

E-Wells PFAS Groundwater Treatment Improvements Project

Draft Initial Study – Mitigated Negative Declaration

prepared by

Santa Clarita Valley Water Agency
26521 Summit Circle
Santa Clarita, California 91350
Contact: Wai Lan Lee, P.E., Engineer

prepared with the assistance of

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

July 2026

RINCON CONSULTANTS

Table of Contents

Initial Study 1
1. Project Title 1
2. Lead Agency Name and Address 1
3. Contact Person and Phone Number 1
4. Project Location 1
5. General Plan Designation 5
6. Zoning 5
7. Description of Project 5
8. Surrounding Land Uses and Setting 8
9. Permitting and Approvals 9
10. Have California Native American Tribes Traditionally and Culturally Affiliated with the Project Area Requested Consultation Pursuant to Public Resources Code Section 21080.3.1? 9
Environmental Factors Potentially Affected 10
Determination 10
Environmental Checklist 13
1 Aesthetics 13
2 Agriculture and Forestry Resources 17
3 Air Quality 19
4 Biological Resources 29
5 Cultural Resources 43
6 Energy 49
7 Geology and Soils 51
8 Greenhouse Gas Emissions 57
9 Hazards and Hazardous Materials 61
10 Hydrology and Water Quality 67
11 Land Use and Planning 73
12 Mineral Resources 75
13 Noise 77
14 Population and Housing 87
15 Public Services 89
16 Recreation 91
17 Transportation 93
18 Tribal Cultural Resources 95
19 Utilities and Service Systems 99
20 Wildfire 103
21 Mandatory Findings of Significance 107
References 113
List of Preparers 118

Tables

Table 1 Project Component Location Details 1
Table 2 E-Wells Groundwater Source Capacities in Urban Water Management Plan 6
Table 3 Health Effects Associated with Criteria Pollutants 20
Table 4 SCAQMD Regional Air Quality Thresholds of Significance 21
Table 5 SCAQMD LSTs for Construction and Operation 22
Table 6 Estimated Maximum Daily Regional Construction Emissions 24
Table 7 Proposed Project Operational Emissions 25
Table 8 Estimated Maximum Daily Localized Construction and Operational Emissions 26
Table 9 Estimated Construction GHG Emissions 60
Table 10 Combined Annual GHG Emissions 60
Table 11 Project Site Noise Monitoring Results – Short Term 79
Table 12 County of Los Angeles Exterior Noise Standards 81
Table 13 County of Los Angeles Construction Noise Standards 81
Table 14 Groundborne Vibration Architectural Damage Criteria 82
Table 15 Estimated Noise Levels by Construction Phase at Sensitive Receptors 83
Table 16 Construction Vibration Levels 85

Figures

Figure 1 Regional Project Location 2
Figure 2 Project Site 3
Figure 3 Representative Site Photographs 4
Figure 4 Approximate Noise Measurement Locations 80

Appendices

Appendix A CalEEMod Modeling Outputs
Appendix B Biological Resources Assessment
Appendix C RCNM Noise Modeling and Vibration Analysis

Initial Study

1. Project Title

E-Wells PFAS Groundwater Treatment Improvements Project

2. Lead Agency Name and Address

Santa Clarita Valley Water Agency
26521 Summit Circle
Santa Clarita, California 91350

3. Contact Person and Phone Number

Wai Lan Lee, P.E., Engineer
(661) 513-1273

4. Project Location

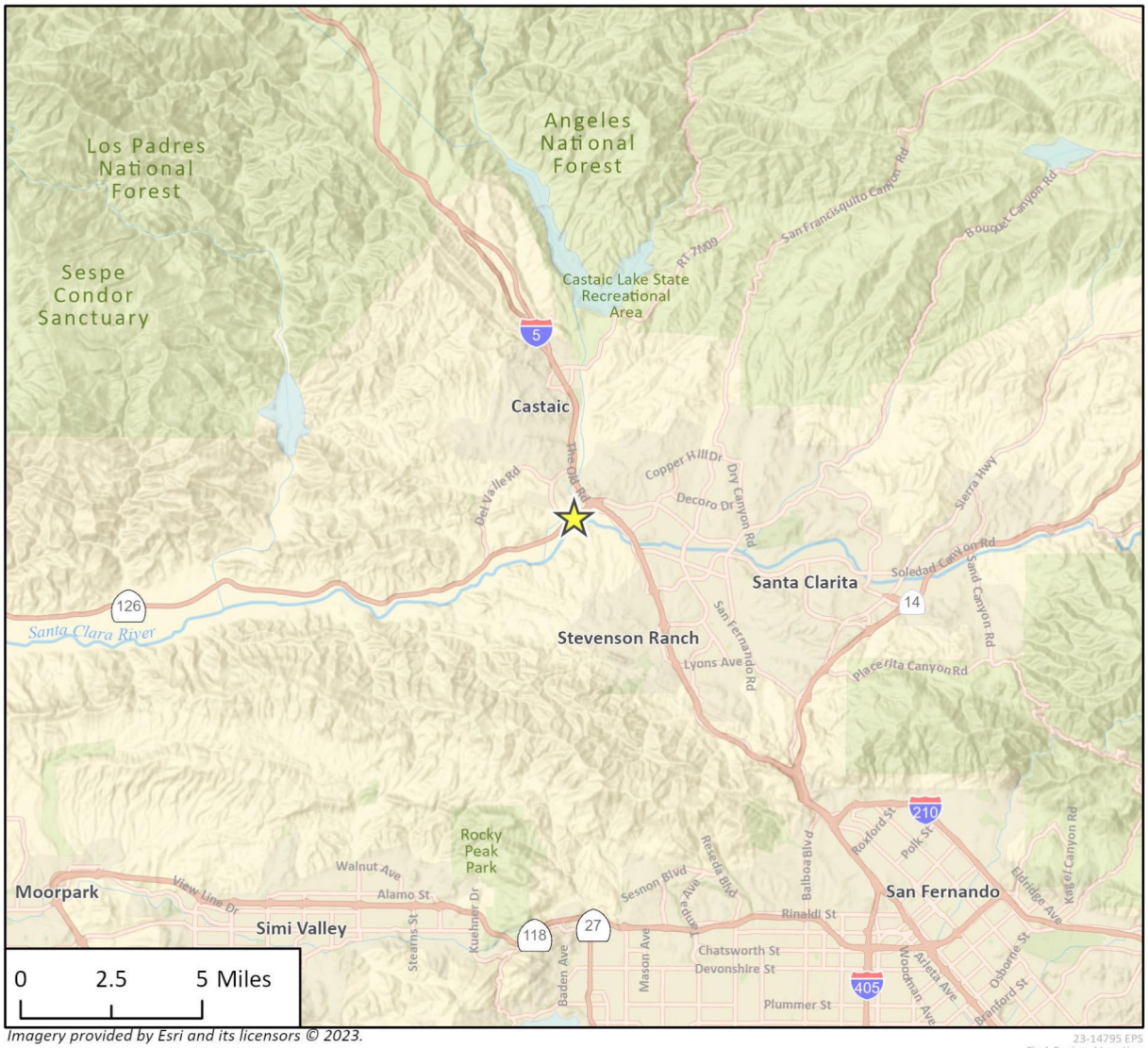
The project site is comprised of an approximately 142-acre maximum project area located within the unincorporated area of Los Angeles County, west of the City of Santa Clarita, as seen in Figure 1 and Figure 2. The project components include four existing wells (E-14, E-15, E-16, and E-17); a proposed new groundwater treatment facility; associated proposed pipeline alignments; and proposed construction staging and laydown areas. State Route (SR) 126 runs east-west through the project area, in between the proposed centralized treatment facility site and the existing E-wells bank. Details on the location, use, and size of the site where each of these project components is located is presented in Table 1.

Figure 3 shows photographs of the site and existing facilities.

Table 1 Project Component Location Details

Project Component	Assessor's ID (AIN)	Description
Existing Wells E-14, E-15, and E-16	2866-002-061	Three existing groundwater wells and appurtenant equipment sites, located along a private road to the south of Castaic Creek. All three wells are inactive.
Existing Well E-17	3271-030-091	One existing inactive groundwater well and appurtenant equipment site, located on a triangular parcel directly north of SR 126 and approximately 0.45 mile southwest of Commerce Center Drive. The parcel currently hosts heavy manufacturing uses.
Proposed centralized water treatment facility	2866-003-011	A 1.66-acre triangular parcel directly adjacent to an existing gas station located at 27241 Henry Mayo Drive, Valencia, CA 91355. The site is situated between Henry Mayo Drive and SR 126.
Proposed pipeline alignments	N/A	The proposed pipeline alignments would be located between the centralized water treatment facility and the wells. Their exact alignments are not yet known but would be located within the maximum project boundary.

Figure 1 Regional Project Location



Imagery provided by Esri and its licensors © 2023.

23-14795 EPS
Fig 1 Regional Location

Project Location

N

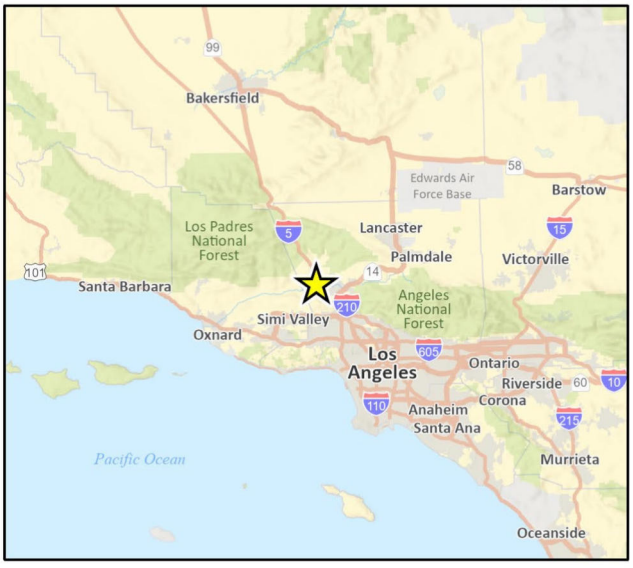


Figure 2 Project Site

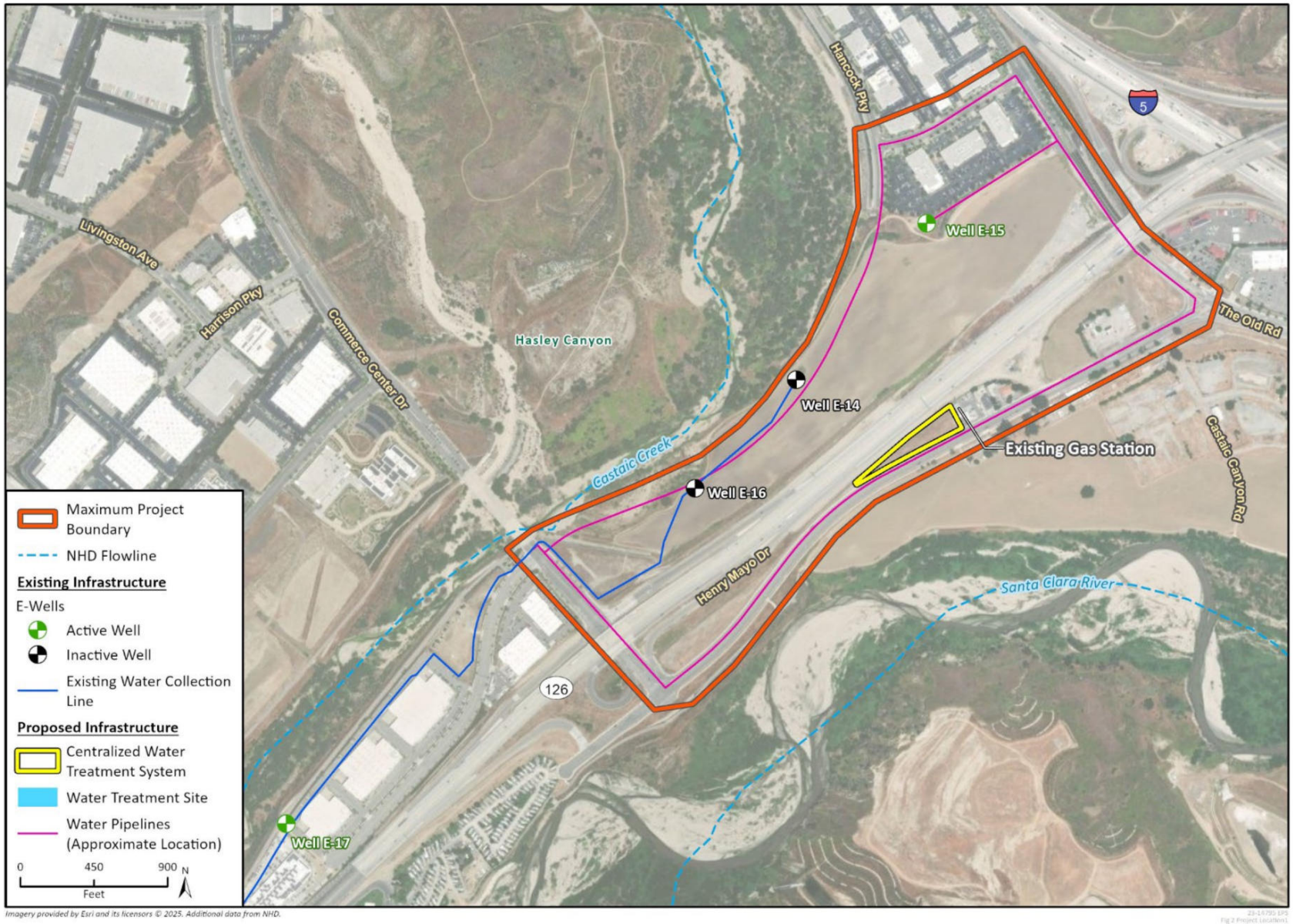


Figure 3 Representative Site Photographs



Photograph 1. View of the project area facing south, toward SR 126.



Photograph 2. View of existing dirt access road along the northern boundary of the project area, with Castaic Creek to the right (north).



Photograph 3. View from the southwestern portion of the project area, facing south along Commerce Center Drive toward SR 126.



Photograph 4. View from Henry Mayo Drive along the southern boundary of the project area, facing east.

5. General Plan Designation

The entire project area has a land use designation of Industrial Office (IO) under the Los Angeles County Santa Clarita Valley Area Plan (Los Angeles County Department of Regional Planning 2014).

6. Zoning

The proposed water treatment facility site is zoned General Commercial (C-3). The existing E-Wells and undeveloped areas within the maximum project boundary north of SR 126 are zoned Restricted Heavy Manufacturing (M-1.5-DP). The existing public roadway rights-of-way (ROW) within the maximum project boundary do not have zoning designations (Los Angeles County Department of Regional Planning 2023).

7. Description of Project

Background

Project Background

In August 2019, the California Division of Drinking Water (DDW) set notification level and response levels for various per- and polyfluoroalkyl substances (PFAS) constituents.[1] In February 2020 Santa Clarita Valley Water Agency (SCV Water) wells were tested and over 60 percent of tested wells exceeded the notification level or response level established by the DDW, resulting in 18 wells being taken out of service (SCV Water 2021). To make up for the resulting loss of groundwater production, SCV Water has relied on the purchase of additional imported water supplies to meet local demand.

Within their groundwater system, SCV Water owns four wells (E-14, E-15, E-16, and E-17), referred to collectively as a bank of E-Wells, located near the Castaic junction. Wells E-15 and E-17 are equipped with pumps and have previously been operational. Wells E-15 and E-17 were tested as part of the testing program conducted in 2020 and exceeded the notification level for PFAS compounds but not the response level. As a result, these wells have been inactive since 2024. Wells E-14 and E-16 are not equipped with pumps and have never been active so were not tested in 2020. However, due to their proximity to Wells E-15 and E-17, Wells E-14 and E-16 are presumed to also be impacted by PFAS compounds and would exceed DDW levels if they were to come into production (SCV Water 2021).

SCV Water's 2020 Urban Water Management Plan (UWMP) accounts for future water production from all four E-Wells. Wells E-15 and E-17 are characterized as "existing wells." Wells E-14 and E-16 are characterized as "future wells" in the UWMP because they are not yet equipped with pumps and have not been in production. However, the UWMP identifies a future facility for PFAS treatment of water produced by the E-wells and estimates all four E-wells will be operational by 2026 (SCV Water 2021). Because all four wells have been drilled and the casings have been installed, the analysis discussed in this document refers to them as "existing wells" except when referring specifically to the UWMP.

The E-Wells bank overlies the Santa Clara River Valley East Groundwater Subbasin (Basin). In 2022, the Santa Clarita Valley Groundwater Sustainability Agency (SCV-GSA) finalized the Santa Clara River Valley East Groundwater Subbasin Groundwater Sustainability Plan (GSP). The GSP includes a presentation of the historical, current, and projected future water budgets for the Basin. These water budgets were developed using a groundwater flow model that simulates the natural and human-induced interactions taking place throughout the Basin between surface and groundwater. The GSP modeling also considers impacts on groundwater dependent ecosystems (GDEs). The GSP water budgets account for future

[1] A notification level is the concentration at which DDW recommends utilities inform their customers about the presence of chemicals within distributed drinking water that could cause health concerns. A response level is the concentration at which DDW recommends a water supply, in this case a well, be taken out of service, pending treatment.

production from all four E-wells. The GSP modeling indicates anticipated future pumping is unlikely to cause an overdraft condition in the local groundwater system (SCV-GSA 2022).

Table 2 identifies the groundwater source capacities identified for each of the E-Wells in the UWMP, including normal year and dry year source capacities as determined by the GSP water budget analysis.

Project Description

The E-Wells PFAS Groundwater Treatment Facility Project (herein referred to as "proposed project" or "project") involves construction of a PFAS groundwater treatment facility (centralized treatment facility) and associated pipelines to collect and treat groundwater pumped from Wells E-14, E-15, E-16, and E-17. The project would not expand the capacity or increase historical production from recently active Wells E-15 and E-17. The project would enable SCV Water to activate Wells E-14 and E-16, with anticipated groundwater production capacities of up to 1,200 gpm each, as identified in the UWMP and shown in Table 2. The project would treat PFAS in pumped groundwater to levels below the federal Maximum Contaminant Level, restore the use of the E-Wells, and reduce SCV Water's dependency on imported water.

Table 2 E-Wells Groundwater Source Capacities in Urban Water Management Plan

Well	Permitted Capacity (gpm)	Maximum Annual Capacity (AF)	GSP Water Budget Analysis	
			Normal Year (AF)	Dry Year (AF)
"Existing" Wells				
Well E-15	1,400	2,260	725	620
Well E-17	1,200	1,940	725	620
"Future" Wells				
Well E-14	1,200	1,940	725	610
Well E-16	1,200	1,940	725	610
Total	**5,000**	**8,080**	**2,900**	**2,460**

gpm - gallons per minute; AF – acre-feet; GSP – Groundwater Sustainability Plan

Source: SCV Water 2021

The E-Wells bank is permitted to generate up to a total of 5,000 gallons per minute of water. The well-by-well GSP modeling currently identifies that this bank of E-Wells can produce up to 2,900 acre-feet per year (AFY) in a normal year, or 2,460 AFY in a dry year, without resulting in adverse impacts to sustainable groundwater management.

Centralized Treatment Facility

The proposed PFAS treatment facility would be located on AIN 2866-003-011, between Henry Mayo Drive and SR 126. The centralized treatment facility would include the following treatment components:

- Cartridge filtration system as a pretreatment to remove suspended particles;
- Up to six ion exchange (IX) vessels (lead/lag configuration) for the removal of PFAS compounds; and
- Disinfection facility composed of on-site sodium hypochlorite generation system and liquid ammonium sulfated system located inside a building.

The facility would be enclosed with an up to approximately 15-foot-high decorative wall and architectural paneling to screen the treatment vessels and other site improvements. Vehicular access to the site would be provided by two driveways along Henry Mayo Drive. For additional security, the pedestrian doors at the facility would be equipped with a key fob system.

In addition, the facility may include a 12-inch pump station and up to two 250-horsepower KW emergency generator.

Water Pipelines

The project would include installation of up to 5,000 linear feet (LF) of raw water collector pipelines, 6,000 LF of treated water pipelines, and up to 3,000 LF of recycled water pipelines. These pipelines would facilitate the conveyance of raw water produced from the E-Wells to the centralized treatment facility, and conveyance of recycled and treated water to and from existing SCV Water pipeline infrastructure in this area.

The project is currently under design. The proposed general location of the water pipelines are shown in Figure 2. It is likely that water pipelines would be sited outside of Castaic Creek and its associated riparian corridor. However, to provide a conservative and complete analysis of all potential environmental impacts associated with the project, it is assumed that all water pipelines would ultimately be located within the Maximum Project Boundary shown in Figure 2 and may require work within Castaic Creek and its associated riparian corridor.

Well Improvements

The project includes improvements at the existing E-Wells. All work would be completed within the existing, fenced facility footprints for these wells in previously disturbed areas. Wells E-14 and E-16 would be equipped with new pumps. Shrubs and ground cover may be removed, as needed, during installation of these improvements, but no trees would be altered or removed.

Construction Activities

Construction of the proposed project would occur between January 2027 and December 2028. Construction activities would typically occur between 7:00 a.m. and 4:00 p.m., Monday through Friday. Construction activities would include ground disturbing activities such as excavation, construction staging, material stockpiling, temporary lane closures, and possible groundwater dewatering.

The maximum depth of excavation would be 30 feet, with an average excavation depth of four to five feet. Centralized treatment facility construction would require approximately 65,000 square feet of ground disturbance, and the pipeline construction would require approximately 45,000 square feet of ground disturbance. Improvements to existing wells would only require surficial ground disturbance, if any.

The pipeline at the highway crossing would be installed via trenchless methods underneath SR 126. Trenchless installation would involve the use of a drilling rig to create an underground crossing between the California Department of Transportation (Caltrans) ROW and SR 126. The drilling rig would install a casing through the underground pathway without disturbing the ground surface within the SR 126 ROW. Entry and exit pits up to 30 feet in depth and up to 900 square feet in surface area would be installed on the north and south sides of SR 126 to accommodate the equipment. During trenchless installation, a diesel generator would be used to power construction equipment. All other pipelines would be installed via conventional open-cut trench methods.

Construction staging would primarily occur at the western end of the centralized treatment facility site and at the existing E-Wells sites. In addition, temporary staging and materials stockpiling would occur along the open-cut trench pipeline alignments in a linear fashion as pipelines are installed.

Temporary lane closures may be necessary on Henry Mayo Drive during pipeline installation activities. Signage and traffic control measures would be implemented, including a flag person to direct traffic flows.

Project construction may require groundwater dewatering if groundwater is encountered during ground disturbing activities (e.g., open-cut trench digging). In addition, upon completion of pipeline installation, there would be discharges of water associated with disinfecting and pressure testing the newly installed pipeline. Dewatered groundwater and pipeline testing discharges would either be discharged to the

nearest storm drain or to Castaic Creek. Water would be tested prior to discharge and may require treatment. All water discharged to Castaic Creek would comply with SCV Water's existing National Pollutant Discharge Elimination System (NPDES) permit requirements (Order WQ 2014-0194-DWQ, General Order No. CAG140001, Waste Discharge Identification Number 4DW0439). These permit requirements include but are not limited to implementation of best management practices to prevent discharges from entering the Santa Clara River Reach 5,[2] compliance with applicable effluent limitations for chlorine residual and turbidity, and conducting monitoring and reporting in compliance with the provisions in the Monitoring and Reporting Program of the Statewide Drinking Water Systems Discharge Permit.

Operation and Maintenance

As part of the proposed project, Wells E-14 and E-16 would be equipped and brought online, with a permitted groundwater pumping capacity of up to 1,200 gpm each. Wells E-15 and E-17 would produce groundwater at a similar rate as to when they were active prior to being taken offline in 2024. The E-Wells and treatment facility would operate up to 24 hours per day, 365 days per year. The four well pumps would be individually controlled and monitored through supervisory control and data acquisition (SCADA), allowing SCV Water to turn on any combination of one to four well pumps at a time.

It is anticipated approximately 2,460 to 2,900 acre-feet per year of groundwater would be pumped in total, depending on hydrologic year type. Annual groundwater pumping rates under this project would not exceed the pumping quantities provided in the groundwater level simulations used in the GSP or the permitted capacity of the E-Wells bank. Through consistent monitoring of groundwater levels at SCV Water's new monitoring wells in the local area, pumping rates would be adjusted, as needed, to prevent adverse impacts to downstream GDEs consistent with the GSP monitoring program.

Operation of the proposed project would require approximately 1,920 megawatt-hours (MWh) of electricity annually.[3] Up to four maintenance staff would visit the project site per week. Resin media would be replaced two to three times a year, which would require the use of a semitruck. In addition, chemical deliveries to the proposed disinfection building would occur approximately twice a month via a midsize delivery truck. Maintenance vehicles would park within the centralized treatment facility site. The vessels would have a life expectancy of approximately 30 to 50 years and may be re-coated approximately every 10 years.

