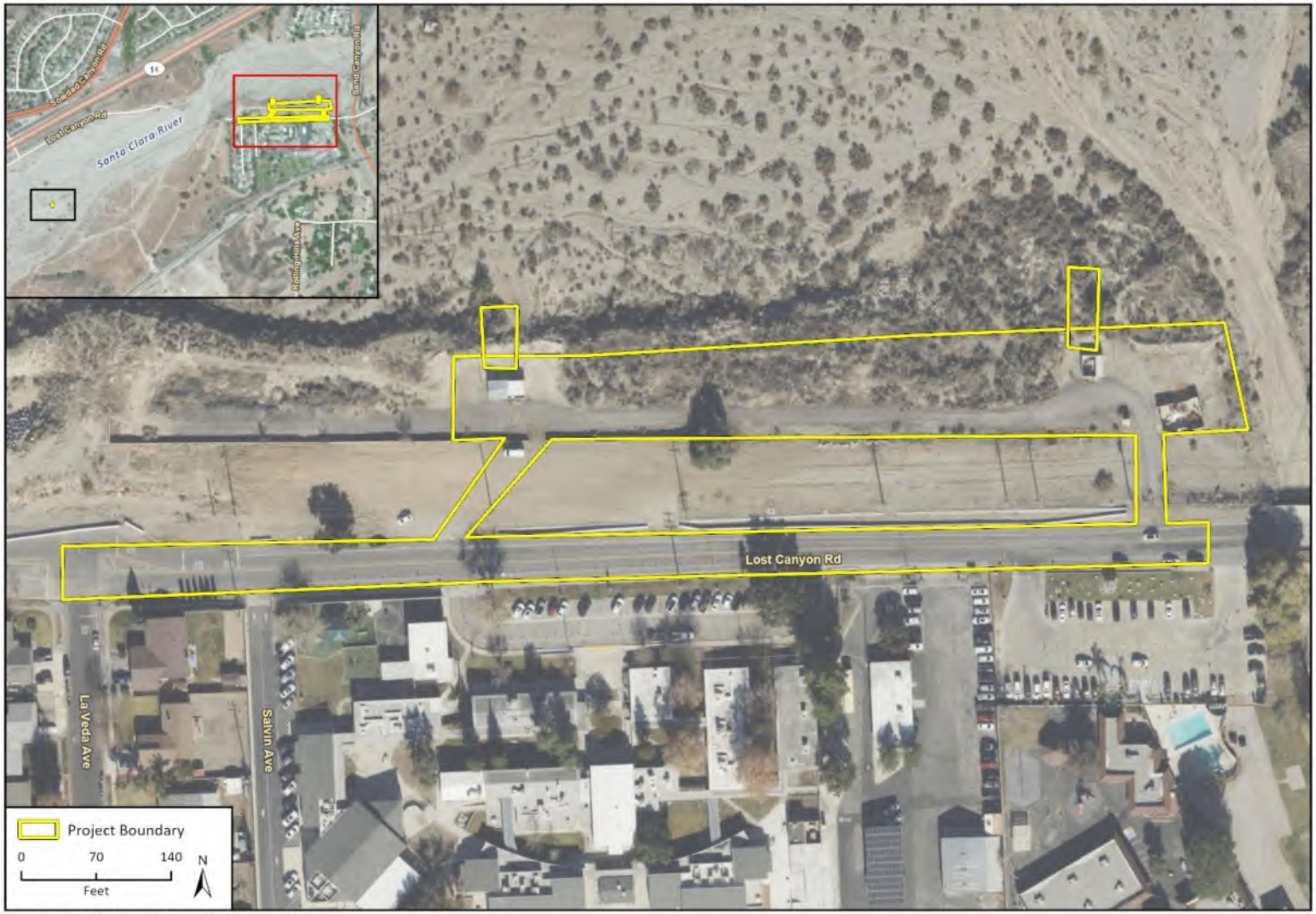

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Figure 2b Project Site - Western Extent

Imagery provided by Microsoft Bing and its licensors © 2025.

Photograph 1 Overview of Sand Canyon Well, Facing Southwest

Photograph 2 Overview of Southern Extent of Project Site, Facing Northeast

Photograph 3 Overview of Eastern Extent of Project Site, Facing West

Photograph 4 Overview of Project Site at Mitchell 5B Well, Facing Northwest

Attachment 2

California Historical Resources Information System Records Search Results

Report List

24-16743 SCVW Lost Canyon

Report No.	Other IDs	Year	Author(s)	Title	Affiliation	Resources
LA-00467		1979	McIntrye, Michael J. and Greenwood, Roberta S.	Cultural Resource Survey of a Near Sand Canyon, Upper Santa Clara River Valley, Los Angeles County, California.	Greenwood and Associates	19-101228
LA-00758		1980	Robinson, R. W.	Cultural Resources Investigation Re: Property Located Near Sand Canyon Road and the Santa Clara River, Los Angeles County		19-001077
LA-00877		1980	Robinson, R. W.	Report on Preliminary Mitigation Efforts Associated With Archaeological Site No. LAN-1077 in North Los Angeles County, California		19-001077
LA-01166		1982	Wlodarski, Robert J.	An Evaluation of the Potential Impacts to Cultural Resources Located on Portions of Tentative Tract 42254 Sand Canyon Road, Canyon Country, Los Angeles County, Ca	Historical, Environmental, Archaeological, Research, Team	
LA-01463		1985	Gummerman, George, Mark Allen, and David S. Whitley	An Archaeological Resource Survey and Impact Assessment of the Proposed Soledad Canyon Road Improvement Project, Los Angeles County, California	University of California, Los Angeles Archaeological Survey	
LA-02215		1990	Alexander, Molly B.	An Archaeological Survey of the Proposed Lost Canyon Road Extension, Santa Clarita, Los Angeles County	Archaeological Associates, Ltd.	
LA-02431		1991	Wlodarski, Robert J.	A Phase 1 Archaeological Study for Tentative Tract Number 50592, [lost Canyon Project] West of Sand Canyon Road and South of the Antelope Valley Freeway, Los Angeles County, California	Historical, Environmental, Archaeological, Research, Team	
LA-02966		1993	Anonymous	Draft Stage I Environmental Site Assessment Eastside Extension (from Whittier Boulevard and Atlantic Boulevard Intersection to Union Station Area) Metro Red Line Los Angeles, California	Geotransit Consultants	
LA-02996		1993	Valentine-Maki, Mary	Cultural Resources Survey for the Proposed Santa Clara River Horse and Bike Trail Santa Clarita, Los Angeles County, California	Fugro McClelland (West), Inc.	19-000351, 19-001077, 19-001824, 19-001829
LA-03837		1997	White, Robert S.	An Archaeological Assessment of the Live Oak Springs Canyon Drain and Debris Basin Project, City of Santa Clarita, Los Angeles County	Archaeological Associates, Ltd.	

Report List

24-16743 SCVW Lost Canyon

Report No.	Other IDs	Year	Author(s)	Title	Affiliation	Resources
LA-03840		1996	Wlodarski, Robert J.	A Phase I Archaeological Study: Santa Clarita Water Company Application 29898 for 13 Existing Well Site Locations, Los Angeles County, California	Historical, Environmental, Archaeological, Research, Team	
LA-05268		2001	Wlodarski, Robert J.	A Phase I Archaeological Study for Proposed Improvements to 6743 Fernhill Drive (the Caballero Residence) City of Malibu, County of Los Angeles, California	Historical, Environmental, Archaeological, Research, Team	
LA-05624		2002	McKenna, Jeanette A.	Cultural Resource Assessment / Evaluation for Nextel Communications Site CA-7565-A, 16404 Delone Street, Santa Clarita, Los Angeles County, California	McKenna et al.	
LA-06942		2003	McKenna, Jeanette A.	The Lost Canyon Pedestrian Bridge and Sidewalk Project Located on the South Side of Los Canyon Road Between Sand Canyon Road and the Terminus of the Existing Asphalt Sidewalk	McKenna et al.	
LA-07487		2005	Keasling, James M.	Cultural Resource Records Search and Site Visit Results for Cingular Telecommunications Facility Candidate Nl-0025-01 (canyon Country Park), 17615 Soledad Canyon Road, Santa Clarita, Los Angeles County, California	Michael Brandman Associates	
LA-07493		2006	Bonner, Wayne H.	Cultural Resources Records Search and Site Visit Results for Cingular Wireless Candidate Lsancad353d (soledad), 16500 Soledad Canyon Road, Santa Clarita, Los Angeles County, California	Michael Brandman Associates	
LA-10556		2004	Schmidt, James J.	2004 Los Angeles County Pole Replacement Project	Compass Rose Archaeological, Inc.	
LA-10560		2005	Hunt, Kevin and Richard D. Schultz	Final Confidential: Cultural Resources Study for the Upper Santa Clara River Watershed Arundo and Tamarisk Removal Program Long-term implementation Plan, program Environmental Impact Report/Environmental Assessment, Los Angeles County, California	SWCA Environmental Consultants	19-000351, 19-001077, 19-001824, 19-002105, 19-002132, 19-002190
LA-10642		2010	Tang, Bai "Tom"	Preliminary Historical/Archaeological Resources Study, Antelope Valley line Positive Train Control (PTC) Project Southern California Regional Rail Authority, Lancaster to Glendale, Los Angeles County, California	CRM Tech	19-001124, 19-001534, 19-002105, 19-002132, 19-002530, 19-002681, 19-003536, 19-003558, 19-003582, 19-150037, 19-150324, 19-180638, 19-186688, 19-186689

Report List

24-16743 SCVW Lost Canyon

Report No.	Other IDs	Year	Author(s)	Title	Affiliation	Resources
LA-11337		2011	Loftus, Shannon K.	Cultural Resource Records Search and Site Survey - AT&T Site NL0025-04 Canyon Country Park, 17615 Soledad Canyon Road, Santa Clarita, Los Angeles County, Caifornia 91351	ACE Environmental. LLC	

Attachment 3

Sacred Lands File Search Results and Native American Outreach

NATIVE AMERICAN HERITAGE COMMISSION

NAHC HEADQUARTERS
1550 Harbor Boulevard
Suite 100
West Sacramento,
California 95691
(916) 373-3710
nahc@nahc.ca.gov

January 8, 2025

Kholood Abdo
Rincon Consultants, Inc.

Via Email to: kabdo@rinconconsultants.com

Re: Native American Tribal Consultation, Pursuant to the Assembly Bill 52 (AB 52), Amendments to the California Environmental Quality Act (CEQA) (Chapter 532, Statutes of 2014), Public Resources Code Sections 5097.94 (m), 21073, 21074, 21080.3.1, 21080.3.2, 21082.3, 21083.09, 21084.2 and 21084.3, Lost Canyon 2A and Sand Canyon Ground Water Treatment Improvements Project, Los Angeles County

To Whom It May Concern:

Pursuant to Public Resources Code section 21080.3.1 (c), attached is a consultation list of tribes that are traditionally and culturally affiliated with the geographic area of the above-listed project. Please note that the intent of the AB 52 amendments to CEQA is to avoid and/or mitigate impacts to tribal cultural resources, (Pub. Resources Code §21084.3 (a)) ("Public agencies shall, when feasible, avoid damaging effects to any tribal cultural resource.")

Public Resources Code sections 21080.3.1 and 21084.3(c) require CEQA lead agencies to consult with California Native American tribes that have requested notice from such agencies of proposed projects in the geographic area that are traditionally and culturally affiliated with the tribes on projects for which a Notice of Preparation or Notice of Negative Declaration or Mitigated Negative Declaration has been filed on or after July 1, 2015. Specifically, Public Resources Code section 21080.3.1 (d) provides:

Within 14 days of determining that an application for a project is complete or a decision by a public agency to undertake a project, the lead agency shall provide formal notification to the designated contact of, or a tribal representative of, traditionally and culturally affiliated California Native American tribes that have requested notice, which shall be accomplished by means of at least one written notification that includes a brief description of the proposed project and its location, the lead agency contact information, and a notification that the California Native American tribe has 30 days to request consultation pursuant to this section.

The AB 52 amendments to CEQA law does not preclude initiating consultation with the tribes that are culturally and traditionally affiliated within your jurisdiction prior to receiving requests for notification of projects in the tribe's areas of traditional and cultural affiliation. The Native American Heritage Commission (NAHC) recommends, but does not require, early consultation as a best practice to ensure that lead agencies receive sufficient information about cultural resources in a project area to avoid damaging effects to tribal cultural resources.

The NAHC also recommends, but does not require that agencies should also include with their notification letters, information regarding any cultural resources assessment that has been completed on the area of potential effect (APE), such as:

1. The results of any record search that may have been conducted at an Information Center of the California Historical Resources Information System (CHRIS), including, but not limited to:

- A listing of any and all known cultural resources that have already been recorded on or adjacent to the APE, such as known archaeological sites;
- Copies of any and all cultural resource records and study reports that may have been provided by the Information Center as part of the records search response;
- Whether the records search indicates a low, moderate, or high probability that unrecorded cultural resources are located in the APE; and
- If a survey is recommended by the Information Center to determine whether previously unrecorded cultural resources are present.

2. The results of any archaeological inventory survey that was conducted, including:

    - Any report that may contain site forms, site significance, and suggested mitigation measures.

      All information regarding site locations, Native American human remains, and associated funerary objects should be in a separate confidential addendum, and not be made available for public disclosure in accordance with Government Code section 6254.10.

3. The result of the Sacred Lands File (SLF) check conducted through the Native American Heritage Commission was negative.

4. Any ethnographic studies conducted for any area including all or part of the APE; and

5. Any geotechnical reports regarding all or part of the APE.

Lead agencies should be aware that records maintained by the NAHC and CHRIS are not exhaustive and a negative response to these searches does not preclude the existence of a tribal cultural resource. A tribe may be the only source of information regarding the existence of a tribal cultural resource.

This information will aid tribes in determining whether to request formal consultation. In the event that they do, having the information beforehand will help to facilitate the consultation process.

If you receive notification of change of addresses and phone numbers from tribes, please notify the NAHC. With your assistance, we can assure that our consultation list remains current.

If you have any questions, please contact me at my email address: Andrew.Green@nahc.ca.gov.

Sincerely,

Andrew Green

Andrew Green
Cultural Resources Analyst

Attachment

Native American Heritage Commission
Native American Contact List
Los Angeles County
1/8/2025