Lighting would be provided within the centralized treatment facility and would be set on a timer controlled at the entrance of the project site. Sodium hypochlorite (chlorine) and liquid ammonium sulfate would be stored at the proposed facility in a completely enclosed structure (concrete masonry building) 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 the 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.

8. Surrounding Land Uses and Setting

Surrounding land uses in the vicinity of the project area include an existing gas station directly east of the proposed centralized treatment facility site; the Santa Clara River south of Henry Mayo Drive; Commerce Center Drive directly west of the maximum project boundary; and undeveloped area (Castaic Creek and

[2] Santa Clara River Reach 5 is a roughly six-mile portion of the Santa Clara River between the Los Angeles-Ventura County boundary to the east and Interstate 5 to the west.
[3] All project components are estimated by SCV water to require 160 MWh per month. Multiplied by 12 months, the project would require approximately 1,920 MWh per year.

Hasley Canyon) to the north of the existing E-Wells sites. In addition, manufacturing land uses surround the existing Well E-17 site and abut the existing Well E-15 site to the north.

9. Permitting and Approvals

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 Los Angeles County's building and zoning ordinances.

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

- 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
- Encroachment permit from Caltrans for construction activities within the ROW

Depending on the ultimate location of the water pipelines, the project may also require the following permits:

- Lake and Streambed Alteration Agreement from the California Department of Fish and Wildlife
- Section 401 Water Quality Certification from the Los Angeles Regional Water Quality Control Board

10. 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 October 25, 2023, SCV Water distributed Assembly Bill (AB) 52 consultation letters for the proposed project, including project information, map, and contact information, to 12 Native American tribes locally and culturally affiliated with the project area. SCV Water received a response from the Coastal Band of the Chumash Nations. Other tribes contacted either did not request consultation or provided no response. The consultation window closed on November 24, 2023. On December 19, 2025, SCV Water distributed an updated letter to the same tribes since the project area had changed since initial letters were sent in 2023. SCV Water received a request to initiate consultation from the Fernandeño Tataviam Band of Mission Indians on April 14, 2026. Section 18, *Tribal Cultural Resources*, 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.

Wai Lan Lee	7-9-2026
Signature	Date
Wai Lan Lee	Engineer
Printed Name	Title

This page intentionally left blank.

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 County's General Plan Conservation and Natural Resources Element, scenic vistas (termed "scenic viewsheds") are defined as the area visible from a specific vantage point, such as a roadway, park, trail, or neighborhood, bounded by the viewer's field of view to the nearest ridgeline and encompassing notable natural landforms like ridgelines, rock outcroppings, waterfalls, ocean views, or other distinctive scenic features (Los Angeles County 2015).

The project site is adjacent to Henry Mayo Drive and State Route 126, surrounded by developed areas. The surrounding mountains include the Santa Susana Mountains to the south and west, the San Gabriel Mountains to the southeast, and the Sierra Pelona Mountains to the north, all of which are part of the Transverse Ranges. Long-range views of these mountains are visible from portions of both Henry Mayo Drive and State Route 126. However, intervening commercial and residential development and roadway infrastructure limit the extent and continuity of these views along both corridors.

The proposed project involves the construction of a centralized treatment facility and associated pipelines, as well as bringing Wells E-14 and E-16 online. Surrounding land uses in the project vicinity include an existing gas station immediately adjacent to the site, the Santa Clara River south of Henry Mayo Drive, Commerce Center Drive to the west, and Castaic Creek and undeveloped areas to the north of the site. The project components would not substantially block middle- or background-range views of the surrounding mountains or other visual resources, as the new facilities would be located in a developed area and would not extend above the visual plane established by existing development. Further, the proposed centralized treatment facility and associated pipelines would be visually similar in form, scale, and character to the existing wells already present on site. The treatment facility would also be located next to an existing gas station, and its industrial appearance would be consistent with the adjacent built

environment. All proposed aboveground project components would be enclosed within an approximately 15-foot-high decorative wall and architectural paneling. 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 State Route (SR) 2 (Angeles Crest Highway), approximately 27 miles southeast of the project site. Due to the distance and intervening topography between SR 2 and the project site, the project would not be visible from this highway. Therefore, no impact to scenic resources within view of 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?

Under Public Resources Code Section 21071(a), an urbanized area is either an incorporated city with a population of at least 100,000 persons, or certain qualifying unincorporated areas that meet population, density, and planning consistency criteria. Although the project site is near Santa Clarita city limits, it is located in unincorporated Los Angeles County and does not meet the provisions of Public Resources Code Section 21071(a) and is considered a non-urbanized area.

The project would not substantially degrade the existing visual character or quality of public views of the site. The project would involve reactivating Wells E-15 and E-17, which are existing structures located within developed areas of nearby commercial development. Reactivation of the wells would not involve substantial changes to the existing well infrastructure. The project would also involve construction of wells E-14 and E-16 and the centralized treatment facility. The new well infrastructure and enclosures for wells E-14 and E-16 would be located several hundred feet from Henry Mayo Drive, Commerce Center Drive, and other areas where public views of the site are accessible, and would be relatively small in size and footprint. The new well infrastructure would not substantially alter the character of the undeveloped area or vegetated corridor along Castaic Creek. As discussed above, the treatment facility would be located next to an existing gas station, and its industrial appearance would be consistent with the adjacent built environment. All proposed aboveground project components would be enclosed within an approximately 15-foot-high decorative wall and architectural paneling. Therefore, the project would not substantially degrade existing visual character or the quality of public views and impacts would be less than significant.

LESS-THAN-SIGNIFICANT IMPACT

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

Construction of the proposed project would occur over approximately 24 months. Construction of the proposed project would typically take place Monday to Friday between 7:00 a.m. to 4:00 p.m. Project construction would generally occur during daytime hours and would generally not require the use of lighting. As described under *Construction Activities* in Initial Study Section 8, *Project Description*, nighttime lighting would be temporary and would be directed downward to avoid light spilling outside of the working area. 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, none of the proposed project components would produce glare. Exterior lighting fixtures would need to comply with the County's Outdoor Lighting Standards within Section 22.80.040 of the County Code. These standards include ensuring all lighting fixtures are directed downward and designed so the luminary and/or lens does not protrude below the luminary housing and is not visible from a public right-of-way. 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

This page intentionally left blank.

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 has a land use designation of Industrial Office (IO) under the Los Angeles County Santa Clarita Valley Area Plan (Los Angeles County Department of Regional Planning 2014). 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 (DOC 2025a). Surrounding land uses include SR 126, residential and commercial development, Logix Headquarters to the southwest, the Valencia Travel Village RV Resort to the south, a shopping center to the northwest, and undeveloped land to the east. Because the site does not contain Prime Farmland, Unique Farmland, or Farmland of Statewide Importance, the project would not convert agricultural land to non-agricultural use. The site is not zoned for agricultural, timberland, or forest land uses; is not under a Williamson Act contract; and does not

contain forest land. The site is also not located adjacent to farmland or forest land. As a result, the project would not contribute to the conversion of these land types 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),[4] 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.
- 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.

[4] 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.

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. Table 3 presents the human health impacts associated with all criteria air pollutants. 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 currently designated nonattainment for the NAAQS for ozone, $PM_{2.5}$, and is in partial nonattainment for lead. Additionally, it is nonattainment for 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 3 Health Effects Associated with 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.
Carbon monoxide (CO)	Reduces oxygen delivery leading to: (1) aggravation of chest pain (angina pectoris) and other aspects of coronary heart disease; (2) decreased exercise tolerance in persons with peripheral vascular disease and lung disease; (3) impairment of central nervous system functions; and (4) possible increased risk to fetuses.
Nitrogen dioxide (NO_2)	(1) Potential to aggravate chronic respiratory disease and respiratory symptoms in sensitive groups; (2) risk to public health implied by pulmonary and extra-pulmonary biochemical and cellular changes and pulmonary structural changes; and (3) contribution to atmospheric discoloration.
Sulfur dioxide (SO_2)	(1) Bronchoconstriction accompanied by symptoms that may include wheezing, shortness of breath, and chest tightness during exercise or physical activity in persons with asthma.
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).
Lead	(1) Learning disabilities; (2) impairment of blood formation and nerve function; (3) cardiovascular effects, including coronary heart disease and hypertension; and (4) possible male reproductive system effects.

Source: USEPA 2025

Air Quality Management

Since 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 4.

Table 4 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 2008a).

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 disturbance area is approximately 2.5 acres; 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 25 meters, 50 meters, 100 meters, 200 meters, and 500 meters between the project disturbance boundary to the sensitive receptors. The nearest sensitive receptors to the project site are RV homes at the Valencia Travel Village RV Resort approximately 745 feet (227 meters) southwest of the project site along Henry Mayo Drive. Therefore, the analysis uses LST values for 200 meters, consistent with SCAQMD methodology (SCAQMD 2008a). LSTs for projects in SRA 13 on a two-acre site with a receptor 200 meters away are shown in Table 5.

Table 5 SCAQMD LSTs for Construction and Operation

	Allowable Emissions for a Two-Acre Site in SRA 13 for a Receptor 200 Meters Away (pounds per day)	
Pollutant	**Construction**	**Operation**
Gradual conversion of NO_X to NO_2	204	204
CO	3,108	3,108
PM_{10}	59	15
$PM_{2.5}$	20	5

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 7, *Description of 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 January 2027 and end in December 2028. Based on the project's details, CalEEMod provides assumptions for equipment lists, construction sub-phase schedule, and construction vehicle trips. The project site is vacant and would not include a demolition phase. Excavated soils during the site preparation and grading phase would be used as backfill on the site, and therefore there would be no soil import or export. 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, area source, and stationary source emissions. Mobile source emissions would be generated by weekly site visits, monthly chemical deliveries, and resin change-outs, which would occur approximately three times per year. Trip generation rates in CalEEMod were adjusted to reflect approximately 470 annual vehicle trips, assuming each trip represents a round trip to and from the project site. In addition, the mobile fleet mix in CalEEMod was adjusted to 11.5 percent heavy-heavy duty truck and 88.5 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 architectural coatings. Stationary sources would consist of two emergency generators, each assumed to be 250 horsepower. It is also assumed that each generator would operate for a maximum of two hours per day and up to 200 hours annually (SCAQMD 2026a). 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?

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).[5]

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 collect and treat groundwater pumped from Wells E-14, E-15, E-16, and E-17 to reduce PFAS levels below the federal Maximum Contaminant Level. The project would enable SCV Water to continue providing its existing customers with a safe, reliable water supply. Therefore, the proposed project would not exceed the 2022 AQMP growth assumptions.

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 6 and Table 7 under thresholds b and c, the 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.

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

[5] 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.

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 architectural coating and the drying of paving. Table 6 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.

Table 6 Estimated Maximum Daily Regional Construction Emissions

	Maximum Daily Pollutant Emissions (pounds per day)					
Construction	**VOC**	**NO_x**	**CO**	**SO_2**	**PM_{10}**	**$PM_{2.5}$**
2027	12	33	44	<1	4	2
2028	2	19	25	<1	2	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), area sources (e.g., architectural coatings), and stationary sources (e.g., generators).[6] Table 7 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.

[6] 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).

Table 7 Proposed Project Operational Emissions

Operations	Maximum Daily Pollutant Emissions (pounds per day)					
	VOC	NO_x	CO	SO_2	PM_{10}	$PM_{2.5}$
Mobile	1	3	10	<1	4	1
Area	<1	<1	<1	<1	<1	<1
Stationary	2	5	4	<1	<1	<1
Project Emissions	3	8	14	<1	4	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

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 long term residents at the Valenica Travel Village RV Resort approximately 745 feet southwest of the project site along Henry Mayo Drive.

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 2024 were 1.2 parts per million for the one-hour and 0.7 pp parts per million m for eight-hour periods (SCAQMD 2025). 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 28 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 weekly site visits, monthly chemical deliveries, and periodic resin changeout trips by SCV Water staff, totaling approximately 470 one-way trips annually. 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 8 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 8 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	33	41	3	2
SCAQMD LST	204	3,108	59	20
Threshold Exceeded?	**No**	**No**	**No**	**No**
Maximum Operational On-site Emissions	5	5	<1	<1
SCAQMD LST	204	3,108	15	5
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 over approximately two years with sensitive receptors approximately 745 feet from 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. According to the California Office of Environmental Health Hazard Assessment, health risk assessments, which determine the exposure of sensitive receptors to toxic emissions, should be based on a 30-year exposure period (assumed to be the approximate time that a person spends in a household). The California Office of Environmental Health Hazard Assessment recommends this risk be bracketed with 9-year and 70-year exposure periods. Health risk assessments should be limited to the period/duration of activities associated with a proposed project.

The maximum PM_{10} exhaust emissions, which are used to represent DPM emissions for this analysis, would occur during the project site preparation and grading construction phase. While project site preparation and grading emissions represent the worst-case condition, such activities would only occur for 215 days, which is approximately two percent of the 30-year and less than one percent of the 70-year health risk calculation periods.

As shown in Table 8, construction-phase emissions are well below SCAQMD's LST for $PM_{10,}$ which is designed to protect sensitive receptors from localized impacts. In addition, exposure within 1,000 feet of construction at a given sensitive receptor would occur for only a limited portion of the overall construction period. The project would install approximately 19 linear feet of pipeline per day[7] and would expose sensitive receptors to heavy equipment for approximately 27 days.[8] According to OEHHA guidance, projects lasting less than two months are considered very short-term, and a detailed assessment of TAC exposure for sensitive receptors is not recommended. Additionally, DPM concentrations would decrease by approximately 70 percent at a distance of 500 feet from DPM emitting source (CARB 2005). Wind rose data from the nearest air monitoring station at the County of Los Angeles Department of Public Works indicates that prevailing winds from the northwest to southeast would likely carry TAC emissions away from the nearest sensitive receptor, further minimizing potential exposure (SCAQMD 2026b). The project would be consistent with the applicable AQMP requirements and control strategies intended to reduce emissions from construction equipment and activities. The project would also 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. Therefore, the project 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.

[7] Total pipeline (14,000 linear feet) divide by total pipeline construction days (730 days) = 19.2 linear feet per day
[8] CARB recommends siting sensitive receptors 1,000 feet from TAC emitting sources (CARB 2005). A sensitive receptor would be exposed to the project construction approaching from 255 feet away and project construction residing 255 feet away (sensitive receptors are approximately 745 feet away from nearest pipeline construction area). Therefore, a sensitive receptor would be exposed for 26.5 construction days = (510 feet divide by 19.2 feet installation per day).

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 County of Los Angeles). 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 on the Biological Resources Assessment prepared for the project, which is included as Appendix B. For the purposes of this analysis, the Biological Study Area is comprised of the maximum project boundary plus a 100-foot buffer to capture potential direct and indirect impacts to biological resources. As part of the Biological Resources Assessment, Rincon Consultants (Rincon) conducted two field reconnaissance surveys of the Study Area in November 2023 and 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 County 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

The BRA evaluated the potential for 39 special-status plant species tracked by CDFW's California Natural Diversity Database (CNDDB) and California Native Plant Society to occur within the Survey Area. 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 species evaluated, white rabbit-tobacco (*Pseudognaphalium leucocephalum*), Parry's spineflower (*Chorizanthe parryi* var. *parryi*), and San Fernando Valley spineflower (*Chorizanthe parryi* var. *fernandina*, State Endangered [SE]) have moderate potential to occur within the Study Area.

Suitable habitat for white rabbit-tobacco, Parry's spineflower, and San Fernando Valley spineflower occur within the banks of Castaic Creek, the Fremont cottonwood woodland, sandbar willow thickets, tamarisk thickets, brittle bush scrub, and California sagebrush – California buckwheat scrub. These vegetation communities occur within the project site and could be directly impacted by project activities. As a result, direct impacts to these special-status species could occur if their habitat is removed or disturbed. In addition, if species are present during construction, indirect impacts may result from habitat modifications, such as the introduction of invasive species from construction equipment, contamination of soils, or habitat degradation due to accidental fuel spills. Accordingly, impacts to special-status plant species are potentially significant and mitigation is required. Because the final locations of individual project components have not yet been determined by SCV Water, the analysis evaluates a conservative maximum project boundary encompassing all vegetation communities that could reasonably be affected. With the implementation of Mitigation Measures BIO-1 through BIO-6, potential and indirect impacts to special-status plant species would be reduced to a less-than-significant level.

Special-Status Wildlife Species

48 special-status wildlife species, as tracked by the CNDDB and California Native Plant Society, have the potential to occur within the Study Area. This assessment was based on the presence of suitable habitat observed during the field survey, as well as existing data on species distributions and regional occurrences. Of the species evaluated, coastal whiptail (*Aspidoscelis tigris stejnegeri*, CDFW SSC), coast horned lizard (*Phrynosoma* blainvillii, CDFW SSC), and Cooper's hawk (*Astur cooperii*, CDFW Watch List) have high potential to occur in the Study Area. Additionally, Crotch's bumble bee (*Bombus crotchii*, State Candidate), unarmored threespine stickleback (*Gasterosteus aculeatus williamsoni*, FE, SE), arroyo chub (*Gila orcuttii*, SSC), Santa Ana sucker (*Pantosteus santaanae*, FT, SSC), loggerhead shrike (*Lanius ludovicianus*, CDFW SSC), and least Bell's vireo (*Vireo bellii pusillus*, FE, SE) have moderate potential to occur.

Suitable habitat for coastal whiptail, coast horned lizard, Crotch's bumble bee, unarmored threespine stickleback, arroyo chub, and Santa Ana sucker includes California sagebrush – California buckwheat scrub, brittle bush scrub, the Castaic Creek channel, and Fremont cottonwood woodlands. These vegetation communities occur within the project site and could be directly impacted by project activities. As a result, direct impacts to these special-status species could occur if their habitat is removed or disturbed. In addition, if individuals are present during construction, indirect impacts may result from increased noise, vibrations, and dust. These disturbances could cause individuals to flush from cover, increasing their vulnerability to predation or vehicle strikes. Accordingly, impacts to special-status wildlife species are potentially significant and mitigation is required. Because the final locations of individual project components have not yet been determined by SCV Water, the analysis evaluates a conservative maximum project boundary encompassing all areas where ground disturbance or habitat modification could occur. With the implementation of Mitigation Measures BIO-7 through BIO-10, potential direct and indirect impacts to special-status wildlife species would be reduced to a less-than-significant level.

Nesting Birds

Within the Study Area, there is suitable nesting habitat for Cooper's hawk and Loggerhead shrike in the Fremont cottonwood woodland vegetation community. Suitable nesting habitat for least Bell's vireo also occurs in Fremont cottonwood woodland, sandbar willow thickets, and tamarisk thicket vegetation communities. Project activities could directly impact these species if construction removes or disturbs nesting habitat. Construction-related noise, dust, and human activity could also cause indirect impacts that lead to nest abandonment or failure. Impacts to nesting birds and impacts associated with the removal or disturbance of foraging or dispersal habitat would be potentially significant.

The project site also contains habitat that may support special-status avian species, including resident and migratory passerine and raptors protected under the CFGC and the Migratory Bird Treaty Act. Although no nests were observed during the field reconnaissance survey, suitable nesting habitat is present in the trees and shrubs within and adjacent to the project site. Raptors may also nest within the taller trees in the area.

As such, the project could result in direct or indirect impacts to nesting avian species. Direct impacts may include mortality from vehicle or equipment strikes and physical disturbance to active nests. Indirect impacts from construction noise, vibrations, and dust could cause birds to flush from cover, increasing their exposure to predators or vehicle strikes. These disturbances could also lead to nest abandonment, egg or chick predation, or egg loss due to vibrations. Because the final locations of individual project components have not yet been determined by SCV Water, the analysis evaluates a conservative maximum project boundary encompassing all nesting birds and habitats that could reasonably be affected. Impacts to nesting birds and special-status avian species are potentially significant, and Mitigation Measures BIO-11 and BIO-12 are required to minimize the potential for direct impacts. The project may also result in the modification of nesting bird habitat, which would be a potentially significant impact. Mitigation Measure BIO-13 and BIO-14 would require avoidance of riparian habitat and sensitive natural communities that contain habitat, and would require compensatory mitigation if impacts cannot be avoided.

As discussed under "Water Pipelines" in the Project Description, the project is currently under design and the final location of the water pipelines is currently unknown. To provide a complete analysis of all potential environmental impacts associated with the project, it is assumed that all water pipelines would ultimately be located within the Maximum Project Boundary. The following mitigation measures are only required if the water pipelines or other project components are located within particular vegetation communities or areas of the project site, which are specified in each measure:

- BIO-4: Special-Status Plant Surveys
- BIO-5: Special-Status Plant Avoidance Measures
- BIO-6: Special-Status Plant Mitigation and Monitoring Plan
- BIO-7: Crotch's Bumble Bee Avoidance, Minimization, and Compensation Measures

- BIO-10: Special-Status Reptile Pre-Activity Survey
- BIO-11: Least Bell's Vireo Pre-Construction Surveys

Mitigation Measures

BIO-1 General Best Management Practices

SCV Water shall require the project construction contractor(s) and their personnel to adhere to the following general BMPs during project construction:

- Project-related vehicles shall observe a 10-mile-per-hour speed limit within the unpaved limits of construction.
- All open trenches or excavations shall be fenced and/or sloped to prevent entrapment of wildlife species.
- 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.
- To avoid disturbance and inadvertent harm to wildlife, no deliberate feeding of wildlife shall be allowed and no pets or firearms should be allowed on the project site.
- Vehicle or equipment maintenance shall be performed in designated staging areas.
- Access to the construction area outside of established work hours for the project shall be prohibited.
- If construction must occur at night (i.e., between dusk and dawn), all lighting shall be shielded and directed downward to minimize the potential for glare or spillover.
- During construction, heavy equipment shall be operated in accordance with standard BMPs. All equipment used on-site should be properly maintained to avoid leaks of oil, fuel, or residues. Provisions shall be in place to remediate accidental spills.
- 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 biological monitor (recommended under Mitigation Measure BIO-8). The construction foreman or biological monitor should immediately notify SCV Water.
- Prior to entering the project site, construction equipment shall be inspected to confirm it is free of mud, dirt, and debris that may carry invasive plant seeds, propagules, and any material which may contain them (e.g., soil). For purposes of this measure, invasive plant species shall include all species with a Cal-IPC rating of moderate or high. Tire track stations shall be installed at project site entrances and exits. Staging areas and access routes shall remain clear of weeds. Only certified weed-free materials (e.g., fiber rolls, straw, and fill) shall be used for the project.

BIO-2 Work Limit Delineation

To minimize impacts to vegetation and sensitive natural communities, SCV Water shall clearly identify work area limits on project design and construction plans and shall require its project construction contractor(s) to delineate and clearly mark approved construction work area limits with flagging or temporary orange construction fencing in the field prior to initial ground disturbing activities (including, but not limited to, site preparation, staging and mobilization, vegetation clearance/mowing/trimming, grading, and excavation). The marked boundaries should be maintained for the duration of project construction activities in each work area and should be clearly visible to personnel on foot and by heavy equipment operators. Fencing or other barriers should be placed on the impact side of the work area limit (i.e., within the project site boundaries) to reduce the potential for encroachment and additional vegetation loss within adjacent open space. Fencing shall be installed pursuant to the approved construction and grading plans. Prior to initial ground disturbing activities (including, but not limited to, site preparation, staging and mobilization, vegetation clearance/mowing/trimming, grading, and excavation), the biological monitor (recommended under BIO-8) shall verify the limits of construction have been properly staked and are readily identifiable. Employees shall strictly limit their activities and

vehicles to the designated project site, staging areas, and routes of travel to minimize the area of potential impacts. Intrusion by unauthorized vehicles outside of construction limits shall be prohibited, with control exercised by an on-site foreman. All temporary fencing shall be removed only after the conclusion of all grading, clearing, and construction activities at each work area along the project alignment.

BIO-3 Construction Worker Environmental Awareness Program

SCV Water shall retain a qualified biologist to conduct a pre-project WEAP training for all personnel working at the project site. The WEAP shall aid workers in recognizing special-status species and regulated biological resources known to occur (e.g., special-status species, sensitive natural communities, jurisdictional waters or wetlands) or potentially occurring on the project site (as determined by the qualified biologist identified in Mitigation Measure BIO-8 and as confirmed by the results of the focused surveys conducted pursuant to Mitigation Measures BIO-7 and BIO-11) and focus on conditions and protocols necessary to avoid and minimize potential impacts to biological resources. All personnel associated with project construction shall attend the WEAP training prior to initiation of project construction activities (including, but not limited to, site preparation, staging and mobilization, vegetation clearance/mowing/trimming, grading, and excavation). The training shall include information about the special-status species potentially occurring within the project site, 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 and measures required to avoid and minimize impacts 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 WEAP and understand the information presented to them. The signed form shall be provided to SCV Water as documentation of training completion. The crew foreman shall be responsible for ensuring crew members adhere to the guidelines and restrictions designed to avoid impacts to special-status species and other regulated biological resources. If new personnel are brought onto the project after completion of the initial WEAP training, the training shall be conducted for all new personnel before they can participate in construction activities.