Tribe Name	Fed (F) Non-Fed (N)	Contact Person	Contact Address	Phone #	Fax #	Email Address	Cultural Affiliation	Counties	Last Updated
Barbareño/Ventureño Band of Mission Indians	N	Cultural Resource Committee,	P.O. Box 364 Ojai, CA, 93024	(805) 746-6685		CR@bvbmi.com	Chumash	Kern,Los Angeles,San Luis Obispo,Santa Barbara,Ventura	6/19/2023
Cahuilla Band of Indians	F	BobbyRay Esparza, Cultural Director	52701 CA Highway 371 Anza, CA, 92539	(951) 763-5549		besparza@cahuilla-nsn.gov	Cahuilla	Imperial,Los Angeles,Orange,Riverside,San Bernardino,San Diego	6/28/2023
Cahuilla Band of Indians	F	Anthony Madrigal, Tribal Historic Preservation Officer	52701 CA Highway 371 Anza, CA, 92539	(951) 763-5549		anthonymad2002@gmail.com	Cahuilla	Imperial,Los Angeles,Orange,Riverside,San Bernardino,San Diego	6/28/2023
Cahuilla Band of Indians	F	Erica Schenk, Chairperson	52701 CA Highway 371 Anza, CA, 92539	(951) 590-0942	(951) 763-2808	chair@cahuilla-nsn.gov	Cahuilla	Imperial,Los Angeles,Orange,Riverside,San Bernardino,San Diego	2/1/2024
Chumash Council of Bakersfield	N	Julio Quair, Chairperson	729 Texas Street Bakersfield, CA, 93307	(661) 322-0121		chumashtribe@sbcglobal.net	Chumash	Kern,Los Angeles,San Luis Obispo,Santa Barbara,Ventura	
Coastal Band of the Chumash Nation	N	Gabe Frausto, Chairman	P.O. Box 40653 Santa Barbara, CA, 93140	(805) 568-8063		fraustogabriel28@gmail.com	Chumash	Kern,Los Angeles,San Luis Obispo,Santa Barbara,Ventura	8/28/2023
Fernandeno Tataviam Band of Mission Indians	N	Sarah Brunzell, CRM Manager	1019 Second Street San Fernando, CA, 91340	(818) 837-0794		CRM@tataviam-nsn.us	Tataviam	Kern,Los Angeles,Ventura	5/25/2023
Gabrieleno Band of Mission Indians - Kizh Nation	N	Christina Swindall Martinez, Secretary	P.O. Box 393 Covina, CA, 91723	(844) 390-0787		admin@gabrielenoindians.org	Gabrieleno	Los Angeles,Orange,Riverside,San Bernardino,Santa Barbara,Ventura	8/18/2023
Gabrieleno Band of Mission Indians - Kizh Nation	N	Andrew Salas, Chairperson	P.O. Box 393 Covina, CA, 91723	(844) 390-0787		admin@gabrielenoindians.org	Gabrieleno	Los Angeles,Orange,Riverside,San Bernardino,Santa Barbara,Ventura	8/18/2023
Gabrieleno/Tongva San Gabriel Band of Mission Indians	N	Anthony Morales, Chairperson	P.O. Box 693 San Gabriel, CA, 91778	(626) 483-3564	(626) 286-1262	GTTribalcouncil@aol.com	Gabrieleno	Los Angeles,Orange,Riverside,San Bernardino,Santa Barbara,Ventura	12/4/2023
Gabrielino Tongva Indians of California Tribal Council	N	Robert Dorame, Chairperson	P.O. Box 490 Bellflower, CA, 90707	(562) 761-6417	(562) 761-6417	gtongva@gmail.com	Gabrielino	Los Angeles,Orange,Riverside,San Bernardino,Santa Barbara,Ventura	3/16/2023
Gabrielino Tongva Indians of California Tribal Council	N	Christina Conley, Cultural Resource Administrator	P.O. Box 941078 Simi Valley, CA, 93094	(626) 407-8761		christina.marsden@alumni.usc.edu	Gabrielino	Los Angeles,Orange,Riverside,San Bernardino,Santa Barbara,Ventura	3/16/2023
Gabrielino/Tongva Nation	N	Sandonne Goad, Chairperson	106 1/2 Judge John Aiso St., #231 Los Angeles, CA, 90012	(951) 807-0479		sgoad@gabrielino-tongva.com	Gabrielino	Los Angeles,Orange,Riverside,San Bernardino,Santa Barbara,Ventura	3/28/2023
Gabrielino-Tongva Tribe	N	Sam Dunlap, Cultural Resource Director	P.O. Box 3919 Seal Beach, CA, 90740	(909) 262-9351		tongvatcr@gmail.com	Gabrielino	Los Angeles,Orange,Riverside,San Bernardino,Santa Barbara,Ventura	5/30/2023
Gabrielino-Tongva Tribe	N	Charles Alvarez, Chairperson	23454 Vanowen Street West Hills, CA, 91307	(310) 403-6048		Chavez1956metro@gmail.com	Gabrielino	Los Angeles,Orange,Riverside,San Bernardino,Santa Barbara,Ventura	5/30/2023
Northern Chumash Tribal Council	N	Violet Walker, Chairperson	P.O. Box 6533 Los Osos, CA, 93412	(760) 549-3532		violetsagewalker@gmail.com	Chumash	Kern,Los Angeles,San Luis Obispo,Santa Barbara,Ventura	6/5/2023
San Fernando Band of Mission Indians	N	Donna Yocum, Chairperson	P.O. Box 221838 Newhall, CA, 91322	(503) 539-0933	(503) 574-3308	dyocum@sfbmi.org	Kitanemuk Vanyume Tataviam	Kern,Los Angeles,San Bernardino,Ventura	5/8/2023
Santa Rosa Band of Cahuilla Indians	F	Vanessa Minott, Tribal Administrator	P.O. Box 391820 Anza, CA, 92539	(951) 659-2700	(951) 659-2228	vminott@santarosa-nsn.gov	Cahuilla	Imperial,Los Angeles,Orange,Riverside,San Bernardino,San Diego	4/8/2024
Santa Rosa Band of Cahuilla Indians	F	Steven Estrada, Tribal Chairman	P.O. Box 391820 Anza, CA, 92539	(951) 659-2700	(951) 659-2228	sestrada@santarosa-nsn.gov	Cahuilla	Imperial,Los Angeles,Orange,Riverside,San Bernardino,San Diego	4/8/2024
Santa Ynez Band of Chumash Indians	F	Crystal Mendoza, Elders' Council Administrative Assistant	100 Via Juana Road Santa Ynez, CA, 93460	(805) 325-5537		cmendoza@chumash.gov	Chumash	Kern,Los Angeles,San Luis Obispo,Santa Barbara,Ventura	2/27/2024
Santa Ynez Band of Chumash Indians	F	Sam Cohen, Government & Legal Affairs Director	100 Via Juana Road Santa Ynez, CA, 93460			scohen@chumash.gov	Chumash	Kern,Los Angeles,San Luis Obispo,Santa Barbara,Ventura	7/6/2023
Santa Ynez Band of Chumash Indians	F	Nakia Zavalla, Tribal Historic Preservation Officer	100 Via Juana Road Santa Ynez, CA, 93460			nzavalla@chumash.gov	Chumash	Kern,Los Angeles,San Luis Obispo,Santa Barbara,Ventura	7/6/2023
Santa Ynez Band of Chumash Indians	F	Wendy Teeter, Cultural Resources Archaeologist	100 Via Juana Road Santa Ynez, CA, 93460	(805) 325-8630		wteeter@chumash.gov	Chumash	Kern,Los Angeles,San Luis Obispo,Santa Barbara,Ventura	7/6/2023
Soboba Band of Luiseno Indians	F	Jessica Valdez, Cultural Resource Specialist	P.O. Box 487 San Jacinto, CA, 92581	(951) 663-6261	(951) 654-4198	jvaldez@soboba-nsn.gov	Cahuilla Luiseno	Imperial,Los Angeles,Orange,Riverside,San Bernardino,San Diego	7/14/2023
Soboba Band of Luiseno Indians	F	Joseph Ontiveros, Tribal Historic Preservation Officer	P.O. Box 487 San Jacinto, CA, 92581	(951) 663-5279	(951) 654-4198	jontiveros@soboba-nsn.gov	Cahuilla Luiseno	Imperial,Los Angeles,Orange,Riverside,San Bernardino,San Diego	7/14/2023

This list is current only as of the date of this document. Distribution of this list does not relieve any person of statutory responsibility as defined in Section 7050.5 of the Health and Safety Code, Section 5097.94 of the Public Resources Code and Section 5097.98 of the Public Resources Code.

This list is only applicable for consultation with Native American tribes under Public Resources Code Sections 21080.3.1 for the proposed Lost Canyon 2A and Sand Canyon Ground Water Treatment Improvements Project, Los Angeles County.

Record: PROJ-2025-000094
Report Type: AB52 GIS
Counties: Los Angeles
NAHC Group: All

Appendix D

Energy Calculations

Lost Canyon/Sand Canyon Groundwater Treatment Project

3/19/2025

Compression-Ignition Engine Brake-Specific Fuel Consumption (BSFC) Factors **[1]**:

HP: 0 to 100	0.0588	HP: Greater than 100	0.0529

Values above are expressed in gallons per horsepower-hour/BSFC.

CONSTRUCTION EQUIPMENT

Construction Equipment	#	Hours per Day	Horsepower	Load Factor	Construction Phase	Fuel Used (gallons)
Tractors/Loaders/Backhoes	1	7	84	0.37	Site Preparation Phase	205
Scrapers	1	8	423	0.48	Site Preparation Phase	1,374
Cranes	1	8	367	0.29	Decommissioning Phase	630
Bore/Drill Rigs	1	8	83	0.5	Decommissioning Phase	273
Tractors/Loaders/Backhoes	1	7	84	0.37	Grading Phase	371
Plate Compactors	1	8	8	0.43	Grading Phase	47
Cranes	1	8	367	0.29	Infrastructure Installation Phase	20,118
Tractors/Loaders/Backhoes	1	6	84	0.37	Infrastructure Installation Phase	4,898
Plate Compactors	1	8	8	0.43	Infrastructure Installation Phase	723
Air Compressors	1	8	37	0.48	Infrastructure Installation Phase	3,732
Cranes	1	8	367	0.29	Nighttime Construction Phase	24,168
Tractors/Loaders/Backhoes	1	8	84	0.37	Nighttime Construction Phase	7,846
Plate Compactors	1	8	8	0.43	Nighttime Construction Phase	868
Air Compressors	1	8	37	0.48	Nighttime Construction Phase	4,484
Pavers	1	8	81	0.42	Paving/Site Restoration Phase	224
Paving Equipment	1	8	89	0.36	Paving/Site Restoration Phase	211
Rollers	2	8	36	0.38	Paving/Site Restoration Phase	180
Air Compressors	1	8	37	0.48	Paving/Site Restoration Phase	117
					Total Fuel Used	**70,469**
						(Gallons)

Construction Phase	Days of Operation
Site Preparation	16
Decommissioning	14
Grading	29
Infrastructure Installation	447
Nighttime	537
Paving/Site Restoration	14
Total Days	1057

WORKER TRIPS

Constuction Phase	MPG [2]	Trips	Trip Length (miles)	Fuel Used (gallons)
Site Preparation	24.1	**5**	**18.5**	61
Decommissioning	24.1	**5**	**18.5**	54
Grading	24.1	**5**	**18.5**	111
Infrastructure Installation	24.1	**0.6**	**18.5**	206
Nighttime	24.1	**0.6**	**18.5**	247
Paving/Site Restoration	24.1	**12.5**	**18.5**	134
			Total Fuel Used	**814**

HAULING AND VENDOR TRIPS

HAULING TRIPS

Constuction Phase	MPG [2]	Trips	Trip Length (miles)	Fuel Used (gallons)
Grading/Excavation	7.5	0.34	20.0	26.29
			Total Fuel Used	**26.29**

VENDOR TRIPS

Constuction Phase	MPG [2]	Trips	Trip Length (miles)	Fuel Used (gallons)
Infrastructure Installation	7.5	0.24	10.2	145.90
Nighttime	7.5	0.24	10.2	175.28
			Total Fuel Used	**175.28**

Total Gasoline Consumption (gallons)	**814**
Total Diesel Consumption (gallons)	**70,670**

Sources:

[1] United States Environmental Protection Agency. 2021. *Exhaust and Crankcase Emission Factors for Nonroad Compression-Ignition Engines in MOVES3.0.2* . September. Available at: https://www.epa.gov/system/files/documents/2021-08/420r21021.pdf.

[2] United States Department of Transportation, Bureau of Transportation Statistics. 2021. *National Transportation Statistics* . Available at: https://www.bts.gov/topics/national-transportation-statistics.

Lost Canyon/Sand Canyon Groundwater Treatment Project

Last Updated: 3/19/25

Populate one of the following tables (Leave the other blank):

Annual VMT		OR	Daily Vehicle Trips	
Annual VMT:	10,430		Daily Vehicle Trips:	
			Average Trip Distance:	

2007671

Fleet Class	Fleet Mix
Light Duty Auto (LDA)	0.932312
Light Duty Truck 1 (LDT1)	0.000000
Light Duty Truck 2 (LDT2)	0.000000
Medium Duty Vehicle (MDV)	0.000000
Light Heavy Duty 1 (LHD1)	0.000000
Light Heavy Duty 2 (LHD2)	0.000000
Medium Heavy Duty (MHD)	0.000000
Heavy Heavy Duty (HHD)	0.067688
Other Bus (OBUS)	0.000000
Urban Bus (UBUS)	0.000000
Motorcycle (MCY)	0.000000
School Bus (SBUS)	0.000000
Motorhome (MH)	0.000000

Fuel Economy (MPG) [1]	
Passenger Vehicles	24.8
Light-Med Duty Trucks	18.1
Heavy Trucks/Other	7.9
Motorcycles	44

Fleet Mix

Vehicle Type	Percent	Fuel Type	Annual VMT: VMT	Vehicle Trips: VMT	Fuel Consumption (Gallons)
Passenger Vehicles	*93.23%*	*Gasoline*	9,724	0.00	392
Light-Medium Duty Trucks	*0.00%*	*Gasoline*	0	0.00	0
Heavy Trucks/Other	*6.77%*	*Diesel*	706	0.00	89
Motorcycle	*0.00%*	*Gasoline*	0	0.00	0

Total Gasoline Consumption (gallons)	**392**
Total Diesel Consumption (gallons)	**89**

Sources:

[1] United States Department of Transportation, Bureau of Transportation Statistics. 2024. National Transportation Statistics. Available at: https://www.bts.gov/topics/national-transportation-statistics.

Appendix E

Noise Modeling

Noise Measurement Data

Number	Start Date	Start Time	End Time	Duration	LAeq	LASmax	LASmin	LAS1%	LAS2%	LAS5%	LAS8%	LAS10%	LAS25%	LAS50%	LAS90%	LAS95%	LAS99%
ST-2	2/20/2025	8:08:20 AM	8:23:20 AM	0:15:00	65.5	81.4	58.9	73.3	71.4	69.3	68.1	67.6	65.3	63.5	61.2	60.6	59.7
ST-1	2/20/2025	8:51:28 AM	9:06:28 AM	0:15:00	64.5	90.6	54.3	71.1	68.5	66.4	65.3	64.7	61.7	58.7	55.9	55.6	55.1

Construction Noise

	Noise Level @ 50 ft	Sulphur Springs Elementary	Single Family Res to the South
Distance		120	45
Site Preparation	74	66.396	74.915
Grading & Excavation	76	68.396	76.915
Building Construction & Infra	79	71.396	79.915
Paving & Site Restoration	74	66.396	74.915

Construction Vibration

	Vibration @ 25 ft	Single Family Res to the S	Sulphur Springs Elementary
Distance		50	60
Vibratory Roller	0.21	0.074	0.056
Loaded Trucks	0.076	0.027	0.020
Small Bulldozer	0.003	0.001	0.001

Roadway Construction Noise Model (RCNM),Version 1.1

Report date: 03/13/2025
Case Description: Site Preparation

**** Receptor #1 ****

Description	Land Use	Baselines (dBA) Daytime	Evening	Night
Site Preparation	Residential	65.0	55.0	50.0

Equipment

Description	Impact Device	Usage (%)	Spec Lmax (dBA)	Actual Lmax (dBA)	Receptor Distance (feet)	Estimated Shielding (dBA)
Backhoe	No	40		77.6	50.0	0.0

Results

Noise Limits (dBA)

Noise Limit Exceedance (dBA)

Calculated (dBA)	Day		Evening		Night		Day		Evening		Night	
Equipment	Lmax	Leq	Lmax	Leq	Lmax	Leq	Lmax	Leq	Lmax	Leq	Lmax	Leq
Backhoe	77.6	73.6	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A
Total	77.6	73.6	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: 03/13/2025
Case Description: Grading_Excavation

**** Receptor #1 ****

Description	Land Use	Baselines (dBA) Daytime	Evening	Night
Grading_Excavation	Residential	65.0	55.0	50.0

Equipment

Description	Impact Device	Usage (%)	Spec Lmax (dBA)	Actual Lmax (dBA)	Receptor Distance (feet)	Estimated Shielding (dBA)
Backhoe	No	40		77.6	50.0	0.0
Compactor (ground)	No	20		83.2	50.0	0.0

Results

Noise Limits (dBA)

Noise Limit Exceedance (dBA)