BIO-4 Special-Status Plant Surveys

SCV Water shall retain a qualified biologist to conduct surveys for special-status plants prior to any vegetation removal, grubbing, or other construction activity within the Fremont cottonwood woodland, sandbar willow thickets, tamarisk thickets, and California sagebrush – California buckwheat scrub vegetation communities within the project footprint in Castaic Creek, as well as the brittle bush scrub vegetation community on the eastern boundary of the Study Area. This measure only applies if construction activities occur within these vegetation communities. The surveys shall be floristic in nature and seasonally timed to coincide with the blooming periods of white rabbit-tobacco, Parry's spineflower, San Fernando Valley spineflower, and slender-horned spineflower. The surveys shall be conducted during the relevant target species' blooming periods no more than two years prior to construction. Special-status plant species identified on site shall be mapped onto a site-specific aerial photograph. Surveys shall be conducted in accordance with the most current CDFW and CNPS protocols (CNPS 2018). A report of the survey results shall be submitted to SCV Water for review and approval.

BIO-5 Special-Status Plant Avoidance Measures

If special-status plants are detected during special-status plant surveys conducted pursuant to Mitigation Measure BIO-4, the observed special-status plants shall be avoided through project design where feasible. An avoidance buffer of at least 50 feet (15 meters), or other distance as approved by a qualified biologist, shall be established around any identified special-status plants that can be feasibly avoided, and the avoidance buffer shall be delineated with bright orange protective fencing. The avoidance buffers shall be maintained for the duration of project construction activities in each work area and shall be removed only after the conclusion of all grading, clearing, and construction activities. If vegetation

clearing within 50 feet (15 meters) of any identified special-status plant cannot be avoided, the vegetation clearing shall be conducted by hand by the project construction contractor(s), if practicable.

BIO-6 Special-Status Plant Mitigation and Monitoring Plan

If special-status plants are detected during special-status plant surveys conducted pursuant to Mitigation Measure BIO-4 and would be impacted by project construction, SCV Water shall retain a qualified restoration specialist to develop a Special-status Plant Mitigation and Monitoring Plan that provides for the on-site or off-site replacement of the species impacted by the project. The Special-status Plant Mitigation and Monitoring Plan shall specify the following:

- A summary of impacts;
- The location of the mitigation site;
- Methods for harvesting seeds or salvaging and transplanting individuals to be impacted;
- Measures for propagating plants or transferring living plants from the salvage site to the mitigation site;
- Site preparation procedures for the mitigation site;
- A schedule and action plan to maintain and monitor the mitigation site;
- Criteria and performance standards by which to measure the success of the mitigation, including replacement of impacted plants at a minimum 1:1 ratio;
- Measures to exclude unauthorized entry into the mitigation areas; and
- Contingency measures such as replanting or weeding if mitigation efforts are not successful.

The performance standards for the Special-status Plant Mitigation and Monitoring Plan shall be, at a minimum, the following:

- Within five years after introducing the plants to the mitigation site, the number of established, reproductive plants shall equal the number impacted during project construction; and
- Restoration shall be considered successful after the success criteria have been met for a period of at least two years without any maintenance or remediation activities other than invasive species control.

The Special-status Plant Mitigation and Monitoring Plan shall be initiated prior to project construction (including, but not limited to, site preparation, staging and mobilization, vegetation clearance/mowing/trimming, grading, and excavation) and shall be implemented over a five-year period. The plan may also be combined with the Habitat Revegetation, Restoration, and Monitoring Program described under Mitigation Measure BIO-14.

Annual reports discussing the implementation and management of the Special-status Plant Mitigation and Monitoring Plan shall be submitted to SCV Water for review and approval. Five years after the start of the mitigation project, a final report shall be submitted to SCV Water for review and approval and shall, at a minimum, discuss the implementation and management of the Special-status Plant Mitigation and Monitoring Plan over the five-year period and indicate whether the Special-status Plant Mitigation and Monitoring Plan has been successful based on the established performance standards. Should the success criteria be met before Year Five, the mitigation effort can be deemed complete.

BIO-7 Crotch's Bumble Bee Avoidance, Minimization, and Compensation Measures

If Crotch's bumble bee is still considered a CESA candidate species or has been listed as threatened or endangered under CESA at the time project construction commences, SCV Water shall implement the following avoidance, minimization, and compensation measures for this species specifically within suitable habitat for the species, including California sagebrush - California buckwheat scrub and brittle bush scrub vegetation communities. These measures only apply if construction activities occur within these vegetation communities.

- A qualified biologist shall conduct a protocol-level presence/absence survey for Crotch's bumble bee in areas of the project site with suitable habitat during the peak active period for Crotch's bumble bee (highest detection probability) that occurs prior to the start of the project's initial ground disturbing activities (including, but not limited to, site preparation, staging and mobilization, vegetation clearance/mowing/trimming, grading, and excavation). The peak active period for Crotch's bumble bee at the project location is anticipated to be April through June given the expected desiccation of Crotch's bumble bee floral resources within the project site by mid-summer, though this timing could depend on annual climatic factors. Survey methodology shall be based on Section 4.1.1 of CDFW's *Survey Considerations for CESA Candidate Bumble Bee Species* (CDFW 2023), or the most current CDFW guidance in effect at the time. Inaccessible areas outside of the project site can be surveyed using binoculars from the project edge or from public roads. The timing of the presence/absence survey can be phased with project build-out, if feasible.
- If construction starts one year or more after the conclusion of the surveys described above, SCV Water shall consult with CDFW as to whether additional surveys are required and shall retain a qualified biologist to conduct additional surveys if recommended by CDFW.
- If Crotch's bumble bee is present, the qualified biologist shall identify the location of nests in or adjacent to the project site to the extent feasible. Inaccessible land adjacent to the project site shall be observed using binoculars. If nests are identified within the project site or immediately adjacent to the site, a qualified biologist shall determine the need to establish a no-disturbance buffer around the nest, where feasible, to reduce the risk of disturbance or accidental take. The buffer shall provide at least 50 feet (15 meters) of clearance around active nest entrances. If project activities may result in disturbance or potential take, the qualified biologist, in coordination with CDFW, shall expand the buffer zone as necessary to prevent disturbance or take. If establishment of a no-disturbance buffer is feasible, construction activities shall not occur within the buffer until a qualified biologist determines the colony is no longer active (i.e., no Crotch's bumble bees are seen flying in or out of the nest for three consecutive days, indicating the colony has completed its nesting season and the next season's queens have dispersed from the colony). Once the nest has been determined to be inactive, construction activities within the no-disturbance buffer(s) shall be allowed to resume. Otherwise, the no-disturbance buffer shall be maintained for the duration of project construction activities in each work area and shall be removed only after the conclusion of all grading, clearing, and construction activities at each work area along the project alignment.
- If establishment of a no-disturbance buffer and/or avoidance of the nest is not feasible, the qualified biologist shall consult with CDFW regarding potential encroachment into the no-disturbance buffer and for project activities that may result in take of Crotch's bumble bee.

BIO-8 Qualified Biological Monitor

SCV Water shall retain a qualified biological monitor with relevant experience with the taxa and species in the Los Angeles region and mountain foothills for which pre-construction surveys, monitoring, or other support is required during project construction (potentially including, but not limited to, rare plants, raptors, nesting birds, and those special-status species with potential to occur based on the results of pre-activity and focused surveys conducted prior to project initiation in accordance with Mitigation Measures BIO-6, BIO-7 and BIO-11). The qualified biologist role may be satisfied by one or more individuals depending on qualifications and experience with one or more species and taxa. The qualified biologist shall be present during initial ground disturbance or vegetation removal activities and shall have the authority to temporarily stop work if one or more special-status species are observed that may be impacted by project activities. The biologist shall relocate special-status amphibian, reptile, or mammals present within anticipated project impact areas to suitable undisturbed habitat outside the areas directly and indirectly affected by construction activities. The biologist shall hold the requisite incidental take permits or authorizations for the capture and handling of the species, if applicable.

The biologist shall recommend measures to ensure compliance with avoidance and minimization measures, applicable permit conditions, and conditions required for observed special-status species. When the biologist is present on site, they shall be responsible for:

- Verifying project compliance with environmental Mitigation Measures and requirements;
- Establishing lines of communication and reporting methods in coordination with the construction crew foreman and SCV Water;
- Conducting pre-construction clearance sweeps for special-status species and nesting birds, as needed;
- Documenting special-status species observations;
- Recommending preventative or protective actions to avoid and minimize potential project impacts to regulated biological resources where feasible;
- Recommending actions to be taken in the event of non-compliance; and
- Daily and weekly reporting of compliance.

Monitoring logs documenting the above shall be submitted to SCV Water for review and approval for the duration of project construction.

BIO-9 Dry Season Construction

If construction within the low-flow channel of Castaic Creek is necessary, it should be limited to the dry season to avoid potential impacts on unarmored threespine stickleback, arroyo chub, and Santa Ana sucker, and to minimize impacts on wildlife movement corridors. This period generally occurs from May 1 to September 15; however, construction can occur outside this window provided no flowing or ponded water associated with Castaic Creek is present within 50 feet of any work area. In addition, surface elevations within Castaic Creek and Unnamed Drainage shall be returned to preconstruction conditions prior to the end of the dry season.

BIO-10 Special-Status Reptile Pre-Activity Survey

SCV Water shall retain a qualified biologist to conduct a pre-activity clearance survey for special-status reptile species no more than seven days prior to commencement of ground or vegetation disturbing activities within the California sagebrush – California buckwheat scrub, brittle bush scrub, and Fremont cottonwood woodland vegetation communities. This measure is not required if construction activities do not occur within these vegetation communities. The pre-activity survey shall utilize methods to detect special-status reptile species with potential to occur at the site. Prior to commencement of project construction activities, the methods and results of the surveys and, if a special-status reptile species is found, recommended species-specific avoidance and/or relocation measures, shall be submitted in a report for review and approval by SCV Water, and implemented during construction activities. These measures may include, but would not be limited to, the qualified biologist conducting a sweep of the proposed impact areas before the daily start of construction in each work area in the locations where special-status reptile individuals were observed during the pre-construction survey, or have moderate or high potential to occur based on habitat suitability as determined by the qualified biologist, and avoidance of work in the sweep areas until the qualified biologist confirms special-status reptiles are not present, or if present, until they have moved out of harm's on their own, as determined by the qualified biologist, or have been moved out of harm's way to adjacent suitable habitat by the qualified biologist.

BIO-11 Least Bell's Vireo Pre-Construction Surveys

Prior to initiation of project construction and activities within or adjacent to suitable nesting habitat (including Fremont cottonwood woodland, sandbar willow thickets, and tamarisk thickets vegetation communities) during least Bell's vireo breeding season (March 15 through September 15), a qualified biologist with experience surveying for least Bell's vireo shall conduct at least eight focused surveys following USFWS-established protocols to determine whether breeding least Bell's vireos are present.

This measure is not required if construction activities do not occur within or 500 feet adjacent to these vegetation communities. Focused surveys shall be completed within the project site and a 500-foot buffer. If least Bell's vireo is present, the biologist shall determine its breeding territory, and no construction shall take place within 500 feet of the breeding territory from March 15 through September 15.

BIO-12 Protection of Nesting Birds

Project-related activities shall occur outside of the bird breeding season (February 1 to August 31) to the extent practicable. If construction must commence within the bird breeding season, a nesting bird pre-construction survey shall be conducted by a qualified biologist within the disturbance footprint plus a 100-foot buffer (300-feet for raptors), where feasible, no more than three days prior to initiation of ground disturbance (including, but not limited to site preparation, vegetation clearance, grading, and excavation). If the proposed project is phased or construction activities stop for more than one week, a subsequent pre-construction nesting bird survey shall be conducted prior to each phase of construction, if initiating during the bird breeding season.

Pre-construction nesting bird surveys shall be conducted during the time of day when birds are active and shall factor in sufficient time to perform this survey adequately and completely. 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 nests are found, an appropriate avoidance buffer ranging in size from 25 to 50 feet for passerine (perching birds) nests, and up to 300 feet for active, non-listed raptor nests (depending upon the species and the proposed work activity) shall be determined and demarcated by the qualified biologist with bright orange construction fencing or other suitable flagging. Active nests shall be monitored at a minimum of once per week until a qualified biologist has determined the birds have fledged and are no longer reliant upon the nest or parental care for survival. No construction activity shall occur within this buffer until the qualified biologist confirms the breeding/nesting is completed and all the young have fledged. If project activities must occur within the buffer, they shall be conducted at the discretion of the qualified biologist. If no nesting birds are observed during pre-construction surveys, no further actions would be necessary.

BIO-13 Riparian and Sensitive Natural Communities and Jurisdictional Features Avoidance and Minimization Measures

Riparian and/or sensitive natural communities, including tamarisk thickets, sandbar willow thickets, and Fremont cottonwood woodland, as well as jurisdictional features, including Castaic Creek and the unnamed drainage, shall be demarcated using brightly colored flagging, as necessary, and avoided to the extent feasible during project construction. The marked boundaries shall be maintained for the duration of project construction activities in each work area and shall be clearly visible to personnel on foot and by heavy equipment operators. Construction personnel shall be instructed to avoid these areas as feasible. All temporary flagging shall be removed only after the conclusion of all grading, clearing, and construction activities at each work area along the project alignment. Compliance with this measure shall be documented in the biological monitoring reporting required under Mitigation Measure BIO-8.

In addition, SCV Water shall require its project construction contractor(s) and their personnel to implement the following measures:

- Any material/spoils generated from project construction shall be located away from sensitive natural communities and jurisdictional features.
- Materials, hand-held equipment and other non-heavy or non-vehicle equipment shall be stored on impervious surfaces or plastic ground covers to prevent any spills or leakage from contaminating the ground and generally at least 50 feet from riparian and/or sensitive natural communities and jurisdictional areas.

- Any spillage of material shall be stopped if it can be done safely. The contaminated area shall be cleaned, and any contaminated materials shall be properly disposed of. For all spills, the project foreman and biological monitor (recommended in Mitigation Measure BIO-8) shall be notified.

BIO-14 Riparian and Sensitive Natural Community Compensatory Mitigation

If temporary impacts to riparian habitat and/or sensitive natural communities cannot be avoided, SCV Water shall identify compensatory mitigation prior to disturbance of the features. Mitigation may take the form of permittee-responsible, on-site or off-site mitigation or the purchase of credits from an approved mitigation bank or through applicant sponsored mitigation (e.g., purchase and/or dedication of land for mitigation). If required, compensatory mitigation for unavoidable impacts to riparian and/or sensitive vegetation communities shall be accomplished at a minimum ratio of 1:1; however, the final ratio would be determined and approved by CDFW. If onsite or offsite restoration would occur, SCV Water shall retain a qualified biologist to develop a Habitat Revegetation, Restoration, and Monitoring Program and submitted for CDFW approval prior to the commencement of project construction (including, but not limited to, site preparation, staging and mobilization, vegetation clearance/mowing/trimming, grading, and excavation). At a minimum, the program shall include the following:

- A description of the purpose and goals of the restoration
- Identification of success criteria and performance standards
- Methods of site preparation, including topsoil salvage and replacement procedures
- Irrigation plan and schedule
- BMPs
- Maintenance and monitoring program
- Adaptive management strategies
- Key stakeholders and responsible parties
- Funding
- Contingencies

Significance After Mitigation

Implementation of Mitigation Measure BIO-1 requires implementation of general best management practices (BMPs) to protect special-status wildlife species. Mitigation Measure BIO-2 minimizes the potential for construction-related impacts to biological resources by requiring construction boundaries to be clearly marked and fenced to keep all work activities within the approved disturbance area. Mitigation Measure BIO-3 requires training construction personnel to identify special-status wildlife species. Mitigation Measures BIO-4 through BIO-10 further reduce the potential for direct or indirect impacts on special-status plant and wildlife species. Mitigation Measures BIO-11 and BIO-12 reduce the potential for impacts on active bird nests by requiring a pre-construction nesting bird survey and establishing avoidance buffers around any active nests, if present. Mitigation Measures BIO-13 and BIO-14 would also reduce the potential for nesting bird habitat and other habitats to be modified by the project, and would require compensatory mitigation if impacts to riparian habitat and/or sensitive natural communities cannot be avoided. Implementation of these measures would minimize direct and indirect impacts on special-status plant and wildlife species, nesting birds, and sensitive habitats 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?

Three riparian vegetation communities occur within the Study Area: tamarisk thickets, sandbar willow thickets, and Fremont cottonwood woodland. Fremont cottonwood woodland is a sensitive natural community and occurs in the northwestern portion of the Study Area buffer along Castaic Creek. Project construction could result in direct temporary impacts on these communities due to vegetation removal or disturbance associated with construction access and installation of the water lines.

The project also has the potential to indirectly impact riparian and sensitive vegetation communities as a result of groundwater extraction via the operation of Wells E-14, E-15, E-16, and E-17. Operation of these wells could deplete local groundwater levels beyond the minimum thresholds for depletion of interconnected surface waters established in the Santa Clara River Valley East Groundwater Subbasin GSP. If groundwater-dependent riparian vegetation occurs within the Study Area, such reductions could adversely affect those communities.

Groundwater pumping from Wells E-15 and E-17 would be consistent with historical pumping rates and would not exceed the pumping quantities in the groundwater levels simulations used in the GSP, and Wells E-14 and E-16 would be brought online in accordance with SCV Water's UWMP. The project would be conducted in accordance with the procedures outlined in Section 9.5.5 of the GSP, which outlines actions to take if GDE triggers are exceeded. These include enhanced monitoring, identifying causes, and implementing management actions to protect ecosystems. Compliance with these procedures would help maintain riparian habitats, including those that support species such as least Bell's vireo, by ensuring groundwater levels remain sufficient to support nesting and foraging habitat. SCV Water would operate the four wells consistent with the GSP's monitoring and management framework such that groundwater levels would not fall below thresholds associated with depletion of interconnected surface waters or undesirable results to groundwater-dependent ecosystems, thereby avoiding indirect impacts to potential groundwater-dependent resources.

Although potential indirect impacts to groundwater-dependent ecosystems would be less than significant, project construction would have potential to result in significant direct impacts to riparian sensitive natural communities. Implementation of Mitigation Measures BIO-1, BIO-3, BIO-13, and BIO-14 (outlined under threshold 4[a]),would reduce potentially significant impacts to riparian habitat and sensitive natural communities to less-than-significant levels.

Mitigation Measures

Significance After Mitigation

Implementation of Mitigation Measure BIO-13 would require identification and delineation of sensitive habitat areas and would involve work in such areas to the extent feasible. If avoidance of riparian habitat or sensitive natural communities is not feasible, Mitigation Measure BIO-14 would require compensatory mitigation prior to impacts to state- or federally-regulated waters. With implementation of these measures, impacts to riparian habitat or other sensitive natural communities would be less than significant.

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?

The project has the potential to directly impact jurisdictional waters and/or wetlands within the Study Area. Castaic Creek is located adjacent to the northern alignment of the proposed pipeline and lies north of Well E-16 and west of Well E-15, creating the potential for temporary and/or permanent impacts. Other potentially jurisdictional features are also located within the maximum project boundary; therefore, direct

impacts to these features may occur depending on the final project design. Mitigation Measures BIO-1, BIO-2, and BIO-3 all discussed under threshold 4(a), would be implemented to avoid and minimize impacts. These measures require general biological BMPs, delineation and fencing of work limits, and worker environmental awareness training. Further, Mitigation Measures BIO-13 and BIO-14 require avoiding and protecting riparian and other sensitive natural communities through flagging, exclusion of construction activities, implementation of spill-prevention and material-management practices, and, if impacts cannot be avoided, providing compensatory mitigation through habitat restoration, monitoring, or approved mitigation credits.

If construction occurs during the rainy season, stormwater runoff following precipitation events could cause indirect impacts to jurisdictional waters and wetlands, such as increased turbidity, pH changes, or reduced dissolved oxygen. Implementation of the stormwater control BMPs (e.g., berms, silt fences, fiber rolls) described in Mitigation Measure BIO-13 (outlined under threshold 4[a]) would reduce potential indirect impacts to jurisdictional waters and wetlands during construction to a less-than-significant level.

During project operation, groundwater extraction from the E-Wells may indirectly affect the hydrology of Castaic Creek. As discussed under threshold 4(b), the project would comply with Section 9.5.5 of the GSP, which prescribes procedures for responding to groundwater-dependent ecosystem trigger exceedances. Pumping from the E-Wells would remain consistent with historical rates and within the groundwater-level simulations evaluated in the GSP, and impacts to groundwater-dependent ecosystems would be less than significant.

Therefore, with incorporation of Mitigation Measures BIO-1, BIO-2, BIO-3, BIO-13, and BIO-14, the proposed project would not have a substantial adverse effect on state or federally protected wetlands, and impacts would be less than significant with mitigation incorporated.

Significance After Mitigation

Mitigation Measures BIO-1, BIO-2, BIO-3, and BIO-13 require implementation of biological best management practices, clear delineation and avoidance of sensitive habitats and jurisdictional features, worker environmental awareness training, groundwater-level monitoring and adaptive management to protect groundwater-dependent ecosystems, and construction protocols that prevent spills, encroachment, and other impacts to riparian and sensitive natural communities. Whenever feasible, impacts to jurisdictional waters must be avoided. These measures ensure that impacts on jurisdictional waters are avoided to the extent feasible. Mitigation Measure BIO-14 requires SCV Water to offset impacts to sensitive habitats such as wetlands or riparian areas through restoration, preservation, or in-lieu fees to ensure no net loss of ecological function. Implementation of these measures would reduce project impacts to regulated waters and wetlands 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?

The project would involve construction of a centralized treatment facility, installation of associated water pipelines, and reactivation of existing E-Wells. Construction activities may temporarily disrupt wildlife movement within portions of the Study Area; however, wildlife would continue to use existing regional movement corridors, including Castaic Creek and the Santa Clara River. These corridors provide the primary routes for native resident and migratory species in the region and would remain intact throughout construction. The proposed centralized treatment facility would not impede wildlife movement because of its location adjacent to SR 126, an existing highway that does not support wildlife movement. 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. Implementation of Mitigation Measures BIO-1 through BIO-3, which include BMPs to discourage wildlife from entering the project site, work limit delineation to avoid injury or mortality of wildlife in undisturbed

and natural areas, and WEAP training to increase worker's awareness of special-status species, would further reduce temporary indirect impacts to wildlife movement to a less-than-significant level.

LESS THAN SIGNIFICANT WITH MITIGATION INCORPORATED

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

The project is subject to consideration of local plans, policies, and ordinances related to biological resources, including those outlined in the County of Los Angeles' General Plan and County Code. The following sections evaluate the project's potential consistency with applicable local regulations and voluntary compliance measures relevant to habitat conservation, tree protection, and land use planning.

Los Angeles County 2035 General Plan and Significant Ecological Areas

The Los Angeles County 2035 General Plan (County of Los Angeles 2025) includes policies in the Conservation and Natural Resources Element that address the preservation of biological resources. Relevant policies include:

- **Policy C/NR 3.6:** Support state, federal, and other agencies in preserving special-status species, associated habitat, and wildlife movement corridors through the administration of SEAs and related programs.
- **Policy C/NR 3.8**: Discourage development in areas with significant biological resources, including SEAs.
- **Policy C/NR 3.10**: Require environmentally superior mitigation for unavoidable impacts on biologically sensitive areas and ensure permanent preservation of mitigation sites.

The County's Significant Ecological Areas (SEA) Program guides development to avoid conflicts with irreplaceable biological resources. The SEA Ordinance (Los Angeles County Code Section 22.102 et seq.) establishes the permitting, design, and review requirements for activities within SEAs. Portions of the Study Area overlap the Santa Clara River SEA in unincorporated Los Angeles County. However, because the project is exempt from local zoning regulations, it is not subject to the SEA Ordinance, and no conflict with the SEA Program would occur.

Los Angeles County Oak Trees and Oak Woodland Management

The Los Angeles County Oak Tree Ordinance is part of the Los Angeles County Planning and Zoning Code (County Code of Ordinances Section 22.174 et seq.). Pursuant to the ordinance, an oak tree permit must be obtained prior to damaging or removing any tree of the oak genus (Quercus spp.) that is:

- Eight inches or more in diameter (25 inches in circumference), as measured 4.5 feet above mean natural grade,
- Oaks with multiple trunks, where the combined diameter of any two trunks is 12 inches (38 inches in circumference) or more, or
- Provided as a replacement tree (pursuant to Los Angeles County Code Section 22.174.020).