Night	Day	Calculated (dBA) Evening	Night	Day Lmax	Day Leq	Evening Lmax	Evening Leq	Night Lmax	Night Leq	Lmax
Equipment		Lmax Leq	Lmax Leq	Lmax	Leq	Lmax	Leq			
Backhoe		77.6 73.6		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				
Compactor (ground)		83.2 76.2		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				
Total		83.2 78.1		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: 03/13/2025
Case Description: Building Construction_Infrastructure Installation

**** Receptor #1 ****

Description	Baselines (dBA) Land Use	Daytime	Evening	Night
Building Construction_Infrastructure Installation	Residential	65.0	55.0	50.0

Equipment

Description	Impact Device	Usage (%)	Spec Lmax (dBA)	Actual Lmax (dBA)	Receptor Distance (feet)	Estimated Shielding (dBA)
Backhoe	No	40		77.6	50.0	0.0
Compactor (ground)	No	20		83.2	50.0	0.0
Crane	No	16		80.6	50.0	0.0

Results

Noise Limits (dBA)

Noise Limit Exceedance (dBA)

Calculated (dBA)	Day		Evening		Night		Day		Evening		Night	
Equipment	Lmax	Leq	Lmax	Leq	Lmax	Leq	Lmax	Leq	Lmax	Leq	Lmax	Leq
Backhoe	77.6	73.6	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A
Compactor (ground)	83.2	76.2	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A
Crane	80.6	72.6	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A
Total	83.2	79.2	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: 03/13/2025
Case Description: Paving_Site Restoration

**** Receptor #1 ****

Description	Land Use	Baselines (dBA) Daytime	Evening	Night
Paving_Site Restoration	Residential	65.0	55.0	50.0

Description	Impact Device	Usage (%)	Equipment Spec Lmax (dBA)	Actual Lmax (dBA)	Receptor Distance (feet)	Estimated Shielding (dBA)
Roller	No	20		80.0	50.0	0.0
Paver	No	50		77.2	50.0	0.0
Compressor (air)	No	40		77.7	50.0	0.0

Results

Noise Limits (dBA)

Noise Limit Exceedance (dBA)

Equipment	Day Lmax	Day Leq	Evening Lmax	Evening Leq	Night Lmax	Night Leq	Day Lmax	Day Leq	Evening Lmax	Evening Leq	Night Lmax	Night Leq
Roller	80.0	73.0	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A
Paver	77.2	74.2	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A
Compressor (air)	77.7	73.7	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A
Total	80.0	78.4	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A

Product Data

WeatherExpert® Ultra High Efficiency Variable Speed Single Packaged Rooftop

3 to 5 Nominal Tons

ecoblue™ technology

48/50JC**04, 05, 06

48JC: Single-Package Gas Heating/Electric Cooling Rooftop Units
50JC: Electric Cooling Rooftop Units with Optional Electric Heat with Puron® Refrigerant (R-410A)

Capacity ratings (cont)

Sound Ratings

UNIT	COOLING STAGES	OUTDOOR SOUND (dB) AT 60 Hz[a,b]								
		A-Weighted[c]	63	125	250	500	1000	2000	4000	8000
48/50JC*V04	Variable Speed	75.4	81.8	81.8	77.0	72.6	69.9	64.6	59.3	55.6
48/50JC*V05	Variable Speed	79.0	85.6	84.7	80.5	76.0	72.4	68.0	62.8	59.3
48/50JC*V06	Variable Speed	79.0	85.6	84.7	80.5	76.0	72.4	68.0	62.8	59.3

NOTE(S):

a. Outdoor sound data is measured in accordance with AHRI.
b. Measurements are expressed in terms of sound power. Do not compare these values to sound pressure values because sound pressure depends on specific environmental factors which normally do not match individual applications. Sound power values are independent of the environment and therefore more accurate.
c. A-weighted sound ratings filter out very high and very low frequencies, to better approximate the response of "average" human ear. A-weighted measurements for Carrier units are taken in accordance with AHRI.

LEGEND

dB — Decibel

Minimum - Maximum Airflow Ratings (cfm) — Natural Gas and Propane

UNIT	HEAT LEVEL	VOLTAGE	COOLING		AL HX HEATING		SS HX HEATING	
			Minimum Airflow (cfm)	Maximum Airflow (cfm)	Minimum Airflow (cfm)	Maximum Airflow (cfm)	Minimum Airflow (cfm)	Maximum Airflow (cfm)
48JC**04	LOW	3 Phase	600	1500	910	2010	910	2010
	MED				960	1630	960	1630
	HIGH				—	—	—	—
48JC**05	LOW	3 Phase	800	2000	910	2010	910	2010
	MED				1250	2330	1250	2330
	HIGH				1390	2220	1390	2220
48JC**06	LOW	3 Phase	1000	2500	910	2510	910	2510
	MED				1250	2720	1250	2720
	HIGH				1390	2780	1390	2780

Minimum - Maximum Airflow Ratings (cfm) — Cooling Units and Accessory Electric Heat

UNIT	COOLING		ELECTRIC HEAT[a]	
	Minimum Airflow (cfm)	Maximum Airflow (cfm)	Minimum Airflow (cfm)	Maximum Airflow (cfm)
50JC**04	600	1500	900	1500
50JC**05	800	2000	1200	2000
50JC**06	1000	2500	1500	2500

NOTE(S):

a. Electric heat modules are available as both factory-installed options or field-installed accessories for 50JC units.

Heat Rating — Natural Gas and Propane

UNIT	GAS HEAT	AL/SS HEAT EXCHANGER		TEMPERATURE RISE (°F)	THERMAL EFFICIENCY (%)	AFUE EFFICIENCY (%)
		Input/Output Stage 1 (MBH)	Input/Output Stage 2 (MBH)			
48JC**04	LOW	50/40	67/54	25-55	81	—
	MED	82/65	110/88	50-85	80	—
	HIGH	—	—	—	—	—
48JC**05	LOW	50/40	67/54	25-55	81	—
	MED	82/65	110/88	35-65	80	—
	HIGH	120/96	150/120	50-80	80	—
48JC**06	LOW	50/40	67/54	20-55	81	—
	MED	82/65	110/88	30-65	80	—
	HIGH	120/96	150/120	40-80	80	—

Appendix F

AB 52 Letters

Torres Martinez Desert Cahuilla Indians
Michael Mirelez, Cultural Resource Coordinator
P.O. Box 1160
Thermal, California 92274
Via Email: mmirelez@tmdci.org

Subject: AB 52 Consultation, Lost Canyon 2A and Sand Canyon Groundwater Treatment Improvements Project, Santa Clarita, Los Angeles County, California

Dear Mr. Mirelez:

Santa Clarita Valley Water Agency (SCV Water) is preparing an Initial Study/Mitigated Negative Declaration (IS-MND) in compliance with the California Environmental Quality Act (CEQA) for the proposed Lost Canyon 2A and Sand Canyon Groundwater Treatment Improvements Project (project). The project site is comprised of an approximately 2.7-acre impact area spanning portions of Assessor's Parcel Number (APN) 2840-006-901 (west of the intersection of Sand Canyon Road and Lost Canyon Road and immediately north of Lost Canyon Road) and APN 2840-002-901 (west of the northern terminus of Sawtooth Lane), and the public right-of-way of Lost Canyon Road in Santa Clarita, Los Angeles County. A project map is provided in Attachment 1.

The project involves decommissioning and sealing of the existing Mitchell 5B and Lost Canyon 2 wells for future use, construction of a centralized groundwater treatment facility at the location of the existing Lost Canyon 2A and Sand Canyon wells at APN 2840-006-901 along with associated above-ground and underground electrical utilities upgrades, improvements to the existing Sand Canyon and Lost Canyon 2A wells, and installation of an approximately 40-foot-long groundwater discharge pipeline between the existing Sand Canyon well and the Santa Clara River. The proposed project also includes replacement of approximately 1,700 linear feet of 14-inch asbestos cement pipeline within Lost Canyon Road with a new 14-inch ductile iron pipeline. The proposed groundwater treatment facility would connect to this replacement pipeline, and the existing pipeline would be abandoned in place. The project would restore the use of the Lost Canyon 2A and Sand Canyon wells and reduce SCV Water's dependency on imported water. Construction materials would be staged within the project site. The maximum depth of excavation for construction would be approximately 12 feet below ground surface. Construction is anticipated to occur between May 2026 and May 2028.