The objectives of the Los Angeles County Oak Woodlands Conservation Management Plan (Woodland Plan) (County of Los Angeles 2011) are to prioritize the preservation of oak woodlands, promote conservation by integrating oak woodlands into the development process in a sustainable manner, and effectively mitigate the loss of oak woodlands. The Woodland Plan was prepared by the County pursuant to the California Oak Woodlands Conservation Act (Assembly Bill 242) to qualify for funding to preserve oak woodlands through the Oak Woodlands Conservation Fund; the County Board of Supervisors adopted the Woodland Plan on August 23, 2011 (County of Los Angeles 2011). The accompanying Oak Woodlands Conservation Management Plan Guide (Woodland Guide) (County of Los Angeles 2014)

implements portions of the Woodland Plan and focuses on potential impacts to oak woodlands from proposed developments. The Woodland Guide defines oak woodlands as:

> An oak stand, including its understory, which consists of two or more oak trees (all native trees of the genus Quercus) of at least five inches in diameter (of the largest trunk) measured at 4.5' above mean natural grade, with greater than 10 percent canopy cover or that may have historically supported greater than 10 percent canopy cover as early as January 1, 2005 (effective date of California Public Resources Code Section 21083.4).

Coast live oak (Quercus agrifolia) and valley oak (Quercus lobata) are sparsely dispersed along the south bank of Castaic Creek. Sufficient data is not available to determine whether these oaks meet the size and spacing thresholds defined in the Los Angeles County Oak Tree Ordinance, Woodland Management Plan, and Woodland Guide. No tree removal is currently proposed as part of the project. Because the project would not remove or disturb any oak trees, and because the project is exempt from local zoning ordinances under Government Code Section 53091, the project is not subject to the Los Angeles County Oak Tree Ordinance. No impact would occur.

NO IMPACT

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

The 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.

NO IMPACT

5 Cultural Resources

	Potentially Significant Impact	Less than Significant with Mitigation Incorporated	Less-than - Significant Impact	No Impact
Would the project:				
a. Cause a substantial adverse change in the significance of a historical resource pursuant to §15064.5?	☐	☐	☐	■
b. Cause a substantial adverse change in the significance of an archaeological resource pursuant to §15064.5?	☐	■	☐	☐
c. Disturb any human remains, including those interred outside of formal cemeteries?	☐	☐	■	☐

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.

The impact analysis below is organized based on the cultural resources thresholds included in CEQA Guidelines Appendix G: Environmental Checklist Form. Threshold A broadly refers to historical resources. To more clearly differentiate between archaeological and built environment resources, the analysis under threshold (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 (b).

Methodology and Results of Cultural Resources Assessment Report

In January 2026, Rincon conducted a cultural resources investigation and analysis of the project site (Rincon 2026). This analysis included a cultural resources records search of the California Historical Resources Information System (CHRIS) 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. The report also included a review of the National Register of Historic Places, the California Register of Historical Resources (CRHR), the California Historical Landmarks list, the Built Environment Resources Directory and the Archaeological Determination of Eligibility list.

The CHRIS records search results indicate 27 cultural resources studies have been previously conducted within the 0.5-mile records search radius. Of the 27 studies, 17 overlap portions of the project site, and 15 included a form of fieldwork such as survey or construction monitoring. One additional study not in the CHRIS records was identified as overlapping the northern portion of the project site. The records search identified 16 cultural resources previously recorded within the 0.5-mile records search radius. No cultural resources were identified within the project site; however, one cultural resource is located immediately adjacent to the project site.

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, soil survey maps, and geotechnical boring lots. The intent of the review was to provide a land use history of the project site and its vicinity, as well as to assess the likelihood for the project site to contain subsurface archaeological deposits.

The geoarchaeological review indicates the project site has undergone varying levels of disturbance from past agricultural operations, soil grading, and the installation of wells, pipelines, and associated utility infrastructure. The CHRIS records search, background search, and field survey did not identify pre-contact or historic period cultural resources within or immediately adjacent to the project site. However, three prehistoric cultural sites, nine prehistorical resources, and the ethnographic village of *Tsawayung* are within 0.5 miles of the project site. The southern project area consists of Holocene-age silts, sands, and clays capable of burying and preserving archaeological materials, whereas the northern portion contains coarse sands and gravels associated with fewer deposits. Soil maps and boring logs indicate that the southern part of the site contains fine sediments from the surface down to about 22 feet, while the northern portion contains mostly sand and gravel, with some buried layers of silt and clay deeper down. These buried fine-grained layers could preserve archaeological materials if they are present. Review of historical topographic maps and aerial imagery indicates that portions of the project site, particularly the proposed PFAS groundwater treatment facility area and the southeastern and southwestern graded pads, have been previously disturbed by agricultural use, grading, and existing well and pipeline construction. Given the mixed depositional settings, documented nearby prehistoric cultural sites, and the presence of buried fine-grained sediments in both the southern and northern portions of the project site, project-related ground disturbance has the potential to encounter buried archaeological deposits.

Rincon archaeologists, Debbie Balam, BA, Catalina Niessen, BA, and Pedro Garcia, BA conducted a pedestrian survey of the project site on November 9, 2023, January 16, 2025, and December 4, 2025. The field survey showed that that the northern portion of the project site, which includes proposed water pipelines, is comprised of agricultural fields. The northwestern portion includes part of the Santa Clara River channel as well as a graded pad with a riprap-lined slope along the river's edge. The area where the centralized treatment facility is proposed, along with the southwestern and southeastern portions of the site, consists of flat, graded ground covered with low-lying seasonal grasses. The northeastern portion of the project site is developed and contains office buildings and paved parking areas. During the survey, 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). No cultural resources were identified during the field survey.

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 based on the results of the CHRIS records search and a field survey. Well E-15 was constructed in 2005. No construction date for Well E14, E-16, or E-17 is provided in the CHRIS records search or SCV Water documentation; however, the well is not depicted on earlier historic maps or surveys and is associated with modern water system improvements. In the absence of any evidence indicating an earlier construction date, Well E-17 is treated as a modern-period facility that does not meet the 45-year threshold for historical resource consideration under CEQA. Therefore, the E-Wells do not meet the age requirement for consideration as historical resources under CEQA. Additionally, the one built environment resource identified in the CHRIS records search is located outside of the area of potential effect. As a result, the proposed project would not result in a substantial adverse change to built environment resources that may qualify as historical resources under CEQA Guidelines Section 15064.5(b). Therefore, the project would result in no impact to built environment resources.

NO IMPACT

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

No precontact or historic-period archaeological resources were identified within the project site as a result of the CHRIS records search, background research, or pedestrian survey. Therefore, no impacts to known archaeological resources qualifying as historical resources or unique archaeological resources as defined by CEQA are anticipated. The geoarchaeological review indicates that the southern portion of the project site contains fine-grained alluvial soils capable of preserving buried archaeological deposits, while the central and northern portions of the site are characterized by coarse sands and gravels associated with the Santa Clara River and Castaic Creek. Portions of the project site have also experienced previous ground disturbance from agricultural activities, grading, and the construction of existing wells, pipelines, and utility infrastructure.

Although no cultural resources were identified within the project site, several prehistoric archaeological sites, isolated artifacts, and the ethnographic village of *Tsawayung* are located within 0.5 mile of the project area, and boring logs indicate the presence of buried fine-grained sediments between approximately 8 and 22 feet below ground surface in some areas. Open-trenching for the water pipelines and excavations within the centralized treatment facility will average 4 to 5 feet deep and reach a maximum of 10 feet deep. Excavations for entry and exit pits for the trenchless crossing of SR 126 will reach up to 30 feet below the surface. Because the water pipelines may ultimately be located anywhere within the Maximum Project Boundary, there is a potential for construction to encounter previously unknown, buried archaeological deposits.

Because the inadvertent discovery of buried archaeological deposits during construction could result in the damage or destruction of cultural materials that may qualify as historical resources or unique archaeological resources under CEQA, such impacts could be potentially significant. Implementation of mitigation measures for cultural resources awareness training, archaeological monitoring, and unanticipated discovery procedures would reduce these impacts to less than significant with mitigation incorporated.

Mitigation Measures

CR-1 Preconstruction Cultural Resources Sensitivity Training

Prior to the start of project-related ground-disturbing activities, a cultural resources specialist working under the supervision of a qualified archaeologist who meets the Secretary of the Interior's Professional Qualifications Standards for Archaeology (National Park Service 1983) shall conduct cultural resources sensitivity training for all construction personnel. Construction personnel will be informed of the types of cultural resources that may be encountered during project construction, and of the proper procedures to be enacted in the event of an unanticipated discovery of archaeological resources or human remains. The training shall also outline safety protocols for working around archaeological and Native American monitors. Subsequent trainings shall be conducted for new construction personnel beginning work on the project. The contractor shall ensure that construction personnel attend the training and retain documentation demonstrating attendance. The cultural resources sensitivity training materials shall be provided to the contractor to be maintained on site for reference as needed.

CR-2 Cultural Resources Monitoring

An archaeological monitor working under the direct supervision of a qualified archaeologist who meets the Secretary of the Interior's Professional Qualifications Standards for Archaeology (National Park Service 1983), as well as one or more Native American monitors affiliated with the tribal groups that have expressed interest in the project, shall observe project-related ground-disturbing activities. The qualified archaeologist, in coordination with the SCV Water and tribal groups that have expressed interest in the project, may reduce or discontinue monitoring if it is determined that the possibility of encountering buried archaeological deposits is low based on observations of soil stratigraphy or other factors. Archaeological monitoring shall be conducted by an archaeologist familiar with the types of archaeological resources that could be encountered within the project site. The archaeological monitor and Native American monitor(s) shall be empowered to halt or redirect ground-disturbing activities away from the vicinity of an unanticipated discovery until the qualified archaeologist, in consultation with the tribal groups that have expressed interested in the project, has evaluated the discovery and determined appropriate treatment. The archaeological monitor shall keep daily logs detailing the types of activities and soils observed, and any discoveries. After monitoring has been completed, the qualified archaeologist shall prepare a monitoring report that details the results of monitoring. The report shall be submitted to the SCV Water and tribal groups that have expressed interest in the project. A copy of the final report shall be filed at the SCCIC.

CR-3 Unanticipated Discovery of Cultural Resources

In the event that archaeological resources are unexpectedly encountered during ground-disturbing activities, work within 50 feet of the find must 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 shall also be contacted to participate in the evaluation of the resource. If the resources 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, per the requirements of the California Code of Regulations (CCR) Section 15126.4(b)(3)(C). The data recovery plan shall identify data recovery excavation methods, measurable objectives, and data thresholds to reduce any significant impacts to cultural resources related to the resource. Pursuant to the data recovery plan, the qualified archaeologist and Native American representative, as appropriate, shall recover and document the scientifically consequential information that justifies the resource's significance. SCV Water shall review and approve the treatment plan and archaeological testing as

appropriate, and the resulting documentation shall be submitted to the SCCIC, per CCR Section 15126.4(b)(3)(C). The lead federal agency (USEPA) shall be afforded the opportunity to review discoveries in accordance with 36 Code of Federal Regulations 800.13 – Post-review Discoveries.

Significance After Mitigation

Mitigation Measures CR-1, CR-2, and CR-3 ensure that construction personnel are trained to recognize cultural resources, that qualified archaeological and Native American monitors oversee ground-disturbing activities, and that any unanticipated discoveries are immediately evaluated and protected through avoidance or data recovery. Together, these mitigation measures ensure that any cultural resources encountered would be identified and properly treated, reducing potential cultural resource impacts 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 human remains are known to exist within the project site; however, the potential for unanticipated discovery during ground-disturbing activities cannot be ruled out. In accordance with California Health and Safety Code Section 7050.5, if human remains are encountered, all work in the vicinity must cease until the County Coroner determines the origin and disposition of the remains as outlined in Public Resources Code Section 5097.98. Should the remains be identified as Native American, the Coroner shall notify the Native American Heritage Commission (NAHC), which will appoint a Most Likely Descendant (MLD). The MLD has 48 hours from the time of notification to make recommendations regarding the treatment of the remains. If no recommendations are provided within that timeframe, the landowner must ensure that the remains are reinterred in a location protected from future disturbance. With implementation of these existing regulatory procedures, the project would result in a less than significant impact to human remains under CEQA.

LESS-THAN-SIGNIFICANT IMPACT

This page intentionally left blank.

6 Energy

	Potentially Significant Impact	Less than Significant with Mitigation Incorporated	Less-than - Significant Impact	No Impact
Would the project:				
a. Result in a potentially significant environmental impact due to wasteful, inefficient, or unnecessary consumption of energy resources, during project construction or operation?	☐	☐	☐	■
b. Conflict with or obstruct a state or local plan for renewable energy or energy efficiency?	☐	☐	☐	■

California ranks among the lowest per capita energy consumers in the United States, placing third-lowest nationally in 2023, largely due to its mild climate and robust energy efficiency programs (United States Energy Information Administration 2025). Electricity and natural gas are primarily consumed by the built environment for lighting, appliances, heating and cooling systems, and industrial processes, as well as by alternative fuel vehicles. In 2023, California generated approximately 58 percent of its electricity from non–CO_2-emitting sources, including nuclear, large hydroelectric, and renewables, with the remaining 42 percent coming from thermal and unspecified sources (California Energy Commission [CEC] 2024). While most electricity is generated in-state, California continues to rely on out-of-state imports for nearly 90 percent of its natural gas supply, underscoring the importance of regional energy infrastructure (CEC 2022).

In addition, 67 percent of California's retail electricity sales in 2023 came from renewable and zero-carbon sources, including solar, wind, geothermal, biomass, hydroelectric, and nuclear generation (Governor Gavin Newsom 2025). This progress aligns with Senate Bill 100, which mandates electricity providers procure 100 percent of retail electricity sales from eligible renewable and zero-carbon resources by 2045, with interim targets of 33 percent by 2020 and 60 percent by 2030 (CEC 2025a).

Petroleum fuel remains the dominant energy source for transportation, with gasoline used primarily by light-duty vehicles and diesel consumed by heavy-duty trucks, buses, trains, ships, and construction equipment (CEC 2025b). California is one of the top petroleum-consuming states in the nation, although it imports most of its crude oil and refined products (United States Energy Information Administration 2025).

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 pollutants 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 generators. Temporary grid power may also be provided to construction trailers or electric construction equipment. 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 construction-related energy impact would occur.

Operational Energy Consumption

Electricity for the proposed project would be supplied by Southern California Edison. 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. 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 built environment 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 and disinfection 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?

SCV Water has not adopted specific renewable energy or energy efficiency plans with which the project could comply. As mentioned above, SB 100 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 100 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?

Like much of California, the project site is located in a seismically active region. The Los Angeles region contains over 50 active and potentially active fault segments (Los Angeles County 2015). According to the DOC, a portion of the project site is located on the San Gabriel Fault Line, which is identified as an Alquist-Priolo Fault (DOC 2025b).

The project involves construction of a centralized treatment facility and associated pipelines, 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 and the project's location within an earthquake fault zone, 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. The project would be required to comply with the seismic safety requirements in the latest iteration of the California Building Code (CBC). 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 and disinfection facility would not be located adjacent to any residences, school buildings, or other structures. Therefore, it would not impact those structures or their occupants should seismic ground shaking compromise the structural integrity of these components. 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 the pipelines or facilities 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 occurs when loose, water-saturated sediments lose strength and fail during strong ground shaking. Liquefaction is defined as the transformation of granular material from a solid state into a liquefied state due to increased pore-water pressure (United States Geological Survey 2025). According to the County's Safety Element, liquefaction usually occurs during or shortly after a large earthquake (Los Angeles County 2015). 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 the proposed water treatment plant in the event of an earthquake, resulting in joint failure or leakage from the pipeline. 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. In the event seismically induced liquefaction compromises the pipelines or facilities 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, 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 a 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?

The proposed project would involve ground-disturbing activities, including excavation for the centralized treatment facility, pipeline installation, and entry/exit pits for trenchless crossing under SR 126. These activities would temporarily expose soils to wind and water erosion. However, the project site and pipeline alignments are located in previously disturbed or developed areas, and excavation depths would generally range from 4 to 10 feet. Construction activities would be subject to the National Pollutant Discharge Elimination System (NPDES) Construction General Permit which requires the development of a Storm Water Pollution Prevention Plan (SWPPP) developed 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, materials storage, 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 centralized treatment facility and E-Wells would operate continuously, but these activities would not involve soil disturbance. Routine maintenance, such as resin replacement and chemical deliveries, would occur within paved or stabilized areas and would not increase erosion potential. Discharges associated with pipeline testing and well flushing would comply 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 required under this permit, SCV Water would be required to implement BMPs that would minimize sediment discharge via use of erosion control measures. The BMPs required by this NPDES permit would thus minimize potential erosion associated with stormwater 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 is the gradual, local settling or sinking of the earth's surface with little or no horizontal motion. Subsidence usually occurs as a result of the extraction of subsurface gas, oil, or water, or from hydro-compaction (SCV GSA 2022). The Santa Clara Valley East Groundwater Subbasin GSP includes a subsidence monitoring program that utilizes various surveys and stations to track land surface elevation changes across the Basin. Historical basin-wide data indicate that elevation changes recorded between 1995 and 2018 were extremely small, reflecting negligible subsidence levels. The GSP also notes that while some areas of the central Basin contain more compressible fine-grained soils, measured subsidence has not been significant.

In addition, the project site is underlain by Entisol soils, which are young, weakly developed soils that typically lack subsurface clay layers or other compressible horizons that contribute to subsidence (SCV

GSA 2022). These soil characteristics further reduce the likelihood of ground deformation in response to groundwater extraction. The proposed project would restore the use of Wells E-14, E-15, E-16, and E-17. SCV Water would manage its pumping regime at the E-Wells in accordance with the provisions of the Santa Clara River Valley East Groundwater Subbasin GSP, which includes metrics for monitoring and addressing subsidence issues (SCV GSA 2022).

Given the lack of documented subsidence in the project area, the low susceptibility of local Entisol soil to consolidation, and compliance with SCV Water's GSP monitoring, the proposed project would not result in soil instability such that subsidence would occur. In addition, as described in 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 soils that shrink or swell as the moisture content decreases or increases. Structures built on these soils may experience shifting, cracking, and breaking damage as soils shrink and subside or expand (United States Department of Agriculture [USDA] 2004). 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 (12.3 percent clay), Hanford sandy loam, 0 to 2 percent slopes (12.5 percent clay), Metz loamy sand, 0 to 2 percent slopes (5 percent clay), Riverwash (2.3 percent clay), and Sandy alluvial land (10.9 percent clay (USDA 2025). Due to the lack of clay content of the 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 there would be no impact.

NO 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] 2025). 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. In the absence of other sensitivity criteria required by certain federal, state, or local regulatory agencies, the Society of Vertebrate Paleontology's Fossil Prediction Map System (FPMS) is used to assign paleontological sensitivity to geologic units (SVP 2025). FPMS assignments are 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. Fossil occurrences are correlated with the geologic units that contain them, so the history of a geologic unit in producing fossils can be used to predict its potential for producing fossils in the future. The FPMS is a 5-tier scale ranging from FPMS 1 (Very Low Potential) to FPMS 5 (Very High Potential) geologic units along with other rankings for geologic units with unknown potential or areas covered by water or ice. 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.

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-east from Point Arguello in Santa Barbara County, east to the San Bernardino Mountains, and south to the Anacapa-Santa Monica-Hollywood-Raymond-Cucamonga fault zone (Yerkes and Campbell 2005). 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). Particularly, the project lies just northeast of the confluence of Castaic Creek and the Santa Clara River. The project is located in the *Newhall, California* United States Geological Survey 7.5-minute topographic quadrangle. The geology of the region surrounding the project site was mapped by Campbell et al. (2016) who identified a single geologic unit, Quaternary young alluvium, underlying the project site.

Quaternary young alluvium underlies the entire project site, and this geologic unit consists of unconsolidated silt, sand, and gravel that has been deposited on floodplains (Campbell et al. 2016). Quaternary young alluvium is a Holocene-aged geologic unit, so it is generally considered too young (i.e., less than 11,700 years old; SVP 2025) to preserve paleontological resources. Therefore, Quaternary young alluvium is considered to have FPMS 2 (Low) paleontological sensitivity. Holocene-aged alluvial geologic units, such as Quaternary young alluvium, increase in age with depth to a point where they become Pleistocene in age and old enough to preserve paleontological resources (i.e., 11,700 years old). Pleistocene alluvial sediments are known to preserve paleontological resources in Los Angeles County (Jefferson 2010; Paleobiology Database 2025). Given the proximity of the project site to the large Santa Clara River and Castaic Creek, the sedimentation rate is likely quite high, so this transition depth is estimated to be 15 feet below the surface. Therefore, the entire project site is considered to have FPMS 2 (Low) paleontological sensitivity from the surface to 15 feet below the surface and FPMS U (Unknown) paleontological sensitivity greater than 15 feet below the surface.

Rincon requested a records search from the Natural History Museum of Los Angeles County (NHMLA) on December 14, 2025, which recovered no known fossil localities within the project site (NHMLA 2025). The nearest NHMLA fossil localities to the project site originate in areas mapped as older bedrock formations (i.e., Pico and Saugus formations) rather than unnamed Quaternary alluvium.

Ground-disturbing activities within previously undisturbed sediments with FPMS U (Unknown) 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. Open-trenching for the water pipelines and excavations within the centralized treatment facility will average 4 to 5 feet deep and reach a maximum of 10 feet deep. Therefore, these activities will not significantly impact paleontological resources. Excavations for entry and exit pits for the trenchless crossing of SR 126 will reach up to 30 feet below the surface, so this activity may significantly impact paleontological resources.

Implementation of Mitigation Measure GEO-1 would reduce potential impacts to paleontological resources to less than significant level and would effectively mitigate the project's impacts to these resources through the recovery, identification, and curation of previously unrecovered fossils.

GEO-1 Unanticipated Fossil Discovery

Paleontological Worker Environmental Awareness Program. Prior to the start of excavation for the entry and exit pits for trenchless pipeline installation, a Paleontological Principal Investigator, as defined by the Society of Vertebrate Paleontology (SVP), or their designee shall prepare and conduct a paleontological Worker Environmental Awareness Program (WEAP) training for construction personnel regarding the appearance of fossils and the procedures for notifying paleontological staff should fossils be discovered by construction personnel. The WEAP shall discuss the potential to discover paleontological resources in the project site, legal obligations to protect paleontological resources, examples of paleontological resources that may be found in the project site, procedures in case a paleontological resource is discovered, and contact information for the Paleontological Principal Investigator. The Paleontological WEAP may be presented in combination with the WEAP required by Mitigation Measure CR-2.

Unanticipated Discovery of Paleontological Resources. SCV Water shall include a standard inadvertent discovery clause in every construction contract to inform contractors of this requirement. If a potential fossil is discovered during project construction, construction activity within 50 feet of the find shall cease until the discovery is examined by a Paleontological Principal Investigator. If the find is determined to be significant, the Paleontological Principal Investigator shall direct all mitigation efforts related to paleontological resources consistent with the SVP standards, which may include, but are not limited to: paleontological monitoring; fossil salvage, preparation, and curation; and reporting to summarize the paleontological mitigation efforts.

LESS THAN SIGNIFICANT WITH MITIGATION INCORPORATED

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]). Per *CEQA Guidelines* Section 15064(h)(3), a project’s incremental contribution to a cumulative impact can be found not cumulatively considerable if the project would comply with a previously approved plan or mitigation program that provides specific requirements that would avoid or substantially lessen the cumulative problem within the geographic area of the project. Therefore, *CEQA Guidelines* Section 15064(h)(3) allows a lead agency to make a finding of less than significant for GHG emissions if a project would comply with adopted plans, programs, policies, and/or other regulatory strategies to reduce GHG emissions.

Section 15064.4 of the *CEQA Guidelines* recommends that lead agencies quantify the GHG emissions of projects and consider several other factors that may be used in the determination of significance of GHG emissions from a project, which include the following: the extent to which the project may increase or reduce GHG emissions; whether a project exceeds an applicable significance threshold; and the extent to which the project complies with regulations or requirements adopted to implement a reduction or mitigation of GHG emissions.

Section 15064.4 does not establish a threshold of significance. Lead agencies have the discretion to establish significance thresholds for their respective jurisdictions, and in establishing those thresholds, a lead agency may appropriately look to thresholds developed by other public agencies, or suggested by other experts, such as the California Air Pollution Control Officers Association, as long as any threshold is supported by substantial evidence. See *CEQA Guidelines* Section 15064.7(c). Neither SCV Water, SCAQMD, Governor's Office of Land Use and Climate Innovation (formerly known as the Governor’s Office of Planning and Research), CARB, California Air Pollution Control Officers Association, nor any other State or applicable regional agency has adopted a numerical significance threshold for assessing GHG emissions that is applicable to the project.

In the absence of an adopted or accepted numeric threshold, the significance of the project’s GHG emissions are evaluated consistent with *CEQA Guidelines* Sections 15064.4(b) and 15064(h)(3) by considering whether the project complies with applicable plans, policies, regulations, and requirements adopted to implement a statewide, regional, or local plan for the reduction or mitigation of GHG emissions.

Therefore, the significance of the project’s potential impacts regarding GHG emissions and climate change is evaluated based on the threshold of significance established by SCV Water for the project, namely whether the project complies with applicable plans, policies, regulations and requirements adopted to implement a statewide, regional or local plan for the purposes of reducing GHG emissions and mitigating the effects of climate change. For this project, the most applicable adopted regulatory plans to reduce GHG emissions and mitigate the effects of climate change is the SCV Water Sustainability Plan and CARB’s 2022 Scoping Plan. GHG emissions from the construction and operation of the project are provided for informational purposes.

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., and the assumptions are described in Section 3, *Air Quality.* In addition, project details are provided in *Project Overview*. The project would not consume water or solid waste; therefore, they would not generate GHG emissions and are excluded from the analysis. In accordance with SCAQMD’s recommendation, GHG emissions from project construction were amortized over a 30-year period and added to annual operational emissions to determine the project’s total annual GHG emissions (SCAQMD 2008b).

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

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. Lighting would be provided within the centralized treatment facility and would be set on a timer controlled at the entrance of the project site. 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 enable SCV Water to activate Wells E-14 and E-16, 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.

GHG Emissions for Informational Purposes

GHG emissions below are provided for informational purposes. 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 1,500 MT of CO_2e. When emissions are amortized over a 30-year period (i.e., the estimated project lifetime), project construction would generate an estimated 50 MT of CO_2e per year.

Table 9 Estimated Construction GHG Emissions

Construction	Project Emissions (MT of CO_2e)
2027	916
2028	584
Total	**1,500**
Amortized over 30 Years	50

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, stationary sources, and refrigerant. 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 1,128 MT of CO_2e per year.

Table 10 Combined Annual GHG Emissions

Emission Source	Project Emissions (MT of CO_2e per year)
Construction[1]	**50**
Operational	**1,078**
Mobile	736
Area	<1
Energy	303
Refrigerant	<1
Stationary	38
Total	**1,128**

MT = metric tons; CO_2e = carbon dioxide equivalent

[1] Construction-related GHG emissions amortized over 30 years (see Table 9).

Source: Appendix A CalEEMod worksheets. See Table 2.5 "Operational Emissions by Sector, Unmitigated" annual emissions.

Therefore, the project would not conflict with any applicable plan, policy, or regulation adopted for the purpose of reducing GHG emissions, and impacts would be less than significant.

LESS-THAN-SIGNIFICANT IMPACT

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, the centralized treatment facility would store liquid sodium hypochlorite and liquid ammonium sulfate inside an enclosed concrete masonry building 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 would occur approximately twice per month via midsized trucks, and resin media for PFAS treatment would be replaced two to three times per year by the supplier, who would transport and dispose of spent resin in accordance with all applicable hazardous waste regulations. Furthermore, 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. Spent resin from the PFAS treatment vessels, which may be considered a hazardous waste depending on the concentration of PFAS, would be removed one to two times a year 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.

Compliance with these regulations and standard operating procedures would ensure that the routine transport, use, and disposal of hazardous materials during construction and operation would not create a significant hazard to the public or the environment. Therefore, 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?

Construction of the proposed project would involve the use and storage of hazardous materials such as fuels, oils, and solvents for vehicles and equipment. If these materials are not properly handled, stored, or secured, accidental spills or releases could occur during ground-disturbing activities or trenchless installation. Such an event could introduce a hazard to the public or the environment, particularly if materials enter Castaic Creek. All hazardous materials used during construction would be managed in compliance with applicable laws and regulations, including the California Building Code, California Fire Code, and federal and state Occupational Safety and Health Administration requirements. To further reduce the potential for accidental releases, Mitigation Measure HAZ-1 would be required to provide additional safety measures during construction. With implementation of this mitigation measure, impacts would be reduced to a less than significant level.

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. Nonetheless, upset or accident conditions could result in the unanticipated spill or release of hazardous materials such as vehicle and equipment fuels during project construction, potentially introducing a hazard to the public and/or the environment, which could result in a potentially significant impact especially if materials are released into the Castaic Creek. Therefore, implementation of Mitigation Measure HAZ-1 would be required to provide an additional level of safety during project construction, thereby reducing the potential impact to the public and environment due to release of hazardous materials during upset or accident conditions to a less-than-significant level.

As discussed under threshold 9(a), project operation would involve the routine use and storage of sodium hypochlorite and liquid ammonium sulfate, which are not considered hazardous at the concentrations proposed. Spent resin from the PFAS treatment vessels, which may be classified as hazardous waste depending on PFAS concentrations, would be replaced two to three times per year by the supplier and transported off-site for disposal in accordance with all applicable regulations, including the Hazardous Materials Transportation Act, California Hazardous Material Management Act, and California Code of Regulations, Title 22. Because of the static nature of the resin and the controlled handling process, accidental releases during removal, transport, or disposal would be unlikely to create a significant hazard to the public or environment. Therefore, project operation would not result in a significant hazard through reasonably foreseeable upset or accident conditions involving hazardous materials. This impact would be less than significant with mitigation.

Mitigation Measure

HAZ-1 Hazardous Materials Management and Spill Control Plan

SCV Water shall require its construction contractor(s) to submit a Hazardous Materials Management and Spill Control Plan (HMMSCP), including a project-specific contingency plan for hazardous materials and waste operations to SCV Water for review and approval. The HMMSCP shall establish policies and procedures consistent with applicable codes and regulations, including, but not limited to, the California Building and Fire Codes, as well as regulations promulgated by the United States Department of Labor, United States Occupational Safety and Health Administration, and California Division of Occupational Safety and Health. The HMMSCP shall articulate hazardous materials handling practices to prevent the accidental spill or release of hazardous materials during project construction.

Significance After Mitigation

Mitigation Measure HAZ-1 would require preparation and implementation of a HMMSCP with appropriate procedures to implement in the event of an accidental spill or release of hazardous materials during project construction. Therefore, implementation of Mitigation Measure HAZ-1 would reduce impacts to the public or the environment related to the release of hazardous materials into the environment during reasonably foreseeable upset and accident conditions to a less-than-significant level.

LESS THAN SIGNIFICANT WITH MITIGATION INCORPORATED

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 school to the project site is Live Oak Elementary School, located approximately 0.7 mile northwest Well E-15 and approximately 0.9 mile northwest of the proposed centralized treatment facility. No existing or proposed schools are located within 0.25 mile of any project component. As discussed under thresholds 9(a) and (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. Hazardous materials associated with project operation, including sodium hypochlorite and liquid ammonium sulfate, would not produce hazardous air emissions under normal operating conditions when handled properly by trained SCV Water personnel. Sodium hypochlorite is a liquid disinfectant and is not equivalent to chlorine gas; chlorine gas would not be used or released during project operation.

Furthermore, implementation of Mitigation Measure HAZ-1 would be required to provide additional safety measures during project construction, further reducing the potential for accidental spills of hazardous materials. Therefore, the project would not emit hazardous emissions or handle hazardous or acutely hazardous materials within 0.25 mile of an existing or proposed school. This impact 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 December 22, 2025, for known hazardous materials contamination at the project site:

- State Water Resources Control Board - GeoTracker search for leaking underground storage tanks (LUST) 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
- The Cortese List, including solid waste disposal sites and sites with active cease and desist or cleanup and abatement orders identified by the SWRCB (California Environmental Protection Agency 2025).

The results of Phase I and Limited Phase II Environmental Site Assessments completed by ENGEO for the location of the proposed centralized treatment facility were also reviewed.

The Phase I Environmental Site Assessment did not identify Recognized Environmental Conditions, Historical Recognized Environmental Conditions, or Controlled Recognized Environmental Conditions for the centralized treatment facility location but did mention potential environmental concerns including two former LUST cases associated with Schwartz Oil Co., adjacent abandoned pipelines, and the potential for aerially deposited lead due to adjacent older roadways. In addition, the proposed facility location was cultivated as agricultural land from at least 1940 through at least 1952, and residual agrichemicals may be present in on-site soils (ENGEO 2026). With regard to the former Schwartz Oil Co. LUST cases, one case was closed in 1996, and prior evaluation efforts for the second case consisted of the installation of four groundwater monitoring wells that reported low concentrations of volatile organic compounds with benzene detected in 2006 (later non-detectable in 2007) and methyl tert-butyl ether (MTBE) detected in 2006 and 2007 at concentrations below the Maximum Contaminant Limit. The Los Angeles Regional Water Quality Control Board closed the second case in 2007 (ENGEO 2026; SWRCB 2025). The proposed centralized treatment facility is also adjacent to a listed site, Newhall Land and Farming, which previously contained a potential gasoline leak. This site was remediated and closed in 1990. The proposed facility is approximately 200 feet west of Angeles County Fire Station #76, which had a release of non-petroleum hydrocarbon contamination; this site was closed in 1997. Additionally, the proposed facility is approximately 0.25 mile southwest of a listed site, Chevron, which had waste oil contamination; this site was closed in 1999 (SWRCB 2025).

To confirm the absence of on-site soil and groundwater contamination associated with these former hazardous material release sites and other potential environmental concerns identified in the Phase I Environmental Site Assessment, ENGEO completed a limited Phase II Environmental Site Assessment consisting of shallow soil sampling at the location of the proposed centralized treatment facility for agrichemicals and aerially deposited lead as well as groundwater sampling for metals, total petroleum hydrocarbons, and volatile organic compounds. None of the constituents analyzed exceeded the applicable screening criteria in any of the soil or groundwater samples, and the Phase II Environmental Site Assessment concluded the property is suitable for the proposed centralized treatment facility (ENGEO 2026).

The nearest active cleanup site is The Old Road, located approximately 0.3 mile from the proposed facility. This site involved removal of a former crude oil pipeline and excavation of petroleum-impacted soil in 2019 and 2020. Two groundwater monitoring wells were installed in 2021, and a third offsite monitoring well is proposed as part of ongoing remediation efforts. The site is currently a vacant lot and does not overlap with the project site (SWRCB 2025).

Because the project site itself is not listed on the Cortese List and adjacent or nearby sites have either been closed or are undergoing remediation with no evidence of migration to the project area, the project would not create a significant hazard to the public or the environment related to location on a hazardous materials site. 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 17 miles to the southeast of the project site. The project site is not located in an area covered by the airport's land use plan or 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 construction, equipment staging primarily occurs within the centralized treatment facility and at existing well sites, as well as along pipeline alignments. Temporary lane closures may be required on Henry Mayo Drive during pipeline installation. However, closures would be short-term with traffic control measures implemented, including signage and flaggers, to maintain emergency access at all times. The project does not include permanent changes to the existing street system that could result in inadequate emergency access or interfere with emergency evacuation routes.

Project operation and maintenance would not introduce new activities or substantial operational traffic that could interfere with emergency response or evacuation plans. Therefore, the project would not impair implementation of or physically interfere with an adopted emergency response plan or emergency evacuation plan. No impact would occur.

NO IMPACT

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

As discussed in Section 20, *Wildfire,* the project site is located in a State Responsibility Area and designated as a Very High Fire Hazard Severity Zone (VHFHSZ) (California Department of Forestry and Fire Protection [CAL FIRE] 2025). The project site is primarily located within existing developed and previously disturbed areas, but the maximum project boundary extends into adjacent native vegetation communities that are highly combustible and pose a fire risk. Heavy-duty equipment used during construction that may produce sparks capable of igniting vegetation would be regulated through compliance with California Public Resources Code (PRC) requirements. PRC Section 4442 mandates the use of spark arrestors on earth-moving and portable construction equipment with internal combustion engines operating on or near 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, because construction would occur within a VHFHSZ and near combustible vegetation, construction activities would have the potential to result in wildland fires, 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.

Project operation would not include components with the potential to ignite wildland fires. 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 no impact would occur.

Mitigation Measure

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

As stormwater flows over a construction site, it can pick up sediment, debris, and chemicals, and transport them to receiving water bodies. Temporary site preparation and trenching activities associated with the project may result in soil erosion. 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 include Castaic Creek to the north and 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. 2009-2009-DWQ, as amended) because project construction would disturb more than one acre of land. The NPDES Construction General Permit requires preparation and implementation of a project-specific SWPPP, which requires operators to implement pollution prevention controls to minimize the discharge of pollutants from stormwater and spilled or leaked materials. Such controls include installation of silt fencing and sandbag barriers, covering of stockpiles, use of desilting basins, and post-construction revegetation and drainage requirements. In addition, pursuant to the NPDES Construction General Permit requirements, inspections would be conducted on the project site once every seven calendar days and within 24 hours of a 0.25-inch storm event. Compliance with applicable regulatory requirements would minimize potential surface water quality impacts associated with sediment erosion during project construction.

There is potential for accidental leaks and spills of hazardous materials at the surface during project construction, which could result in potentially significant impacts to water quality if hazardous materials enter Castaic Creek or storm drains. Mitigation Measure HAZ-1, as described in Section 9, *Hazards and Hazardous Materials*, would reduce the potential for accidental leaks and spills of hazardous materials by requiring preparation and implementation of an HMMSCP. With implementation of Mitigation Measure HAZ-1, 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

The proposed project would include operation of a centralized treatment facility and associated pipelines. The facility would treat groundwater pumped from Wells E-14, E-15, E-16, and E-17 to levels below federal Maximum Contaminant Levels before distribution. Discharges associated with pipeline testing and well flushing would be covered under SCV Water's existing Statewide General Permit for Drinking Water System Discharges to Waters of the United States (Order WQ 2014-0194-DWQ, General Order No. CAG140001, WDID No. 4DW0439) and would be required to comply with water quality standards established in this permit, including effluent limitations for chlorine residual and turbidity, monitoring, and reporting requirements. In addition, chemicals stored on-site for disinfection (sodium hypochlorite and liquid ammonium sulfate) would be maintained in an enclosed building with secondary containment and venting, and SCV Water would prepare a Hazardous Materials Business Plan and emergency response plan in accordance with regulatory requirements. These measures would prevent chemical releases and protect water quality. 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 WITH MITIGATION INCORPORATED

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. 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 overdrafted (SCV GSA 2022). The SCV Water 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 restore the use of Wells E-14, E-15, E-16, and E-17, along with construction and operation of a centralized treatment facility and associated water pipelines. The purpose of the proposed project is to reduce SCV Water's dependence on imported water supplies by restoring groundwater production capacity. Although Wells E-14 and E-16 are not currently equipped, the GSP water budgets account for future production from all four E-wells. The GSP modeling indicates anticipated future pumping is unlikely to cause an overdraft condition in the local groundwater system (SCV-GSA

2022). . Annual groundwater pumping under the project would be anticipated to range from approximately 2,460 to 2,900 acre-feet per year, depending on hydrologic year type, which is consistent with the modeled limits established in the GSP and permitted well capacities.

To avoid substantial depletion of groundwater resources, SCV Water would operate the wells in compliance with Section 9.5.5 of the GSP, which outlines monitoring and adaptive management strategies to protect groundwater-dependent ecosystems and avoid exceeding thresholds for interconnected surface water depletion. Implementation of these procedures would ensure the project does not conflict with sustainable groundwater management targets, recharge objectives, or cause long-term adverse impacts on basin conditions.

Recent implementation of the GSP has demonstrated that the basin is being operated sustainably and within modeled limits. In Water Year (WY) 2024, total groundwater extraction was 21,194 acre-feet, the lowest level in the last five years, and average annual pumping in WY 2020 through WY 2024 was 30,968 acre-feet. Both these groundwater extraction values are below the GSP's long-term modeled sustainable yield of 52,200 acre-feet per year. In addition, basin-wide storage of groundwater increased by 94,714 acre-feet in WY 2023 and 16,417 acre-feet in WY 2024, reflecting wet-year recovery consistent with the GSP model. Monitoring demonstrates that groundwater elevations in most representative monitoring locations are at or above minimum thresholds established by the GSP, and the 2024 Annual Report for the GSP reports that established sustainable management criteria are being met (SCV-GSA 2025). Collectively, these results demonstrate that GSP implementation in the last several years has resulted in sustainable groundwater management and groundwater pumping does not exceed modeled rates.

The project would not substantially increase impervious surfaces on the project site because the centralized treatment facility would be located in a previously disturbed area. Stormwater runoff from the facility would be discharged to existing storm drainage infrastructure and ultimately to Castaic Creek, 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 is between Castaic Creek and Santa Clara Creek but does not overlap. Portions of the project are located with a 500-year or a 100-year floodplain and are directly adjacent to a flood zone boundary (Federal Emergency Management Agency [FEMA] 2025). Construction would involve ground disturbance of approximately 65,000 square feet for the centralized treatment facility and 45,000 square feet for pipeline installation, primarily within existing roadway rights-of-ways and previously disturbed areas. Improvements to existing wells would require minimal or no ground disturbance.

The project would not alter the course of a stream or river. Upon completion, the centralized treatment facility would include a building footprint, paved access, and equipment pads; however, these features would not substantially change existing drainage patterns. Stormwater runoff would be directed to existing storm drainage and ultimately to Castaic Creek, consistent with current drainage patterns. Pipeline installation would not create permanent impervious surfaces beyond minor appurtenances.

The water pipelines could be installed within the undeveloped areas of the maximum project boundary; however, the pipelines would be underground and would not alter surface runoff patterns. In addition, because the site is already partially developed and disturbed, the net change in surface runoff would be minimal. The project would not result in substantial erosion or siltation; increase the rate or amount of surface runoff such that on- or off-site flooding occurs; or impede or redirect flows. All discharges during construction would comply with SCV Water's NPDES requirements. Therefore, 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 5.6 miles northeast of the project site. Given this distance and intervening topography, the project site is not at risk of inundation due to seiche. The project site is approximately 29 miles northeast of the Pacific Ocean and is therefore not located in a tsunami hazard zone. Portions of the proposed project are located within a 500-year or 100-year floodplain and are directly adjacent to a flood zone boundary (FEMA 2025). Wells E-14 and E-16 are located within these flood hazard areas. However, these wells would not store hazardous materials and would not contain pollutants that could be released in the event of inundation. The proposed centralized treatment facility, where chemicals such as sodium hypochlorite and ammonium sulfate would be stored, would be located outside of the flood hazard areas in a fully enclosed building with secondary containment. Therefore, the project site is not at risk of inundation with no potential to release pollutants due to project inundation. Impacts would be less than significant.

LESS-THAN-SIGNIFICANT IMPACT

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 Regional Water Quality Control Board's Basin Plan for the Coastal Watersheds of Los Angeles and Ventura Counties (Los Angeles Regional Water Quality Control Board 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 pollution prevention controls 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 (WDID No. 4DW0768), SCV Water would be required to implement BMPs that would minimize sediment discharge in stormwater runoff during project operation via the use of erosion control measures. 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 restore the use of Wells E-14, E-15, E-16 and E-17 without increasing SCV Water's basin-wide groundwater pumping beyond historical levels. Annual pumping would remain within the modeled limits established in the GSP and permitted well capacities. In addition, the project

would not interfere with groundwater recharge because impervious surfaces would be limited and stormwater would continue to drain to existing infrastructure and natural drainage features. SCV Water would operate the wells in compliance with Section 9.5.5 of the GSP, which outlines monitoring and adaptive management strategies to protect groundwater-dependent ecosystems and avoid undesirable results such as depletion of interconnected surface waters. The proposed project would support the implementation of SCV Water's GSP and would not substantially decrease groundwater supplies or interfere with groundwater recharge in a way that would impede sustainable groundwater management of the basin. Impacts would be less than significant.

LESS-THAN-SIGNIFICANT IMPACT

This page intentionally left blank.

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 proposed project would restore the use of Wells E-14, E-15, E-16, and E-17, along with construction and operation of a centralized treatment facility. All project components would be located within previously disturbed areas, including existing well sites and roadway rights-of-ways. The centralized treatment facility would be constructed on a site between Henry Mayo Drive and SR 126, and the pipelines would be installed underground. These improvements would not create new barriers or alter existing roadway connections, neighborhoods, or other community features. 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 proposed centralized treatment facility is zoned General Commercial (C-3) and the existing E-Wells and undeveloped areas within the maximum project boundary are zoned Restricted Heavy Manufacturing (M-1.5-DP). 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 production, generation, storage, treatment, or transmission of water. As such, the project would not be subject to the County's building and zoning ordinances (Los Angeles County Code Titles 26 and 22). However, SCV Water would obtain the required vegetation removal permit from the Los Angeles County Engineer prior to any vegetation removal (Los Angeles County Code Section 12.28.030.

The Los Angeles County General Plan includes Goal PS/F 2 for drinking water, which states that the County aims to increase water conservation efforts (Los Angeles County 2015). The proposed project would enable SCV Water to continue providing its existing customers with a safe, reliable water supply by enabling SCV Water to construct a centralized treatment facility and restore the use of Wells E-14, E-15, E-16, and E-17. Therefore, the project would further implementation of Goal PS/F 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 not cause a significant environmental impact due to a conflict with any land use plan, policy, or regulation adopted for the purpose of avoiding or mitigating an environmental effect, and impacts would be less than significant.

LESS-THAN-SIGNIFICANT IMPACT

This page intentionally left blank.

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?

According to the County's General Plan, the project site is not located in a Mineral Resource Zone (Los Angeles County 2015). Additionally, the site is not designated or zoned for mineral resource extraction, and no mineral resource extraction activities are currently occurring on site. As nearby residential and school uses are incompatible with mineral extraction, no such operations are reasonably anticipated at the site. Therefore, the project would result in no impact to mineral resources.

NO IMPACT

This page intentionally left blank.

13 Noise

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

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 receptor. 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 receptor (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 Receptors

Noise exposure goals for various types of land uses reflect the varying noise sensitivities associated with those uses. The County's Noise Element describes noise-sensitive land uses as schools, hospitals, childcare, senior care, congregate care, parks, and all types of residential uses (Los Angeles County 2015). The nearest noise-sensitive receptor to the project area is Travel Village RV Resort along SR-126, which is located approximately 745 feet to the southeast.

Vibration-sensitive receptors are similar to noise-sensitive receptors and include residences and institutional uses, such as schools, churches, and hospitals. However, vibration-sensitive receptors also include buildings where vibrations may interfere with vibration-sensitive equipment, which can be affected by levels that may be well below those associated with human annoyance. The closest vibration-sensitive receptor to the project area is the commercial building adjacent to the proposed centralized treatment facility site, located approximately 35 feet to the southeast.

Project Noise Setting

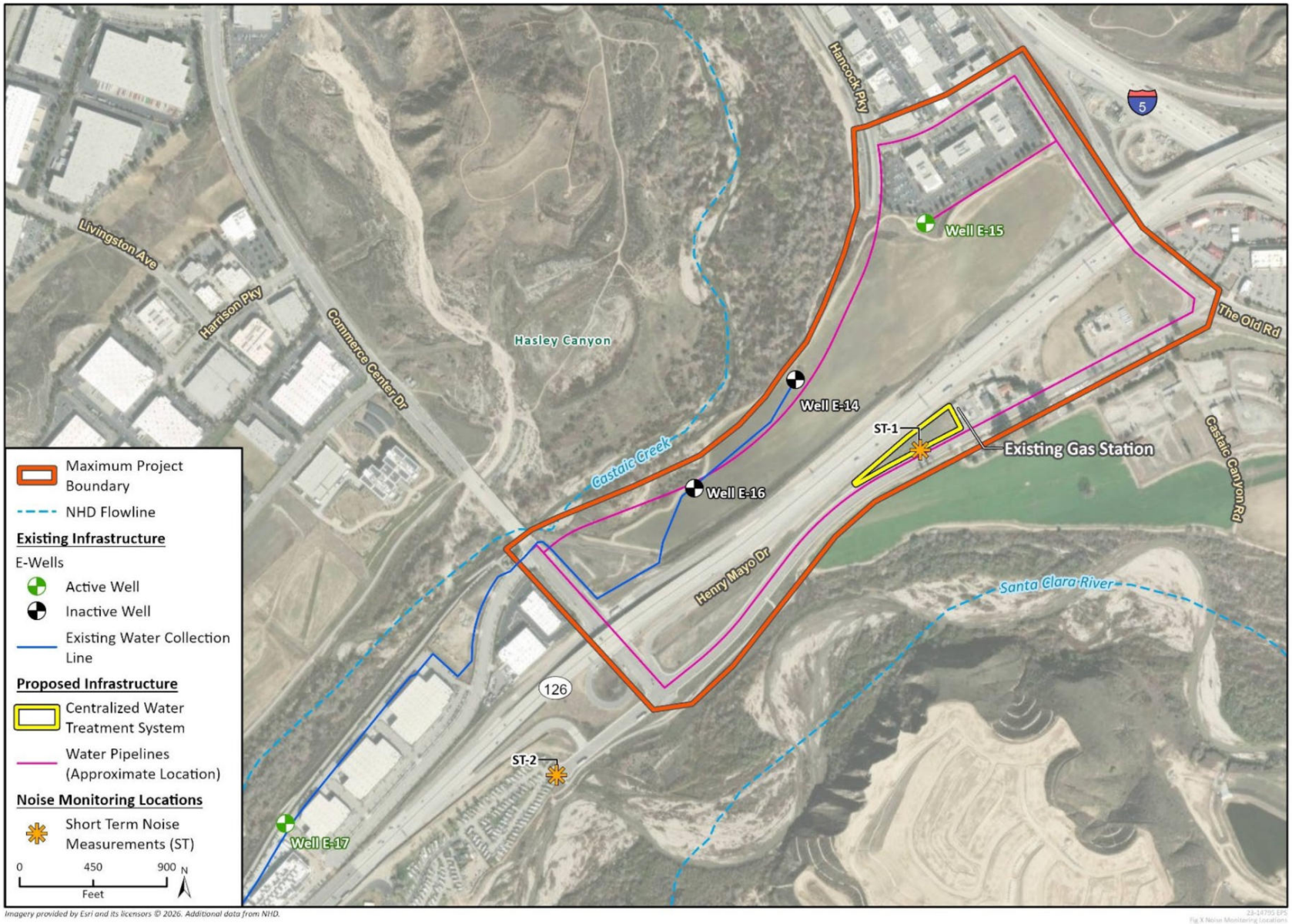
The most common source of noise in the project site vicinity is vehicular traffic along SR-126, Commerce Center Drive, and Henry Mayo Drive. To characterize ambient sound levels at and near the project site, two short-term (ST) 15-minute sound level measurements were conducted from July 10-11, 2025. The sound meter was calibrated prior to measurements. As shown in Figure 4, ST 1 was taken at the southern boundary of the proposed centralized water treatment system to measure ambient noise levels on site, and ST-2 was taken to the west end of Henry Mayo Drive to measure ambient noise levels at the nearest residences to the project site. Table 11 summarizes the results of the noise measurements.