The proposed project must comply with California Public Resources Code Section 21080.3.1 (Assembly Bill [AB] 52 of 2014), which requires local governments to conduct meaningful consultation with California Native American tribes that have requested to be notified by lead agencies of proposed projects in the geographic area with which the tribe is traditionally and culturally affiliated.

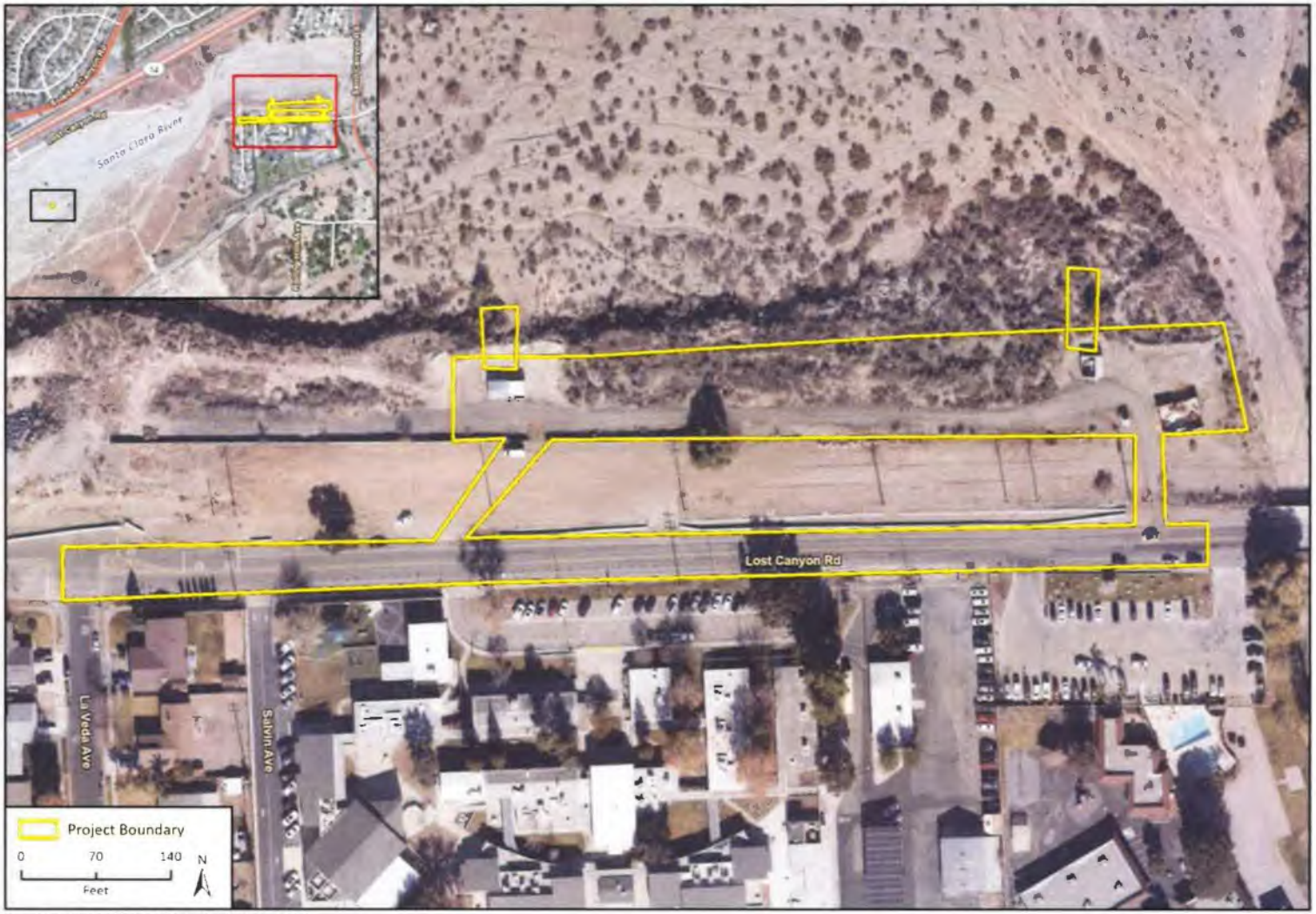
The input of the Torres Martinez Desert Cahuilla Indians is important to SCV Water's planning process. Under AB 52, you have 30 days from receipt of this letter to respond in writing if you wish to consult on the proposed project. If you require any additional information or have any questions, please contact me at 661-714-0993 or via e-mail at maumentado@scvwa.org. Thank you for your assistance.

Sincerely,

Mark Aumentado, PE
Engineer
Santa Clarita Valley Water Agency

Attachments

Attachment 1 Project Location Maps



SCV Water | Summit Circle – Engineering
26515 Summit Circle, Santa Clarita, CA 91350 · 661-297-1600 · yourSCVwater.com

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SCV Water | Summit Circle – Engineering
26515 Summit Circle, Santa Clarita, CA 91350 • 661-297-1600 • yourSCVwater.com

Gabrieleno Band of Mission Indians – Kizh Nation
Andrew Salas, Chairman
P.O. Box 393
Covina, California 91723
Via Email: admin@gabrielenoindians.org

Subject: AB 52 Consultation, Lost Canyon 2A and Sand Canyon Groundwater Treatment Improvements Project, Santa Clarita, Los Angeles County, California

Dear Chairman Salas:

Santa Clarita Valley Water Agency (SCV Water) is preparing an Initial Study/Mitigated Negative Declaration (IS-MND) in compliance with the California Environmental Quality Act (CEQA) for the proposed Lost Canyon 2A and Sand Canyon Groundwater Treatment Improvements Project (project). The project site is comprised of an approximately 2.7-acre impact area spanning portions of Assessor's Parcel Number (APN) 2840-006-901 (west of the intersection of Sand Canyon Road and Lost Canyon Road and immediately north of Lost Canyon Road) and APN 2840-002-901 (west of the northern terminus of Sawtooth Lane), and the public right-of-way of Lost Canyon Road in Santa Clarita, Los Angeles County. A project map is provided in Attachment 1.

The project involves decommissioning and sealing of the existing Mitchell 5B and Lost Canyon 2 wells for future use, construction of a centralized groundwater treatment facility at the location of the existing Lost Canyon 2A and Sand Canyon wells at APN 2840-006-901 along with associated above-ground and underground electrical utilities upgrades, improvements to the existing Sand Canyon and Lost Canyon 2A wells, and installation of an approximately 40-foot-long groundwater discharge pipeline between the existing Sand Canyon well and the Santa Clara River. The proposed project also includes replacement of approximately 1,700 linear feet of 14-inch asbestos cement pipeline within Lost Canyon Road with a new 14-inch ductile iron pipeline. The proposed groundwater treatment facility would connect to this replacement pipeline, and the existing pipeline would be abandoned in place. The project would restore the use of the Lost Canyon 2A and Sand Canyon wells and reduce SCV Water's dependency on imported water. Construction materials would be staged within the project site. The maximum depth of excavation for construction would be approximately 12 feet below ground surface. Construction is anticipated to occur between May 2026 and May 2028.

The proposed project must comply with California Public Resources Code Section 21080.3.1 (Assembly Bill [AB] 52 of 2014), which requires local governments to conduct meaningful consultation with California Native American tribes that have requested to be notified by lead agencies of proposed projects in the geographic area with which the tribe is traditionally and culturally affiliated.