Table 11 Project Site Noise Monitoring Results – Short Term

Measurement	Location	Sample Times	Approximate Distance to Primary Noise Source	L_{eq} (dBA)	L_{max} (dBA)	L_{min} (dBA)
ST-1	Midpoint of southern boundary of proposed Centralized Water Treatment System	9:19 – 9:34 a.m.	Approximately 15 feet to the nearest lane on Henry Mayo Drive	70	89	58
ST-2	At the dead end of Henry Mayo Drive to the west.	8:54 – 9:09 a.m.	Approximately 15 feet to the nearest lane on Henry Mayo Drive	58	66	52

Approximate noise measurement locations are shown in Figure 4.

Figure 4 Approximate Noise Measurement Locations



Regulatory Setting

Noise regulations are governed by Los Angeles County Code Title 22, Chapter 12.08. The County's Noise Control Ordinance establishes general noise limits, identified prohibited noise activities, and provides specific restrictions for construction-related noise. Section 12.08.390 sets operational noise levels at residential, commercial, and manufacturing uses, which are shown in Table 12.

Table 12 County of Los Angeles Exterior Noise Standards

Land Use	Time	Noise Limit (dB)
Noise-sensitive area	Anytime	45
Residential properties	7:00 a.m. to 10:00 p.m. (Day)	50
	10:00 p.m. to 7:00 a.m. (Night)	45
Commercial properties	7:00 a.m. to 10:00 p.m. (Day)	60
	10:00 p.m. to 7:00 a.m. (Night)	55
Industrial properties	Anytime	70

Source: Los Angeles County Code Section 12.08.390

Pursuant to Part 5 of Chapter 12.08, construction noise is exempt from compliance with the County's exterior noise standards. Section 12.08.440 limits construction to 7:00 a.m. to 7:00 p.m., Monday through Saturday, and prohibits construction noise on Sunday and legal holidays. Section 12.08.440 establishes construction noise levels at residential uses, which are shown in Table 13.

Table 13 County of Los Angeles Construction Noise Standards

Land Use	Time	Noise Limit (dB)
Single family residential	Daily except Sundays and holidays, 7:00am to 8:00pm (Day)	75
	Daily 8:00pm to 7:00am (Night), and Sundays and holidays	60
Multi-family residential	Daily except Sundays and holidays, 7:00am to 8:00pm (Day)	80
	Daily 8:00pm to 7:00am (Night), and Sundays and holidays	64
Semi-residential/commercial	Daily except Sundays and holidays, 7:00am to 8:00pm (Day)	85
	Daily 8:00pm to 7:00am (Night), and Sundays and holidays	70

Source: Los Angeles County Code Section 12.08.440

Significance Thresholds

Construction Noise

The noise level limits contained in Los Angeles County Code Section 12.08.440 (see Table 13) were utilized to evaluate the project's construction noise impacts.

Operational Noise

The noise level limits contained in Los Angeles County Code Section 12.08.390 (see Table 12) 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 receptors 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 receptors 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 January 2027 and December 2028. The nearest sensitive receptors to construction would be the Higher Vision Church along The Old Road, approximately 400 feet east of the pipeline installation and 2,200 feet to the northeast of the centralized water treatment center; Travel Village RV Resort along SR-126, approximately 745 feet southeast of the pipeline installation and approximately 2,585 feet to the southwest of the proposed centralized water treatment center; and single-family residences, approximately 2,490 feet to the northwest of the pipeline installation and approximately 3,880 feet to the north of the proposed centralized water treatment center.

Daytime Construction Work

A potential construction scenario includes a grader, scraper, and backhoe working during building construction. All equipment was assumed to operate along the center of the project site to account for the average location of equipment for the pipeline and access road work area. As shown in Table 15, at a distance of 400 feet to the nearest church use (Higher Vision Church), Linear, Drainage, Utilities & Sub-Grade activities during pipeline installation would generate a noise level of 66 dBA L_{eq} (8-hour); at a distance of 470 feet to the nearest sensitive residential receptor, Linear, Drainage, Utilities & Sub-Grade activities during pipeline installation would generate a noise level of 63 dBA L_{eq} (8-hour); and at a distance of 2,585 feet to the nearest sensitive residential receptor during the site preparation phase of the Centralized Water Treatment Center, the noise level would be up to 51 dBA L_{eq} (8-hour). Daytime construction would occur between the hours of 7:00 a.m. to 4:00 p.m., Monday through Friday, and would be subject to Los Angeles County's daytime construction noise standards (Table 13). As shown below, noise generated by construction activities at the nearest receptors would not exceed the most stringent daytime noise threshold of 75 dBA for single family residences. 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 Estimated Noise Levels by Construction Phase at Sensitive Receptors

	dBA Leq (8-hour)			
Construction Activity Phase	**RCNM Reference Noise Level**	**Travel Village RV Park to the Southeast**	**Higher Vision Church to the Northeast**	**Single-Family Residence on Diablo Place to the Northwest**
Distance to Pipeline Installation (feet)[1]	**50**	**745**	**400**	**2,490**
Linear, Grubbing & Land Clearing	82	63	64	48
Linear, Grading & Excavation	79	60	61	45
Linear, Drainage, Utilities & Sub-Grade	84	65	66	50
Linear, Paving	78	59	60	44
Distance to Centralized Water Treatment Center (feet)[2]	**50**	**2,585**	**2,200**	**3,880**
Site Preparation	84	50	51	46
Grading	83	49	50	45
Building Construction	75	41	42	37
Paving	78	44	45	40

L_{eq} = average noise level equivalent; dBA = A-weighted decibel

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

Noise levels rounded to the nearest whole number.

[1] Distance from the nearest pipeline installation construction activity to nearest sensitive receptor.

[2] Distance from nearest boundary of the centralized water treatment center construction activity to nearest sensitive receptor.

Source: FTA 2018

Construction Traffic

According to the CalEEMod assumptions for the project, project construction would involve up to 43 trips per day during Linear, Grading & Excavation. The segment of Henry Mayo Drive within the southern portion of the project site has a traffic volume of approximately 2,564 average daily trips according to Replica's modeled data about activity in the built environment (Replica 2024). As such, project construction traffic would result in a less than 1.6 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 Henry Mayo Drive. 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 Noise

On-Site Pump Noise

On-site noise sources associated with the proposed project would include mechanical equipment, specifically the pump station and surrounding mechanical components. To analyze noise impacts from the pump station and accompanying mechanical components, a reference noise level measured for a 100-horsepower (HP) pump at a water treatment plant was used. This 100-horsepower pump had a sound power level of 93.2 dBA L_{eq} which is equivalent to a sound pressure level (SPL) of 85.2 dBA L_{eq} at a distance of three feet. The proposed project would include one 300-horsepower pump at Well E-14, E-15, E-16, and E-17. Therefore, the reference level for one 100-horsepower pump was adjusted to account for the larger pumps by assuming each 100 horsepower equates to a noise level of 85.2 dBA L_{eq} at a distance of three feet. Therefore, for purposes of this analysis, pump noise levels were estimated to be 90.0 dBA L_{eq} for the 300-horsepower pump[9] at a distance of three feet. To provide a conservative estimate of impacts, this analysis assumes the pump would be operational 24 hours per day, 365 days per year.

For Well E-17, with a distance of approximately 470 feet between the pump to the nearest sensitive receptor property line to the southeast (i.e., Travel Village RV Resort), the pump would generate a noise level of 44 dBA L_{eq} at the receptor. In addition, for Well E-15, with a distance of approximately 2,890 feet between the pump to the nearest sensitive receptor property line to the northwest (i.e., single-family residence), the pump would generate a noise level of 30 dBA L_{eq} at the receptor. Well E-14 and Well E-16 would be located further away and noise levels would be lower. Therefore, noise generated by the pumps at Wells E-14, E-15, E-16, and E-17 would not exceed the County's residential daytime exterior noise limit of 50 dB or nighttime exterior noise limit of 45 dB. 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 four maintenance trips per week to the project site. 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.

LESS THAN SIGNIFICANT IMPACT

[9] Noise levels for the proposed 250 HP and 300 HP pump were calculated using the formula: Reference Noise Level + $10\log_{10}$ (proposed HP / Reference HP).

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 receptors, especially during paving and pipeline installation phases of the project site. Neither blasting nor pile driving would be required for construction of the project, which typically generate the highest levels of vibration. The greatest vibratory source during construction in the project vicinity would be a vibratory roller, which may be used within 35 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 0.127 in/sec PPV at a distance of 35 feet to the nearest commercial building from Well E-17. Additionally, a large bulldozer would create a vibration level of approximately 0.089 in/sec PPV at a distance of 25 feet (FTA 2018), which would attenuate to a vibration level of 0.127 in/sec PPV at a distance of 20 feet to the nearest commercial building east of the Centralized Water Treatment System. This level of vibration would not exceed the significance threshold of 0.2 in/sec PPV for nonengineered timber and masonry buildings (residential buildings) or 0.3 in/sec PPV for engineered concrete and masonry (no plaster) (commercial building). All other sensitive receptors would be further away and vibration levels would be lower. 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**	**Commercial Building to the South of Well E-17**	**Commercial Building to the East of Centralized Water Treatment System**
Distance (feet)	**25**	**35**	**20**
Large Bulldozer	0.089	0.054	0.124
Loaded Trucks	0.076	0.046	0.106
Small Bulldozer	0.003	0.002	0.004
Distance (feet)	**25**	**35**	**80**
Vibratory Roller	0.210	0.127	0.037
FTA Threshold for Building Damage	–	0.3	0.3
Threshold Exceeded?	–	No	No

Source: FTA 2018

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

Note: Vibration analysis worksheets are included in Appendix C.

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 16.5 miles to the southeast 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

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 growth. The proposed project would restore the use of Wells E-14, E-15, and E-16, and E-17, along with construction and operation of a centralized treatment facility. The purpose of the proposed project is to reduce dependence on imported water supplies by restoring 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 all wells were operational; thus, the project would not provide an additional source of water supply to serve new population growth. The project would also not extend water infrastructure into previously unserved areas. 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 would restore the use of Wells E-14, E-15, E-16, and E-17, along with construction and operation of a centralized treatment facility and associated pipelines. 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

This page intentionally left blank.

15 Public Services

		Potentially Significant Impact	Less than Significant with Mitigation Incorporated	Less-than - Significant Impact	No Impact
a	**Would the project result in substantial adverse physical impacts associated with the provision of new or physically altered governmental facilities, or the need for new or physically altered governmental facilities, the construction of which could cause significant environmental impacts, in order to maintain acceptable service ratios, response times or other performance objectives for any of the public services:**				
1	Fire protection?	☐	☐	☐	■
2	Police protection?	☐	☐	☐	■
3	Schools?	☐	☐	☐	■
4	Parks?	☐	☐	☐	■
5	Other public facilities?	☐	☐	☐	■

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 project would involve the construction of a centralized treatment facility and associated pipelines to restore the use of existing wells. These improvements would not generate new residential or commercial development, nor would they increase population or employment in the area.

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 Los Angeles County Fire Department Fire Station No. 76, immediately adjacent to the centralized treatment facility on the east side.

The project would also incorporate security measures to minimize the need for additional police protection services. All components of the centralized treatment facility would be enclosed within an approximately 15-foot-high decorative wall with controlled access through two driveways along Henry Mayo Drive. Pedestrian doors would be secured with a key fob system.

Because the project would not generate population growth or create new demands on public services, it would not necessitate construction or physical alteration of fire stations, police facilities, schools, parks, or other public facilities to maintain acceptable service ratios, response times, or performance objectives. 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 such facilities, the construction of which could cause significant environmental impacts. No impact would occur.

NO IMPACT

16 Recreation



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

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

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

The proposed project would not involve or require the use of existing neighborhood or regional parks or recreational facilities. Construction activities would occur primarily at the western end of the centralized treatment facility site and at the existing E-Wells sites. While temporary lane closures may occur on Henry Mayo Drive during pipeline installation, the closures would not affect access to parks or recreational facilities. No trails or recreational amenities would be closed or impacted during construction.

The project does not include recreational facilities and would not require the construction or expansion of recreational facilities. Project operation would not result in additional residents or workers that could increase the use of nearby parks or recreational facilities. Therefore, the project would not increase the use of existing neighborhood or regional parks or other recreational facilities such that substantial physical deterioration of those facilities would occur or be accelerated, nor would it require the construction or expansion of recreational facilities. No impact would occur.

NO IMPACT

This page intentionally left blank.

17 Transportation

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

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

The proposed project is accessible via Henry Mayo Drive, which includes sidewalks on both sides of the street. The project may lead to temporary traffic impacts and localized lane closures due to Henry Mayo Drive as project construction would require vehicle trips including construction worker daily commutes, haul trucks (including export of soil materials), and other trucks associated with equipment, material, and concrete deliveries. Temporary lane closures would be managed with appropriate traffic control measures, including signage and flaggers, in accordance with County requirements. Construction-related traffic would be short-term and would cease upon completion of construction activities. Therefore, project construction 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.

Operational activities of the proposed project would require up to four maintenance staff per week, resin media replacement approximately two to three times per year, and chemical deliveries approximately twice a month. 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. Given the minimal number of trips generated, operational impacts related to adopted policies, plans, or programs addressing the circulation system, including public transit, bicycle, or pedestrian facilities would be less than significant.

LESS-THAN-SIGNIFICANT IMPACT

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

CEQA Guidelines Section 15064.3(b) identifies criteria for evaluating transportation impacts. Specifically, the guidelines state 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 Land Use and Climate Innovation (formerly the 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 daily site visits, the resin media replacement visit, and the 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, impacts associated with VMT would be less than significant.

LESS-THAN-SIGNIFICANT IMPACT

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

The proposed project would not include new publicly-accessible roadways or driveways; therefore, no proposed geometric design features would increase hazards to human health or safety. Construction activities would occur within the centralized treatment facility site, existing well sites, and along pipeline alignments within public right-of-way. Temporary lane closures may occur on Henry Mayo Drive during pipeline installation; however, these closures would be managed with appropriate traffic control measures, including signage and flaggers. No permanent changes to roadway geometry would occur.

Following completion of construction, project operation would require periodic site visits by SCV Water staff, resin media replacement approximately two to three times per year, and chemical deliveries approximately twice per month. These trips would utilize existing public roadways and would be similar to existing SCV Water maintenance activities in the area. The project would not introduce incompatible uses or substantially increase hazards related to roadway design or traffic operations. Therefore, the project would not substantially increase hazards due to a geometric design feature or incompatible use during construction or operation.

LESS-THAN-SIGNIFICANT IMPACT

d. Would the project result in inadequate emergency access?

The project would not impact emergency access as the project site does not intersect with emergency access routes. While temporary lane closures may occur on Henry Mayo Drive during pipeline installation, these closures would be short-term and managed with appropriate traffic control measures, including signage and flaggers. Emergency vehicle access would be maintained at all times, and no permanent road closures are proposed.

During operation, the project would not alter existing roadway configurations or restrict emergency access routes. Therefore, the project would not result in inadequate emergency access during construction or operation. Therefore, no impact would occur.

NO IMPACT

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 October 25, 2023, SCV Water distributed AB 52 consultation letters for the proposed project, including project information, map, and contact information, to 12 Native American Tribes:

- Gabrieleño Band of Mission Indians – Kizh Nation
- Gabrieleño/Tongva San Gabriel Band of Mission Indians
- Gabrielino-Tongva Tribe
- Gabrielino Tongva Indians of California Tribal Council
- San Fernando Band of Mission Indians
- Gabrielino/Tongva

- Fernandeño Tataviam Band of Mission Indians
- Coastal Band of the Chumash Nation
- Chumash Council of Bakersfield
- Northern Chumash Tribal Council
- Barbareño/Ventureño Band of Mission Indians
- Santa Ynez Band of Chumash 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 November 24, 2023. SCV Water did not receive a letter from a Native American tribe that submitted a formal request for tribal consultation and additional project information. However, SCV Water received a letter from Gabriel Frausto, Chairman of the Coastal Band of the Chumash Nation, stating that the project site has tribal significance and is culturally sensitive on November 7, 2023. Other tribes contacted either did not request consultation or provided no response.

On December 19, 2025, SCV Water distributed an updated letter to the same tribes since the project area had changed since initial letters were sent in 2023. SCV Water received a request to initiate consultation from the Fernandeño Tataviam Band of Mission Indians (FTBMI) on April 14, 2026. A consultation meeting occurred on April 30, 2026, and Sarah Brunzell, Cultural Resources Management Division Manager, recommended several mitigation measures to include in the IS-MND.

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?*

The NAHC SLF search was returned with positive result. SCV Water received a letter from Gabriel Frausto, Chairman of the Coastal Band of the Chumash Nation, stating that the project site has tribal significance and is culturally sensitive on November 7, 2023. Chairman Frausto indicated the project site has sensitivity for tribal cultural resources due to its proximity to the Santa Clara river bed, Castaic Creek, and Halsey Canyon, which contain identified tribal cultural resources. SCV Water also engaged in AB 52 consultation with the FTBMI on April 30, 2026. Ms. Brunzell indicated the potential presence of tribal cultural resources within the maximum project boundary and the sensitivity of the project region. Ms. Brunzell recommended several mitigation measures to mitigate potential impacts to tribal cultural resources, which were accepted by SCV Water and are included as Mitigation Measures TCR-1 and TCR-2 below.

In addition, implementation of CR-1 through CR-3 (listed under threshold 5[a]) would reduce potential impacts associated with inadvertent discovery of unknown resources. In particular, CR-2 requires Native American and archaeological monitoring during all ground-disturbing activities to ensure that any unanticipated discoveries are appropriately identified and protected, thereby reducing potential impacts on tribal cultural resources to a less-than-significant level.

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 through CR-3, 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 Measures

Refer to Section 5, *Cultural Resources*, for Mitigation Measures CR-1 through CR-3.

TCR-1 Full Time Tribal Monitoring

SCV Water shall retain a professional Tribal Monitor procured by the Fernandeño Tataviam Band of Mission Indians (FTBMI) to observe the following ground-disturbing activities: grading, excavation, trenching, drilling, auguring, or similar activities. Tribal Monitoring is required during the initial pass, defined as the first soil disturbance to the maximum depth proposed for disturbance. If no tribal cultural resources are encountered during the initial pass of all ground-disturbing activities, no further Tribal Monitoring is required. If cultural resources are encountered during the initial pass, Tribal Monitoring shall continue for all remaining ground-disturbing activities, regardless of whether soils have been previously disturbed, until all ground-disturbing activities are complete. Tribal Monitoring shall continue until SCV Water provides written confirmation to the FTBMI that all activities requiring monitoring have been completed. If construction activities occur in separate phases requiring the Tribal Monitor to leave and later return to the site, SCV Water shall:

- Provide written confirmation to the Tribe upon completion of each monitored phase; and
- Provide written notice to the Tribe at least five days in advance, if feasible, prior to the start of each subsequent phase requiring monitoring.

If cultural resources are discovered, the Tribal Monitor shall have the authority to request a temporary halt to ground-disturbing activities within 60 feet of the discovery. SCV Water shall retain a qualified archaeologist who meets the Secretary of the Interior's Professional Qualifications Standards for Archaeology to evaluate the discovery and recommend appropriate treatment in coordination with the Tribal Monitor.

TCR-2 Disposition and Treatment of Inadvertent Discoveries

SCV Water shall, in good faith, consult with the FTBMI on the disposition and treatment of any tribal cultural resource encountered during all ground disturbing activities.

Significance After Mitigation

Implementation of Mitigation Measures CR-1 through CR-3 (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 of the proposed project components, implementation of a Worker's Environmental Awareness Program training prior to construction for all project components, and appropriate procedures for evaluation and treatment should any discoveries be made during construction for all project components.

LESS THAN SIGNIFICANT WITH MITIGATION INCORPORATED

This page left intentionally blank.

19 Utilities and Service Systems

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

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

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 project would not require permanent on-site personnel and does not include the installation of restroom facilities. Therefore, no wastewater would be generated, and the project would not result the construction or relocation of additional new or expanded wastewater facilities. No impact would occur.

Stormwater Drainage

As discussed in Section 10, *Hydrology and Water Quality*, the project would minimally alter drainage patterns on site due to construction of the centralized treatment facility and associated improvements.

Stormwater runoff would continue to be directed to existing storm drainage infrastructure and ultimately to Castaic Creek, consistent with current conditions. Other project components, such as improvements to the existing 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 160 MWh of electricity monthly, or approximately 1,920 MWh annually to operate the groundwater pumps, PFAS treatment vessels, and disinfection systems at the centralized treatment facility. The project would not require construction or relocation of off-site electrical transmission infrastructure. Any necessary on-site electrical improvements would occur within the project site. 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 would not require the installation of telecommunication facilities. 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 proposed project involves construction of a centralized treatment facility and associated pipelines to collect and treat groundwater pumped from existing wells. The purpose of the project is to reduce reliance on imported water supplies by restoring groundwater production capacity. The project would result in an increase in SCV Water's basin-wide groundwater pumping due to Wells E-14 and E-16 being brought back online, with anticipated groundwater production capacities of up to 1,200 gpm each, as identified in the SCV Water UWMP and shown in Table 2. The E-Wells bank is permitted to produce up to a total of 5,000 gpm. The project would not expand the capacity or increase historical production from recently active Wells E-15 and E-17.

GSP modeling indicates that this bank of E-Wells can produce up to 2,900 acre-feet per year (AFY) in a normal year and 2,460 AFY in a dry year without resulting in adverse impacts to sustainable groundwater management. The project would continue providing existing customers with a safe, reliable water supply in accordance with the SCV Water UWMP (SCV Water 2021) and the Santa Clara River Valley East Groundwater Subbasin GSP (SCV Water 2022).

Therefore, sufficient water supplies are available to serve the project and reasonably foreseeable future development during normal, dry, and multiple dry years. No impact 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 project would not require permanent on-site personnel and does not include the installation of restroom facilities. Therefore, no wastewater would be generated, and 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, located approximately 10 miles southeast of the project site, would receive solid waste generated by the proposed project. The landfill 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 (CalRecycle 2025).

Excavated soils during the site preparation and grading phase would be used as backfill on the site, and therefore there would be no soil import or export. Other 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 removed two to three times a year 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. Disposal of hazardous waste would occur at licensed hazardous waste disposal facilities. 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

This page left intentionally blank.

20 Wildfire

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

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. 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.

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 2018). 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 (USGS 2018).

The project site is located in a State Responsibility Area and is designated as a Very High Fire Hazard Severity Zone (VHFSZ) (California Department of Forestry and Fire Protection [CAL FIRE] 2025). The project site is primarily located within existing developed and/or previously disturbed areas such as paved roadways and parking lots. The maximum project boundary extends into undeveloped natural areas such as adjacent native vegetation communities.

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 County's Operational Area Emergency Operations Plan sets forth hazard mitigation strategies related to a variety of threats, including wildfire. Strategies towards mitigating wildfire the Los Angeles County

Fire Department enhancing 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 County's Urban Forestry ability to manage wildfire events. The proposed project does not include components that would interfere with implementation of the County's Operational Area Emergency Operations Plan.