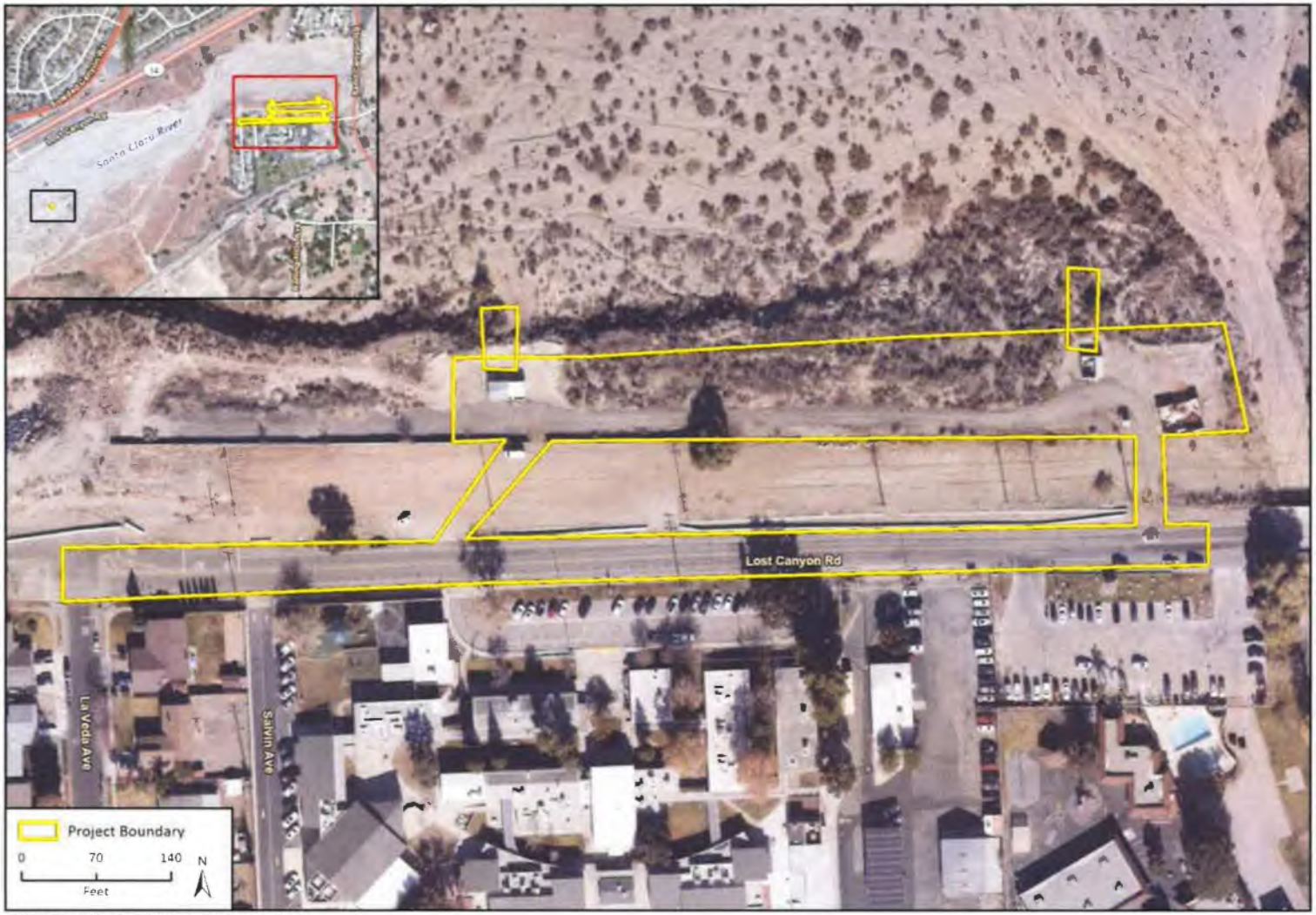
The input of the Gabrieleno Band of Mission Indians – Kizh Nation is important to SCV Water's planning process. Under AB 52, you have 30 days from receipt of this letter to respond in writing if you wish to consult on the proposed project. If you require any additional information or have any questions, please contact me at 661-714-0993 or via e-mail at maumentado@scvwa.org. Thank you for your assistance.

Sincerely,

Mark Aumentado, PE
Engineer
Santa Clarita Valley Water Agency

Attachments

Attachment 1 Project Location Maps



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San Gabriel Band of Mission Indians
Anthony Morales, Chief
P.O. Box 693
San Gabriel, California 91778
Via Email: GTTribalcouncil@aol.com

Subject: AB 52 Consultation, Lost Canyon 2A and Sand Canyon Groundwater Treatment Improvements Project, Santa Clarita, Los Angeles County, California

Dear Chief Morales:

Santa Clarita Valley Water Agency (SCV Water) is preparing an Initial Study/Mitigated Negative Declaration (IS-MND) in compliance with the California Environmental Quality Act (CEQA) for the proposed Lost Canyon 2A and Sand Canyon Groundwater Treatment Improvements Project (project). The project site is comprised of an approximately 2.7-acre impact area spanning portions of Assessor's Parcel Number (APN) 2840-006-901 (west of the intersection of Sand Canyon Road and Lost Canyon Road and immediately north of Lost Canyon Road) and APN 2840-002-901 (west of the northern terminus of Sawtooth Lane), and the public right-of-way of Lost Canyon Road in Santa Clarita, Los Angeles County. A project map is provided in Attachment 1.

The project involves decommissioning and sealing of the existing Mitchell 5B and Lost Canyon 2 wells for future use, construction of a centralized groundwater treatment facility at the location of the existing Lost Canyon 2A and Sand Canyon wells at APN 2840-006-901 along with associated above-ground and underground electrical utilities upgrades, improvements to the existing Sand Canyon and Lost Canyon 2A wells, and installation of an approximately 40-foot-long groundwater discharge pipeline between the existing Sand Canyon well and the Santa Clara River. The proposed project also includes replacement of approximately 1,700 linear feet of 14-inch asbestos cement pipeline within Lost Canyon Road with a new 14-inch ductile iron pipeline. The proposed groundwater treatment facility would connect to this replacement pipeline, and the existing pipeline would be abandoned in place. The project would restore the use of the Lost Canyon 2A and Sand Canyon wells and reduce SCV Water's dependency on imported water. Construction materials would be staged within the project site. The maximum depth of excavation for construction would be approximately 12 feet below ground surface. Construction is anticipated to occur between May 2026 and May 2028.

The proposed project must comply with California Public Resources Code Section 21080.3.1 (Assembly Bill [AB] 52 of 2014), which requires local governments to conduct meaningful consultation with California Native American tribes that have requested to be notified by lead agencies of proposed projects in the geographic area with which the tribe is traditionally and culturally affiliated.

The input of the San Gabriel Band of Mission Indians is important to SCV Water's planning process. Under AB 52, you have 30 days from receipt of this letter to respond in writing if you wish to consult on the proposed project. If you require any additional information or have any questions, please contact me at 661-714-0993 or via e-mail at maumentado@scvwa.org. Thank you for your assistance.