Construction of the project may require temporary lane closures along Henry Mayo Drive during pipeline installation; however, traffic control measures, including signage and flaggers, would be implemented to maintain emergency access at all times. The project does not include permanent 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 construction or operational impacts related to emergency response plans and emergency evacuation plans would occur.

NO IMPACT

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 involve activities with potential wildfire ignition risk. Project construction in proximity to vegetated areas would have the potential to result in wildfire ignition, and the project site consists of previously developed/disturbed areas and native vegetation communities 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. Fires potentially caused by project activities could expose people in the surrounding areas to pollutant concentrations from a wildfire or the uncontrolled spread of a wildfire. 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 fire prevention measures for construction activities, would be required to reduce impacts to a less-than-significant level.

LESS THAN SIGNIFICANT WITH MITIGATION INCORPORATED

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 centralized treatment facility and pipelines well as improvements 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

This page left intentionally blank.

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. Therefore, no impact would occur.

NO 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 2026):

- **Valencia Commerce Center Project.** This project consists of development of approximately 3.4 million square feet of industrial/business park space, a multi-purpose trail, roadways, and infrastructure within approximately 321 acres located west of I-5 and north of SR-126, including the northern half of the project site. The construction schedule for this project has not been defined and therefore may overlap with construction of the proposed project (Los Angeles County Department of Regional Planning 2025).
- **Homewood Suites/Hampton Inn.** This project is approximately 1.3 miles northeast of the project site. It involves approximately 124,000 square feet consisting of two hotel buildings with a total of 185 hotel rooms. This project is currently under construction.
- **Residence Inn/Springhill Suites/Holiday Inn Express.** This project is approximately 2 miles southeast of the project site. It involves a 182-room Residence Inn/Springhill Suites and a 108-room Holiday Inn Express. This project is currently under construction.

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 both the City of Santa Clarita and unincorporated areas of Los Angeles County, could continue to alter the visual landscape. Planned development within Santa Clarita would introduce multi-story buildings in already developed areas, while projects in unincorporated Los Angeles County, such as the Valencia Commerce Center Project, would modify visual character in accordance with the County's General Plan and zoning regulations. 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, the proposed project would not result in a cumulatively considerable contribution to this impact, whether it is significant or otherwise.
- **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. For example, the Valencia Commerce Center project, which would result in significant impacts to biological resources within and adjacent to the proposed project site, is required to implement a series of mitigation measures outlined in its Final Supplemental Environmental Impact Report (EIR) (Los Angeles County Department of Regional Planning 2025b). As discussed in Section 4, *Biological Resources*, proposed 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 and state- and federally-

protected waters, including riparian habitat. In addition, the proposed project would be required to implement Mitigation Measures BIO-1 through BIO-14 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. For example, the Valencia Commerce Center project, which would result in significant impacts to archaeological and tribal cultural resources, is required to implement a series of mitigation measures outlined in its Final Supplemental EIR (Los Angeles County Department of Regional Planning 2025b). 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 through CR-3 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 encounter areas with the potential to contain paleontological resources. This analysis conservatively assumes a significant cumulative impact to paleontological resources would occur. As discussed in Section 7, *Geology and Soils*, sediments within the project site that would be impacted by the proposed project may contain paleontological resources, and Mitigation Measure GEO-1 is required. 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.
- **Hydrology and Water Quality:** Cumulative projects in the region, including the proposed project and the Valencia Commerce Center project, would be required to comply with existing NPDES 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 County's General Plan, County Code, City of Santa Clarita'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:** Depending on its construction schedule, construction of the Valencia Commerce Center Project may occur at the same time as the proposed project and generate noise affecting the same noise-sensitive receptors. However, the nearest noise-sensitive receptors to the project site are Higher Vision Church, which is located approximately 400 feet to the northeast, and Travel Village RV Resort along SR-126, which is located approximately 745 feet to the southeast. The combined construction noise level for the proposed project and the Valencia Commerce Center would be approximately 68 dBA L_{eq} (8-hour) at Higher Vision Church[10] and 69 dBA L_{eq} (8-hour) at the Travel Village RV Resort,[11] which would not exceed the County's most stringent daytime noise threshold of 75 dBA for single family residences. In addition, potentially significant project noise impacts are limited to nighttime construction activities, and the Valencia Commerce Center project will not require nighttime construction (Los Angeles County Department of Regional Planning 2025). Therefore, cumulative noise impacts would not be significant.
- **Recreation.** No recreational facilities are located near the site, and neither the proposed project nor the Valencia Commerce Center project would result in significant impacts related to recreation. Therefore, cumulative impacts related to recreation would not be significant.
- **Transportation:** The cumulative development projects listed above may occur at the same time as the proposed project. Cumulative development would introduce new residential, commercial, and industrial uses to previously undeveloped areas, and would result in an increase in VMT. While a significant cumulative increase in VMT may occur, the project would result in a minimal increase in trips during construction and operation. 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 and unincorporated Los Angeles County would generally result in increased demands for utilities and service systems. 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. 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, significant or otherwise, 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.

LESS THAN SIGNIFICANT WITH MITIGATION INCORPORATED

[10] 66 dBA during pipeline installation for the proposed project + 63 dBA during construction of the Valencia Commerce Center project. Construction noise levels for the proposed project are shown in Table 15 in Section 13, *Noise*, of this IS-MND, and construction noise levels estimated for the Valencia Commerce Center Project are presented in Table 5.8-8 of its Draft Supplemental Environmental Impact Report (Los Angeles County Department of Regional Planning 2025a).
[11] 65 dBA during pipeline installation for the proposed project + 67 dBA during construction of the Valencia Commerce Center project. Construction noise levels for the proposed project are shown in Table 15 in Section 13, *Noise*, of this IS-MND, and construction noise levels estimated for the Valencia Commerce Center Project are presented in Table 5.8-8 of its Draft Supplemental Environmental Impact Report (Los Angeles County Department of Regional Planning 2025a).

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

Impacts to human beings are generally 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.

LESS THAN SIGNIFICANT WITH MITIGATION INCORPORATED

This page intentionally left blank.

References

Bibliography

California Air Pollution Control Officers Association (CAPCOA). 2021. California Emissions Estimator Model User's Guide Version 2020.4.0. May 2021.

California Air Resources Board (CARB). 2005. Air Quality and Land Use Handbook: A Community Health Perspective. April 2005. https://files.ceqanet.opr.ca.gov/221458-6/attachment/UNr-g159CW-r0G4DR8q6daNdAKT3RJTd8gGQCfz4wqFfl-eNdZNQEqjf8tfls1x6Gsae7YqpXwtFIZBd0 (accessed January 2026).

_____. 2022. 2022 Scoping Plan for Achieving Carbon Neutrality. November 16, 2022. https://ww2.arb.ca.gov/sites/default/files/2023-04/2022-sp.pdf (accessed January 2026).

_____. 2023. "Maps of State and Federal Designations". November 2023. https://ww2.arb.ca.gov/resources/documents/maps-state-and-federal-area-designations (accessed January 2026)

California Department of Conservation (DOC). 2025a. California Important Farmland Finder. https://maps.conservation.ca.gov/DLRP/CIFF/ (accessed December 2025).

_____. 2025b. Earthquake Zones of Required Investigation. https://maps.conservation.ca.gov/cgs/informationwarehouse/eqzapp/ (accessed December 2025).

California Department of Forestry and Fire Protection (CALFIRE). 2025. Fire Hazard Severity Zones in State Responsibility Area. https://calfire-forestry.maps.arcgis.com/apps/webappviewer/index.html?id=988d431a42b242b29d89597ab693d008 (accessed December 2025).

California Department of Fish and Wildlife (CDFW). 2023. Survey Considerations for California Endangered Species Act (CESA) Candidate Bumble Bees. June 6, 2023.

California Department of Transportation (Caltrans). 2013. Technical Noise Supplement to the Traffic Noise Analysis Protocol. (CT-HWANP-RT-13-069.25.2) September. https://dot.ca.gov/-/media/dot-media/programs/environmental-analysis/documents/env/tens-sep2013-a11y.pdf (accessed December 2025).

_____. 2020. Transportation and Construction Vibration Guidance Manual. https://dot.ca.gov/-/media/dot-media/programs/environmental-analysis/documents/env/tcvgm-apr2020-a11y.pdf (accessed December 2025).

_____. 2018. California State Scenic Highway System Map. https://caltrans.maps.arcgis.com/apps/webappviewer/index.html?id=465dfd3d807c46cc8e8057116f1aacaa (accessed January 2026).

California Energy Commission (CEC). 2022. Supply and Demand of Natural Gas in California. https://www.energy.ca.gov/data-reports/energy-almanac/californias-natural-gas-market/supply-and-demand-natural-gas-california (accessed December 2025).

_____. 2024. 2023 Total System Electric Generation. https://www.energy.ca.gov/data-reports/energy-almanac/california-electricity-data/2023-total-system-electric-generation (accessed December 2025).

_____. 2025a. Transforming Transportation. https://www.energy.ca.gov/about/core-responsibility-fact-sheets/transforming-transportation (accessed December 2025).

_____. 2025b. SB 100 Joint Agency Report. https://www.energy.ca.gov/sb100 (accessed December 2025).

California Department of Resources Recycling and Recovery (CalRecycle). 2025. Sunshine Canyon City/County Activity Details. https://www2.calrecycle.ca.gov/SolidWaste/SiteActivity/Details/259?siteID=4702 (accessed December 2025).

California Environmental Protection Agency. 2025. Cortese List Data Resources. https://calepa.ca.gov/sitecleanup/corteselist/ (accessed December 2025).

California Geological Survey. 2002. Note 36 – California Geomorphic Provinces. https://www.conservation.ca.gov/cgs/Documents/Publications/CGS-Notes/CGS-Note-36.pdf

California Natural Resources Agency. 2019. California's Fourth Climate Change Assessment Statewide Summary Report. January 2019. http://www.climateassessment.ca.gov/state/ (accessed January 2026).

Campbell, R.H., C.J. Wills, P.J. Irvine, and B.J. Swanson. 2016. Preliminary geologic map of the Los Angeles 30' x 60' quadrangle, California: version 2.1. [map.] California Geological Survey. Preliminary Geological Maps PGM-13-06.2016, scale 1:100,000.

ENGEO. 2026. Proposed E-Well Site Limited Phase II Environmental Site Assessment. May 28, 2026.

Federal Emergency Management Agency (FEMA). 2025. FEMA's National Flood Hazard Layer Viewer. https://hazards-fema.maps.arcgis.com/apps/webappviewer/index.html?id=8b0adb51996444d4879338b5529aa9cd&extent=-121.94529102661183,36.5159779735144,-121.90374897338809,36.53322138877889 (accessed December 2025).

Federal Highway Administration (FHWA). 2006. FHWA Highway Construction Noise Handbook. (FHWAHEP-06-015; DOT-VNTSC-FHWA-06-02). https://rosap.ntl.bts.gov/view/dot/8837/dot_8837_DS1.pdf (accessed December 2025).

Governor Gavin Newsom. 2025. In historic first, California powered by two-thirds clean energy – becoming largest economy in the world to achieve milestone. July 14, 2025. https://www.gov.ca.gov/2025/07/14/in-historic-first-california-powered-by-two-thirds-clean-energy-becoming-largest-economy-in-the-world-to-achieve-milestone/ (assessed December 2025)

Intergovernmental Panel on Climate Change (IPCC). 2014. "Climate Change 2014 Synthesis Report." Contribution of Working Groups I, II and III to the Fifth Assessment Report of the Intergovernmental Panel on Climate Change [Core Writing Team, R.K. Pachauri and L.A. Meyer (eds.)]. IPCC, Geneva, Switzerland. https://www.ipcc.ch/site/assets/uploads/2018/02/SYR_AR5_FINAL_full.pdf (accessed January 2026).

_____. 2021. Climate Change 2021: The Physical Science Basis. Contribution of Working Group I to the Sixth Assessment Report of the Intergovernmental Panel on Climate Change [Masson-Delmotte, V., P. Zhai, A. Pirani, S. L. Connors, C. Péan, S. Berger, N. Caud, Y. Chen, L. Goldfarb, M. I. Gomis, M. Huang, K. Leitzell, E. Lonnoy, J.B.R. Matthews, T. K. Maycock, T. Waterfield, O. Yelekçi, R. Yu and B. Zhou (eds.)] Cambridge University Press. https://www.ipcc.ch/report/ar6/wg1/downloads/report/IPCC_AR6_WGI_Full_Report.pdf (accessed January 2026).

Jefferson, G.T. 2010. A catalogue of late Quaternary vertebrates from California. *Natural History Museum of Los Angeles County Technical Report*. Volume 7, pp. 5-172.

Los Angeles, County of. 2011. Los Angeles County Oak Woodlands Conservation Management Plan. https://planning.lacounty.gov/wp-content/uploads/2022/11/oakwoodlands_conservation-management-plan.pdf (accessed January 2026).

_____. 2014. Los Angeles Regional Water Quality Control Board's Basin Plan for the Coastal Watersheds of Los Angeles and Ventura Counties. https://www.waterboards.ca.gov/losangeles/water_issues/programs/basin_plan/basin_plan_documentation.html (accessed December 2025).

_____. 2014. Los Angeles County Oak Woodlands Conservation Management Plan Guide. https://planning.lacounty.gov/long-range-planning/oak-woodlands-conservation-management-plan/ (accessed December 2025).

_____. 2015. Los Angeles County General Plan. https://planning.lacounty.gov/long-range-planning/general-plan/ (accessed February 2026).

_____. 2023. County of Los Angeles Operational Area Emergency Operations Plan. https://ceo.lacounty.gov/wp-content/uploads/2023/11/County-of-Los-Angeles-OAEOP-2023-Final-for-Website.pdf (accessed February 2026).

Los Angeles County Department of Regional Planning. 2014. Santa Clarita Valley Area Plan Land Use Map. Adopted November 27, 2014. https://planning.lacounty.gov/wp-content/uploads/2022/05/LUP_Santa_Clarita_Valley_1.pdf (accessed December 2025).

_____. 2023. "GIS-NET Public." https://rpgis.isd.lacounty.gov/Html5Viewer/index.html?viewer=GISNET_Public.GIS-NET_Public (accessed October 2023).

_____. 2025a. Entrada South and Valencia Commerce Center Draft Supplemental Environmental Impact Report (State Clearinghouse No. 2000011025). https://ceqanet.lci.ca.gov/2000011025/14 (accessed June 2026).

_____. 2025b. Entrada South and Valencia Commerce Center Final Supplemental Environmental Impact Report (State Clearinghouse No. 2000011025). https://ceqanet.lci.ca.gov/2000011025/16 (accessed June 2026).

Los Angeles Regional Water Quality Control Board (LARWQCB). 2014. LARWQCB Basin Plan. https://www.waterboards.ca.gov/losangeles/water_issues/programs/basin_plan/basin_plan_documentation.html (accessed July 2025).

Natural History Museum of Los Angeles County (NHMLA). 2025. Paleontological resources records search for the SCV Water E Wells Groundwater Treatment Project (#23-14795), dated December 14, 2025.

National Park Service. 1983. Archaeology and Historic Preservation: Secretary of the Interior's Standards and Guidelines. Accessed online at http://www.nps.gov/history/local-law/Arch_Standards.htm (accessed December 2025).

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

Paleobiology Database. 2025. The Paleobiology Database, http://paleobiodb.org/ (accessed December 2025)

Replica. 2024. *Replica Annual Average Daily Traffic (AADT) Data*. 2024. (Accessed January 2026)

Rincon Consultants (Rincon). 2026. Cultural Resources Assessment for the E-Wells Per- and Polyfluorinated Substances Groundwater Treatment Improvements Project, Los Angeles County, California. January 9, 2026.

Santa Clarita, City of. 2010. General Plan Final Environmental Impact Report. https://filecenter.santa-clarita.com/EIR/OVOV/Draft/3_10_MineralResources091410.pdf (accessed July 2025).

_____. 2011. General Plan Conservation and Open Space Element. https://www.codepublishing.com/CA/SantaClarita/html/SantaClaritaGP/SantaClaritaGP.html (accessed December 2025).

_____. 2022. General Plan Safety Element. https://www.codepublishing.com/CA/SantaClarita/html/SantaClaritaGP/7%20-%20Safety%20Element.pdf (accessed July 2025).

_____. 2026. Major Development Projects. https://santaclarita.gov/planning/major-development-projects/ (accessed January 2026).

Santa Clarita Valley Groundwater Sustainability Agency (SCV-GSA). 2021. SCV Water Urban Water Management Plan. https://fta.valleywater.org/dl/pggls1SeCr (accessed December 2025).

_____. 2022. Santa Clara River Valley East Groundwater Subbasin Groundwater Sustainability Plan. https://scvgsa.org/wp-content/uploads/2022/02/Santa-Clara-River-Valley-East-Groundwater-Subbasin-GSP.pdf (accessed December 2025).

_____. 2023. Santa Clarita Valley Water Agency Sustainability Plan. March 2023. https://yourscvwater.com/sites/default/files/SCVWA/your-water/plans-and-reports/sustainability-plan/2023-SCV-Water-Draft-Sustainability-Plan.pdf (accessed December 2025).

_____. 2025. 2024 Annual Report for the Santa Clara River Valley East Groundwater Subbasin Groundwater Sustainability Plan. https://scvgsa.org/wp-content/uploads/2025/02/SCVGSA_2024-Annual-Report_Final_March-2025.pdf (accessed January 2026).

Society of Vertebrate Paleontology (SVP). 2025. Best Practice Guidelines for Mitigation of Adverse Impacts on Paleontological Resources. https://vertpaleo.org/wp-content/uploads/2025/10/SVP_Mitigation_Paleontology_Best_Practices_First_edition_October_2025.pdf (accessed December 2025).

Southern California Association of Governments. 2020. Connect SoCal. https://scag.ca.gov/sites/default/files/2024-05/0903fconnectsocal-plan_0.pdf (accessed January 2026).

South Coast Air Quality Management District (SCAQMD). 2003. Final 2003 AQMP Appendix V. August 2003. https://www.aqmd.gov/docs/default-source/clean-air-plans/air-quality-management-plans/2003-air-quality-management-plan/2003-aqmp-appendix-v.pdf (accessed December 2025).

_____. 2005. Guidance Document for Addressing Air Quality Issues in General Plans and Local Planning. May 6, 2005. https://www.aqmd.gov/docs/default-source/planning/air-quality-guidance/complete-guidance-document.pdf (accessed December 2025).

_____. 2008a. Final Localized Significance Threshold Methodology. July 2008. https://www.aqmd.gov/docs/default-source/ceqa/handbook/localized-significance-thresholds/final-lst-methodology-document.pdf (accessed January 2026).

_____. 2008b. Interim CEQA GHG Significance Threshold for Stationary Sources, Rules and Plans. December 5, 2008. https://www.aqmd.gov/docs/default-source/ceqa/handbook/greenhouse-gases-(ghg)-ceqa-significance-thresholds/ghgboardsynopsis.pdf?sfvrsn=2 (accessed December 2025).

_____. 2009. Appendix C – Mass Rate LST Look-Up Tables. October 21, 2009. http://www.aqmd.gov/docs/default-source/ceqa/handbook/localized-significance-thresholds/appendix-c-mass-rate-lst-look-up-tables.pdf?sfvrsn=2 (accessed December 2025).

_____. 2017. Final 2016 Air Quality Management Plan. March 2017. http://www.aqmd.gov/docs/default-source/clean-air-plans/air-quality-management-plans/2016-air-quality-management-plan/final-2016-aqmp/final2016aqmp.pdf?sfvrsn=15 (accessed December 2025).

_____. 2022. 2022 Air Quality Management Plan. December 2, 2022. http://www.aqmd.gov/docs/default-source/clean-air-plans/air-quality-management-plans/2022-air-quality-management-plan/final-2022-aqmp/final-2022-aqmp.pdf?sfvrsn=16 (accessed December 2025).

_____. 2023. South Coast AQMD Air Quality Significance Thresholds. March 2023. https://www.aqmd.gov/docs/default-source/ceqa/handbook/south-coast-aqmd-air-quality-significance-thresholds.pdf?sfvrsn=25 (accessed December 2025).

_____. 2025. 2024 Air Quality - South Coast Air Quality Management District. https://www.aqmd.gov/docs/default-source/air-quality/historical-data-by-year/2023-air-quality-data-tables.pdf?sfvrsn=6 (accessed December 2025).

_____. 2026a. “Emergency Generators”. [website]. N.d. https://www.aqmd.gov/home/permits/emergency-generators#Fact1 (accessed January 2026).

_____. 2026b. “Health Risk Assessment Tool and AERMOD-Ready Meteorological Data Files”. [website]. N.d. https://www.aqmd.gov/assets/aermet/AERMET_files_And_HRA_Tool.html (accessed January 2026).

State Water Resources Control Board (SWRCB). Geotracker. https://geotracker.waterboards.ca.gov/map/ (accessed December 2025).

United States Department of Agriculture, Natural Resources Conservation Service. 2004. Understanding Soil Risks and Hazards. https://nrcspad.sc.egov.usda.gov/DistributionCenter/pdf.aspx?productID=500 (accessed January 2026).

_____. 2025. Web Soil Survey. https://websoilsurvey.sc.egov.usda.gov/App/WebSoilSurvey.aspx (accessed December 2025).

United States Energy Information Administration. 2025. California State Energy Profile. https://www.eia.gov/state/print.php?sid=CA (accessed December 2025).

United States Environmental Protection Agency (U.S. EPA). 2025. “Criteria Air Pollutants.” Last modified: July 30, 2024. https://www.epa.gov/criteria-air-pollutants (accessed December 2025).

United States Geological Survey. 2018. Post-Fire Flooding and Debris Flow. https://ca.water.usgs.gov/wildfires/wildfires-debris-flow.html (accessed December 2025).

_____. 2025. Liquefaction Susceptibility. https://earthquake.usgs.gov/education/geologicmaps/liquefaction.php (accessed December 2025).

Yerkes, R.F. and R.H. Campbell. 2005. Preliminary geologic map of the Los Angeles 30’ x 60’ quadrangle, southern California. United States Geological Survey. [map]. Open-File Report 2005-1019, scale 1:100,000.

List of Preparers

Rincon Consultants prepared this IS-MND under contract to SCV Water. Persons involved in data gathering analysis, project management, and quality control are listed below.