Sincerely,

Mark Aumentado, PE
Engineer
Santa Clarita Valley Water Agency

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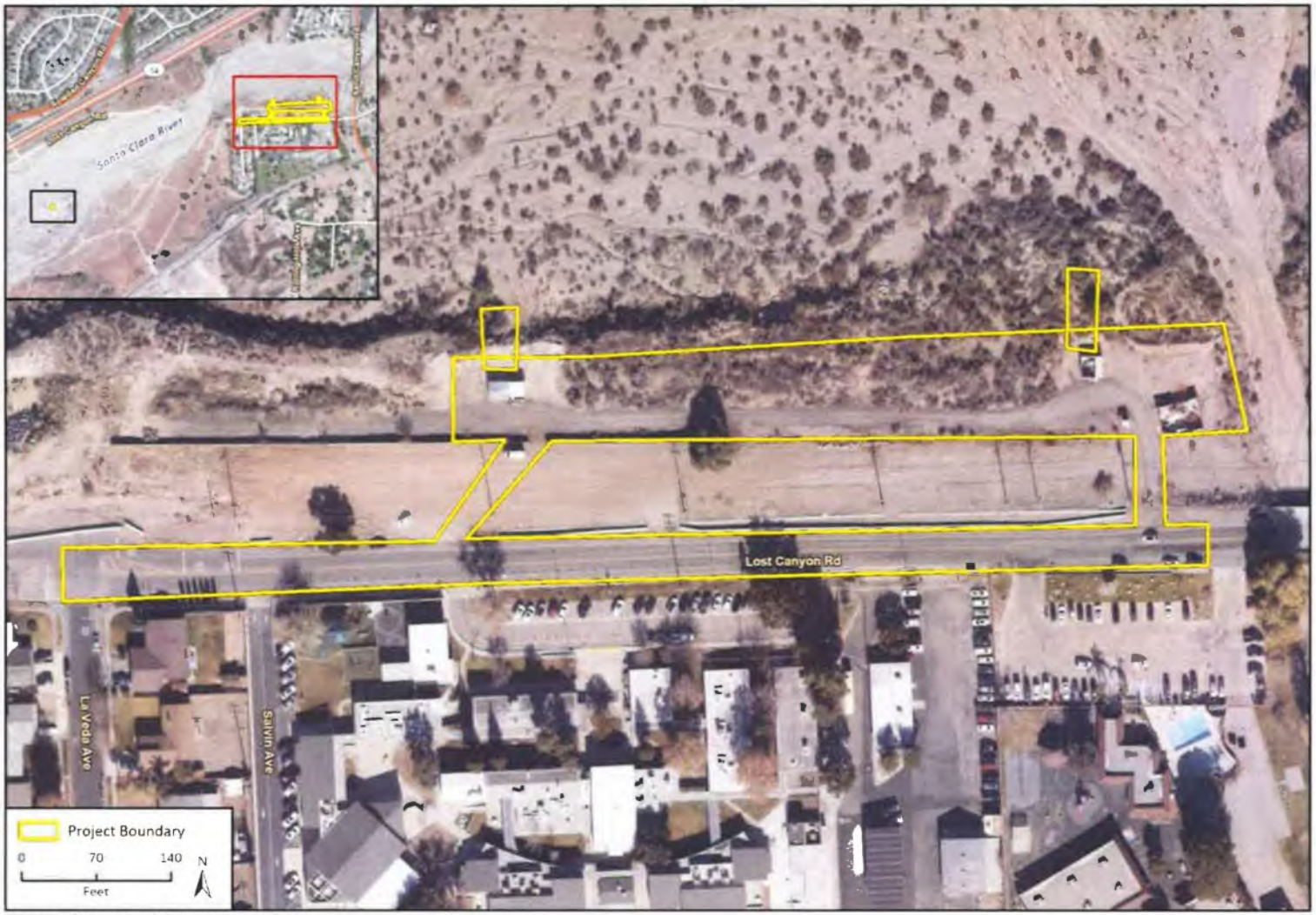

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Fernandeño Tataviam Band of Mission Indians
Sarah Brunzell, CRM Manager
1019 Second Street,I Suite 1
San Fernando, California 91340
Via Email: sarah.brunzell@tataviam-nsn.us

Subject: AB 52 Consultation, Lost Canyon 2A and Sand Canyon Groundwater Treatment Improvements Project, Santa Clarita, Los Angeles County, California

Dear Ms. Brunzell:

Santa Clarita Valley Water Agency (SCV Water) is preparing an Initial Study/Mitigated Negative Declaration (IS-MND) in compliance with the California Environmental Quality Act (CEQA) for the proposed Lost Canyon 2A and Sand Canyon Groundwater Treatment Improvements Project (project). The project site is comprised of an approximately 2.7-acre impact area spanning portions of Assessor's Parcel Number (APN) 2840-006-901 (west of the intersection of Sand Canyon Road and Lost Canyon Road and immediately north of Lost Canyon Road) and APN 2840-002-901 (west of the northern terminus of Sawtooth Lane), and the public right-of-way of Lost Canyon Road in Santa Clarita, Los Angeles County. A project map is provided in Attachment 1.

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The proposed project must comply with California Public Resources Code Section 21080.3.1 (Assembly Bill [AB] 52 of 2014), which requires local governments to conduct meaningful consultation with California Native American tribes that have requested to be notified by lead agencies of proposed projects in the geographic area with which the tribe is traditionally and culturally affiliated.

The input of the Fernandeño Tataviam Band of Mission Indians is important to SCV Water's planning process. Under AB 52, you have 30 days from receipt of this letter to respond in writing if you wish to consult on the proposed project. If you require any additional information or have any questions, please contact me at 661-714-0993 or via e-mail at maumentado@scvwa.org. Thank you for your assistance.

Sincerely,

Mark Aumentado, PE
Engineer
Santa Clarita Valley Water Agency

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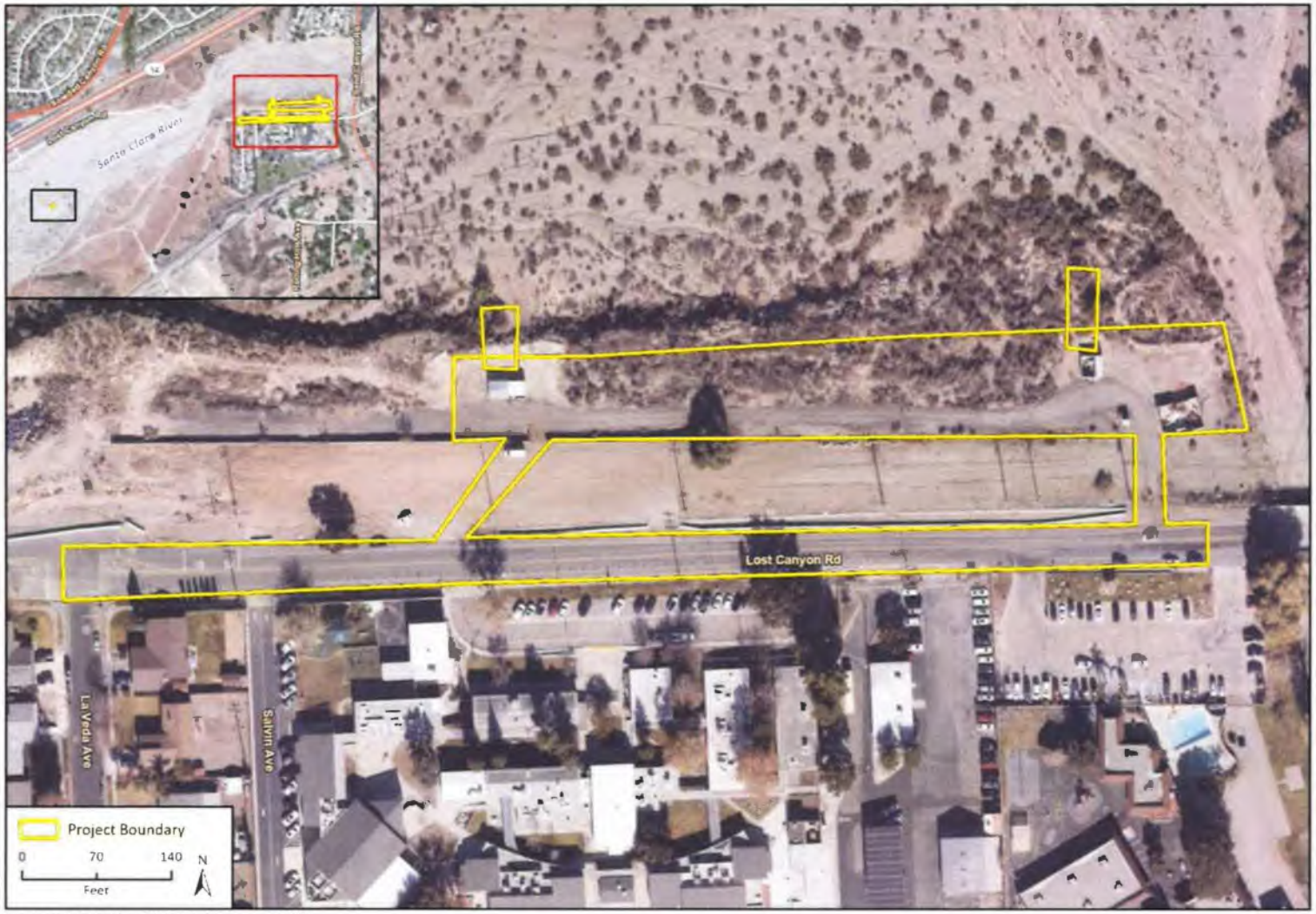

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