Rincon Consultants

Jennifer Jacobus, PhD, Principal-in-Charge
Kayleigh Limbach, Project Manager
Elise Gustilo, Environmental Planner
Bill Vosti, Supervising Environmental Planner
Jesse McCandless, Noise Specialist
Lucas Carneiro, Environmental Planner
Andrew McGrath, Paleontologist
Abby Robles, GIS Analyst
Kaylee Herbold, GIS Analyst
Dario Campos, Publishing Specialist
Yaritza Ramirez, Publishing Specialist
Alvin Flores, Publishing Specialist

Appendix A

CalEEMod Modeling Outputs

E-Wells PFAS Groundwater Treatment Improvement Project Detailed Report

Table of Contents

1. Basic Project Information

1.1. Basic Project Information

1.2. Land Use Types

1.3. User-Selected Emission Reduction Measures by Emissions Sector

2. Emissions Summary

2.1. Construction Emissions Compared Against Thresholds

2.2. Construction Emissions by Year, Unmitigated

2.4. Operations Emissions Compared Against Thresholds

2.5. Operations Emissions by Sector, Unmitigated

3. Construction Emissions Details

3.1. Linear, Grubbing & Land Clearing (2027) - Unmitigated

3.3. Linear, Grading & Excavation (2027) - Unmitigated

3.5. Linear, Drainage, Utilities, & Sub-Grade (2027) - Unmitigated

3.7. Linear, Drainage, Utilities, & Sub-Grade (2028) - Unmitigated

3.9. Linear, Paving (2028) - Unmitigated

3.11. Site Preparation (2027) - Unmitigated

3.13. Grading (2027) - Unmitigated

3.15. Building Construction (2027) - Unmitigated

3.17. Paving (2027) - Unmitigated

3.19. Architectural Coating (2027) - Unmitigated

4. Operations Emissions Details

4.1. Mobile Emissions by Land Use

4.1.1. Unmitigated

4.2. Energy

4.2.1. Electricity Emissions By Land Use - Unmitigated

4.2.3. Natural Gas Emissions By Land Use - Unmitigated

4.3. Area Emissions by Source

4.3.1. Unmitigated

4.4. Water Emissions by Land Use

4.4.1. Unmitigated

4.5. Waste Emissions by Land Use

4.5.1. Unmitigated

4.6. Refrigerant Emissions by Land Use

4.6.1. Unmitigated

4.7. Offroad Emissions By Equipment Type

4.7.1. Unmitigated

4.8. Stationary Emissions By Equipment Type

4.8.1. Unmitigated

4.9. User Defined Emissions By Equipment Type

4.9.1. Unmitigated

4.10. Soil Carbon Accumulation By Vegetation Type

4.10.1. Soil Carbon Accumulation By Vegetation Type - Unmitigated

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

4.10.3. Avoided and Sequestered Emissions by Species - Unmitigated

5. Activity Data

5.1. Construction Schedule

5.2. Off-Road Equipment

5.2.1. Unmitigated

5.3. Construction Vehicles

5.3.1. Unmitigated

5.4. Vehicles

5.4.1. Construction Vehicle Control Strategies

5.5. Architectural Coatings

5.6. Dust Mitigation

5.6.1. Construction Earthmoving Activities

5.6.2. Construction Earthmoving Control Strategies

5.7. Construction Paving

5.8. Construction Electricity Consumption and Emissions Factors

5.9. Operational Mobile Sources

5.9.1. Unmitigated

5.10. Operational Area Sources

5.10.1. Hearths

5.10.2. Architectural Coatings

5.10.3. Landscape Equipment

5.11. Operational Energy Consumption

5.11.1. Unmitigated

5.12. Operational Water and Wastewater Consumption

5.12.1. Unmitigated

5.13. Operational Waste Generation

5.13.1. Unmitigated

5.14. Operational Refrigeration and Air Conditioning Equipment

5.14.1. Unmitigated

5.15. Operational Off-Road Equipment

5.15.1. Unmitigated

5.16. Stationary Sources

5.16.1. Emergency Generators and Fire Pumps

5.16.2. Process Boilers

5.17. User Defined

5.18. Vegetation

5.18.1. Land Use Change

5.18.1.1. Unmitigated

5.18.1. Biomass Cover Type

5.18.1.1. Unmitigated

5.18.2. Sequestration

5.18.2.1. Unmitigated

6. Climate Risk Detailed Report

6.1. Climate Risk Summary

6.2. Initial Climate Risk Scores

6.3. Adjusted Climate Risk Scores

6.4. Climate Risk Reduction Measures

7. Health and Equity Details

7.1. CalEnviroScreen 4.0 Scores

7.2. Healthy Places Index Scores

7.3. Overall Health & Equity Scores

7.4. Health & Equity Measures

7.5. Evaluation Scorecard

7.6. Health & Equity Custom Measures

8. User Changes to Default Data

8.1. Justifications

8.3. Land Use

8.4. Construction

8.4.1. Construction Phases

8.5. Operations

8.5.1. Mobile Sources

8.5.1.1. Vehicle Data

8.5.1.2. Fleet Mix

8.5.3. Energy Usage

8.5.4. Water and Waste Water

8.5.5. Solid Waste

1. Basic Project Information

1.1. Basic Project Information

Data Field	Value
Project Name	E-Wells PFAS Groundwater Treatment Improvement Project
Construction Start Date	1/1/2027
Operational Year	2028
Lead Agency	—
Land Use Scale	Project/site
Analysis Level for Defaults	County
Windspeed (m/s)	2.5
Precipitation (days)	16
Location	34.43877439742029, -118.61179595056535
County	Los Angeles-South Coast
City	Unincorporated
Air District	South Coast AQMD
Air Basin	South Coast
TAZ	3615
EDFZ	7
Electric Utility	Southern California Edison
Gas Utility	Southern California Gas
App Version	2022.1.1.36

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	9.6	1000sqft	1.5	9,600	0.00	—	—	—

Road Construction	2.7	Mile	1.0	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.	4.9	4.1	33	44	0.08	1.3	1.9	3.2	1.2	0.28	1.5	—	9,393	9,393	0.38	0.10	2.1	9,436
Daily, Winter (Max)	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Unmit.	13	12	33	43	0.08	1.3	3.3	4.0	1.2	1.4	2.1	—	9,361	9,361	0.36	0.10	0.06	9,401
Average Daily (Max)	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Unmit.	3.2	2.7	20	26	0.05	0.78	1.2	2.0	0.72	0.19	0.91	—	5,507	5,507	0.21	0.06	0.58	5,532
Annual (Max)	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Unmit.	0.58	0.49	3.6	4.7	0.01	0.14	0.21	0.36	0.13	0.03	0.17	—	912	912	0.04	0.01	0.10	916

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)	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—

2027	4.9	4.1	33	44	0.08	1.3	1.9	3.2	1.2	0.28	1.5	—	9,393	9,393	0.38	0.10	2.1	9,436
2028	2.8	2.4	19	25	0.05	0.70	1.5	2.2	0.65	0.23	0.88	—	6,181	6,181	0.24	0.06	1.4	6,207
Daily - Winter (Max)	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
2027	13	12	33	43	0.08	1.3	3.3	4.0	1.2	1.4	2.1	—	9,361	9,361	0.36	0.10	0.06	9,401
2028	2.8	2.4	19	25	0.05	0.70	1.5	2.2	0.65	0.23	0.88	—	6,155	6,155	0.24	0.06	0.04	6,181
Average Daily	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
2027	3.2	2.7	20	26	0.05	0.78	1.2	2.0	0.72	0.19	0.91	—	5,507	5,507	0.21	0.06	0.58	5,532
2028	1.6	1.4	11	15	0.03	0.41	0.84	1.2	0.37	0.13	0.51	—	3,514	3,514	0.13	0.04	0.41	3,529
Annual	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
2027	0.58	0.49	3.6	4.7	0.01	0.14	0.21	0.36	0.13	0.03	0.17	—	912	912	0.04	0.01	0.10	916
2028	0.30	0.25	2.0	2.8	0.01	0.07	0.15	0.23	0.07	0.02	0.09	—	582	582	0.02	0.01	0.07	584

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.	3.1	2.7	7.5	14	0.05	0.28	3.6	3.9	0.28	0.92	1.2	0.00	7,094	7,094	0.38	0.39	14	7,233
Daily, Winter (Max)	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Unmit.	3.0	2.6	7.7	13	0.05	0.28	3.6	3.9	0.28	0.92	1.2	0.00	6,950	6,950	0.38	0.39	2.8	7,078
Average Daily (Max)	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Unmit.	1.7	1.5	4.3	11	0.04	0.11	3.6	3.7	0.11	0.91	1.0	0.00	6,379	6,379	0.36	0.39	7.6	6,511
Annual (Max)	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—

Unmit.	0.31	0.27	0.79	1.9	0.01	0.02	0.65	0.67	0.02	0.17	0.18	0.00	1,056	1,056	0.06	0.06	1.3	1,078

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	0.95	0.79	2.9	9.8	0.04	0.04	3.6	3.6	0.04	0.92	0.96	—	4,432	4,432	0.17	0.36	12	4,555
Area	0.30	0.30	< 0.005	0.42	< 0.005	< 0.005	—	< 0.005	< 0.005	—	< 0.005	—	1.7	1.7	< 0.005	< 0.005	—	1.7
Energy	0.00	0.00	0.00	0.00	0.00	0.00	—	0.00	0.00	—	0.00	—	1,821	1,821	0.17	0.02	—	1,832
Water	—	—	—	—	—	—	—	—	—	—	—	0.00	0.00	0.00	0.00	0.00	—	0.00
Waste	—	—	—	—	—	—	—	—	—	—	—	0.00	0.00	0.00	0.00	0.00	—	0.00
Refrig.	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	2.5	2.5
Stationary	1.8	1.6	4.6	4.2	0.01	0.24	0.00	0.24	0.24	0.00	0.24	0.00	840	840	0.03	0.01	0.00	842
Total	3.1	2.7	7.5	14	0.05	0.28	3.6	3.9	0.28	0.92	1.2	0.00	7,094	7,094	0.38	0.39	14	7,233
Daily, Winter (Max)	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Mobile	0.94	0.77	3.1	8.8	0.04	0.04	3.6	3.6	0.04	0.92	0.96	—	4,289	4,289	0.18	0.36	0.31	4,402
Area	0.23	0.23	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Energy	0.00	0.00	0.00	0.00	0.00	0.00	—	0.00	0.00	—	0.00	—	1,821	1,821	0.17	0.02	—	1,832
Water	—	—	—	—	—	—	—	—	—	—	—	0.00	0.00	0.00	0.00	0.00	—	0.00
Waste	—	—	—	—	—	—	—	—	—	—	—	0.00	0.00	0.00	0.00	0.00	—	0.00
Refrig.	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	2.5	2.5
Stationary	1.8	1.6	4.6	4.2	0.01	0.24	0.00	0.24	0.24	0.00	0.24	0.00	840	840	0.03	0.01	0.00	842
Total	3.0	2.6	7.7	13	0.05	0.28	3.6	3.9	0.28	0.92	1.2	0.00	6,950	6,950	0.38	0.39	2.8	7,078
Average Daily	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—

Mobile	0.94	0.77	3.1	9.1	0.04	0.04	3.6	3.6	0.04	0.91	0.95	—	4,327	4,327	0.17	0.36	5.1	4,445
Area	0.28	0.28	< 0.005	0.29	< 0.005	< 0.005	—	< 0.005	< 0.005	—	< 0.005	—	1.2	1.2	< 0.005	< 0.005	—	1.2
Energy	0.00	0.00	0.00	0.00	0.00	0.00	—	0.00	0.00	—	0.00	—	1,821	1,821	0.17	0.02	—	1,832
Water	—	—	—	—	—	—	—	—	—	—	—	0.00	0.00	0.00	0.00	0.00	—	0.00
Waste	—	—	—	—	—	—	—	—	—	—	—	0.00	0.00	0.00	0.00	0.00	—	0.00
Refrig.	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	2.5	2.5
Stationary	0.49	0.45	1.3	1.1	< 0.005	0.07	0.00	0.07	0.07	0.00	0.07	0.00	230	230	0.01	< 0.005	0.00	231
Total	1.7	1.5	4.3	11	0.04	0.11	3.6	3.7	0.11	0.91	1.0	0.00	6,379	6,379	0.36	0.39	7.6	6,511
Annual	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Mobile	0.17	0.14	0.56	1.7	0.01	0.01	0.65	0.66	0.01	0.17	0.17	—	716	716	0.03	0.06	0.84	736
Area	0.05	0.05	< 0.005	0.05	< 0.005	< 0.005	—	< 0.005	< 0.005	—	< 0.005	—	0.19	0.19	< 0.005	< 0.005	—	0.20
Energy	0.00	0.00	0.00	0.00	0.00	0.00	—	0.00	0.00	—	0.00	—	302	302	0.03	< 0.005	—	303
Water	—	—	—	—	—	—	—	—	—	—	—	0.00	0.00	0.00	0.00	0.00	—	0.00
Waste	—	—	—	—	—	—	—	—	—	—	—	0.00	0.00	0.00	0.00	0.00	—	0.00
Refrig.	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	0.41	0.41
Stationary	0.09	0.08	0.23	0.21	< 0.005	0.01	0.00	0.01	0.01	0.00	0.01	0.00	38	38	< 0.005	< 0.005	0.00	38
Total	0.31	0.27	0.79	1.9	0.01	0.02	0.65	0.67	0.02	0.17	0.18	0.00	1,056	1,056	0.06	0.06	1.3	1,078

3. Construction Emissions Details

3.1. Linear, Grubbing & Land Clearing (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)	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—

Daily, Winter (Max)	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Off-Road Equipment	0.40	0.34	3.0	3.5	< 0.005	0.16	—	0.16	0.15	—	0.15	—	491	491	0.02	< 0.005	—	492
Dust From Material Movement	—	—	—	—	—	—	0.21	0.21	—	0.02	0.02	—	—	—	—	—	—	—
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	0.06	0.05	0.42	0.48	< 0.005	0.02	—	0.02	0.02	—	0.02	—	69	69	< 0.005	< 0.005	—	69
Dust From Material Movement	—	—	—	—	—	—	0.03	0.03	—	< 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	0.08	0.09	< 0.005	< 0.005	—	< 0.005	< 0.005	—	< 0.005	—	11	11	< 0.005	< 0.005	—	11
Dust From Material Movement	—	—	—	—	—	—	0.01	0.01	—	< 0.005	< 0.005	—	—	—	—	—	—	—
Onsite truck	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	—	0.00	0.00	0.00	0.00	0.00	0.00
Offsite	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—

Daily, Summer (Max)	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Daily, Winter (Max)	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Worker	0.07	0.06	0.08	0.89	0.00	0.00	0.23	0.23	0.00	0.05	0.05	—	220	220	< 0.005	0.01	0.02	223
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	0.01	0.01	0.01	0.13	0.00	0.00	0.03	0.03	0.00	0.01	0.01	—	31	31	< 0.005	< 0.005	0.04	32
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	0.02	0.00	0.00	0.01	0.01	0.00	< 0.005	< 0.005	—	5.2	5.2	< 0.005	< 0.005	0.01	5.2
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

3.3. Linear, Grading & Excavation (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	3.4	2.8	23	29	0.06	0.99	—	0.99	0.91	—	0.91	—	6,495	6,495	0.26	0.05	—	6,517

Dust From Material Movement	—	—	—	—	—	—	1.2	1.2	—	0.13	0.13	—	—	—	—	—	—	—
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	3.4	2.8	23	29	0.06	0.99	—	0.99	0.91	—	0.91	—	6,495	6,495	0.26	0.05	—	6,517
Dust From Material Movement	—	—	—	—	—	—	1.2	1.2	—	0.13	0.13	—	—	—	—	—	—	—
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	1.9	1.6	13	17	0.03	0.56	—	0.56	0.52	—	0.52	—	3,719	3,719	0.15	0.03	—	3,732
Dust From Material Movement	—	—	—	—	—	—	0.71	0.71	—	0.08	0.08	—	—	—	—	—	—	—
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	0.35	0.30	2.5	3.0	0.01	0.10	—	0.10	0.09	—	0.09	—	616	616	0.02	< 0.005	—	618

Dust From Material Movement	—	—	—	—	—	—	0.13	0.13	—	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
Offsite	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Daily, Summer (Max)	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Worker	0.17	0.15	0.15	2.6	0.00	0.00	0.56	0.56	0.00	0.13	0.13	—	565	565	0.02	0.02	1.8	573
Vendor	< 0.005	< 0.005	0.03	0.02	< 0.005	< 0.005	0.01	0.01	< 0.005	< 0.005	< 0.005	—	31	31	< 0.005	< 0.005	0.08	32
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	0.17	0.15	0.18	2.2	0.00	0.00	0.56	0.56	0.00	0.13	0.13	—	535	535	0.01	0.02	0.05	542
Vendor	< 0.005	< 0.005	0.03	0.02	< 0.005	< 0.005	0.01	0.01	< 0.005	< 0.005	< 0.005	—	31	31	< 0.005	< 0.005	< 0.005	32
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	0.10	0.08	0.10	1.3	0.00	0.00	0.31	0.31	0.00	0.07	0.07	—	311	311	< 0.005	0.01	0.43	315
Vendor	< 0.005	< 0.005	0.02	0.01	< 0.005	< 0.005	< 0.005	< 0.005	< 0.005	< 0.005	< 0.005	—	18	18	< 0.005	< 0.005	0.02	18
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	0.02	0.02	0.02	0.24	0.00	0.00	0.06	0.06	0.00	0.01	0.01	—	52	52	< 0.005	< 0.005	0.07	52
Vendor	< 0.005	< 0.005	< 0.005	< 0.005	< 0.005	< 0.005	< 0.005	< 0.005	< 0.005	< 0.005	< 0.005	—	2.9	2.9	< 0.005	< 0.005	< 0.005	3.0
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. Linear, Drainage, Utilities, & Sub-Grade (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)	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Daily, Winter (Max)	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Off-Road Equipment	2.8	2.3	20	23	0.05	0.76	—	0.76	0.70	—	0.70	—	5,692	5,692	0.23	0.05	—	5,711
Dust From Material Movement	—	—	—	—	—	—	1.0	1.0	—	0.11	0.11	—	—	—	—	—	—	—
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	0.01	< 0.005	0.04	0.05	< 0.005	< 0.005	—	< 0.005	< 0.005	—	< 0.005	—	11	11	< 0.005	< 0.005	—	11
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	0.01	0.01	< 0.005	< 0.005	—	< 0.005	< 0.005	—	< 0.005	—	1.8	1.8	< 0.005	< 0.005	—	1.9

Dust From Material Movement	—	—	—	—	—	—	< 0.005	< 0.005	—	< 0.005	< 0.005	—	—	—	—	—	—	—
Onsite truck	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	—	0.00	0.00	0.00	0.00	0.00	0.00
Offsite	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Daily, Summer (Max)	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Daily, Winter (Max)	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Worker	0.15	0.13	0.16	1.9	0.00	0.00	0.49	0.49	0.00	0.11	0.11	—	472	472	0.01	0.02	0.04	478
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	< 0.005	0.00	0.00	< 0.005	< 0.005	0.00	< 0.005	< 0.005	—	0.94	0.94	< 0.005	< 0.005	< 0.005	0.95
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	—	0.16	0.16	< 0.005	< 0.005	< 0.005	0.16
Vendor	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	—	0.00	0.00	0.00	0.00	0.00	0.00
Hauling	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	—	0.00	0.00	0.00	0.00	0.00	0.00

3.7. Linear, Drainage, Utilities, & Sub-Grade (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	2.7	2.2	19	23	0.05	0.70	—	0.70	0.65	—	0.65	—	5,691	5,691	0.23	0.05	—	5,711
Dust From Material Movement	—	—	—	—	—	—	1.0	1.0	—	0.11	0.11	—	—	—	—	—	—	—
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	2.7	2.2	19	23	0.05	0.70	—	0.70	0.65	—	0.65	—	5,691	5,691	0.23	0.05	—	5,711
Dust From Material Movement	—	—	—	—	—	—	1.0	1.0	—	0.11	0.11	—	—	—	—	—	—	—
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	1.3	1.1	9.3	12	0.03	0.35	—	0.35	0.32	—	0.32	—	2,851	2,851	0.12	0.02	—	2,861
Dust From Material Movement	—	—	—	—	—	—	0.52	0.52	—	0.06	0.06	—	—	—	—	—	—	—
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	0.24	0.21	1.7	2.1	< 0.005	0.06	—	0.06	0.06	—	0.06	—	472	472	0.02	< 0.005	—	474
Dust From Material Movement	—	—	—	—	—	—	0.09	0.09	—	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
Offsite	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Daily, Summer (Max)	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Worker	0.15	0.13	0.13	2.1	0.00	0.00	0.49	0.49	0.00	0.11	0.11	—	489	489	< 0.005	0.02	1.4	496
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	0.15	0.13	0.15	1.8	0.00	0.00	0.49	0.49	0.00	0.11	0.11	—	464	464	0.01	0.02	0.04	470
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	0.07	0.06	0.07	0.94	0.00	0.00	0.24	0.24	0.00	0.06	0.06	—	236	236	< 0.005	0.01	0.30	239
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	0.01	0.01	0.01	0.17	0.00	0.00	0.04	0.04	0.00	0.01	0.01	—	39	39	< 0.005	< 0.005	0.05	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

3.9. Linear, Paving (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	0.92	0.77	6.9	11	0.01	0.24	—	0.24	0.22	—	0.22	—	1,619	1,619	0.07	0.01	—	1,625
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	0.92	0.77	6.9	11	0.01	0.24	—	0.24	0.22	—	0.22	—	1,619	1,619	0.07	0.01	—	1,625
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	0.20	0.17	1.5	2.3	< 0.005	0.05	—	0.05	0.05	—	0.05	—	346	346	0.01	< 0.005	—	347
Onsite truck	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	—	0.00	0.00	0.00	0.00	0.00	0.00
Annual	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Off-Road Equipment	0.04	0.03	0.27	0.42	< 0.005	0.01	—	0.01	0.01	—	0.01	—	57	57	< 0.005	< 0.005	—	57

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	0.12	0.10	0.10	1.7	0.00	0.00	0.39	0.39	0.00	0.09	0.09	—	392	392	< 0.005	0.01	1.1	397
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	0.12	0.10	0.12	1.4	0.00	0.00	0.39	0.39	0.00	0.09	0.09	—	371	371	< 0.005	0.01	0.03	376
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	0.02	0.02	0.02	0.32	0.00	0.00	0.08	0.08	0.00	0.02	0.02	—	81	81	< 0.005	< 0.005	0.10	82
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	0.06	0.00	0.00	0.02	0.02	0.00	< 0.005	< 0.005	—	13	13	< 0.005	< 0.005	0.02	13
Vendor	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	—	0.00	0.00	0.00	0.00	0.00	0.00
Hauling	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	—	0.00	0.00	0.00	0.00	0.00	0.00

3.11. Site Preparation (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)	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Daily, Winter (Max)	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Off-Road Equipment	1.3	1.1	9.1	11	0.03	0.39	—	0.39	0.36	—	0.36	—	2,716	2,716	0.11	0.02	—	2,725
Dust From Material Movement	—	—	—	—	—	—	0.62	0.62	—	0.07	0.07	—	—	—	—	—	—	—
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	0.01	0.01	0.05	0.06	< 0.005	< 0.005	—	< 0.005	< 0.005	—	< 0.005	—	15	15	< 0.005	< 0.005	—	15
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	0.01	0.01	< 0.005	< 0.005	—	< 0.005	< 0.005	—	< 0.005	—	2.5	2.5	< 0.005	< 0.005	—	2.5
Dust From Material Movement	—	—	—	—	—	—	< 0.005	< 0.005	—	< 0.005	< 0.005	—	—	—	—	—	—	—

Onsite truck	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	—	0.00	0.00	0.00	0.00	0.00	0.00
Offsite	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Daily, Summer (Max)	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Daily, Winter (Max)	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Worker	0.03	0.03	0.03	0.38	0.00	0.00	0.10	0.10	0.00	0.02	0.02	—	94	94	< 0.005	< 0.005	0.01	96
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	< 0.005	0.00	0.00	< 0.005	< 0.005	0.00	< 0.005	< 0.005	—	0.53	0.53	< 0.005	< 0.005	< 0.005	0.53
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	—	0.09	0.09	< 0.005	< 0.005	< 0.005	0.09
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

3.13. Grading (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)	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Daily, Winter (Max)	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—

Off-Road Equipment	1.6	1.4	12	14	0.02	0.54	—	0.54	0.50	—	0.50	—	2,455	2,455	0.10	0.02	—	2,464
Dust From Material Movement	—	—	—	—	—	—	2.8	2.8	—	1.3	1.3	—	—	—	—	—	—	—
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	0.02	0.02	0.13	0.15	< 0.005	0.01	—	0.01	0.01	—	0.01	—	27	27	< 0.005	< 0.005	—	27
Dust From Material Movement	—	—	—	—	—	—	0.03	0.03	—	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	< 0.005	< 0.005	0.02	0.03	< 0.005	< 0.005	—	< 0.005	< 0.005	—	< 0.005	—	4.5	4.5	< 0.005	< 0.005	—	4.5
Dust From Material Movement	—	—	—	—	—	—	0.01	0.01	—	< 0.005	< 0.005	—	—	—	—	—	—	—
Onsite truck	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	—	0.00	0.00	0.00	0.00	0.00	0.00
Offsite	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Daily, Summer (Max)	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—

Daily, Winter (Max)	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Worker	0.04	0.03	0.04	0.51	0.00	0.00	0.13	0.13	0.00	0.03	0.03	—	126	126	< 0.005	< 0.005	0.01	127
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	0.01	0.00	0.00	< 0.005	< 0.005	0.00	< 0.005	< 0.005	—	1.4	1.4	< 0.005	< 0.005	< 0.005	1.4
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	—	0.23	0.23	< 0.005	< 0.005	< 0.005	0.23
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

3.15. 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	1.4	1.1	9.7	12	0.02	0.32	—	0.32	0.30	—	0.30	—	2,201	2,201	0.09	0.02	—	2,208
Onsite truck	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	—	0.00	0.00	0.00	0.00	0.00	0.00
Daily, Winter (Max)	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—

Off-Roa Equipment	1.4	1.1	9.7	12	0.02	0.32	—	0.32	0.30	—	0.30	—	2,201	2,201	0.09	0.02	—	2,208
Onsite truck	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	—	0.00	0.00	0.00	0.00	0.00	0.00
Average Daily	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Off-Roa d Equipm ent	0.74	0.62	5.3	6.4	0.01	0.18	—	0.18	0.16	—	0.16	—	1,206	1,206	0.05	0.01	—	1,210
Onsite truck	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	—	0.00	0.00	0.00	0.00	0.00	0.00
Annual	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Off-Roa d Equipm ent	0.14	0.11	0.97	1.2	< 0.005	0.03	—	0.03	0.03	—	0.03	—	200	200	0.01	< 0.005	—	200
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	0.01	0.01	0.24	0.00	0.00	0.05	0.05	0.00	0.01	0.01	—	54	54	< 0.005	< 0.005	0.17	54
Vendor	< 0.005	< 0.005	0.05	0.02	< 0.005	< 0.005	0.01	0.01	< 0.005	< 0.005	< 0.005	—	48	48	< 0.005	0.01	0.13	50
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	0.02	0.01	0.02	0.21	0.00	0.00	0.05	0.05	0.00	0.01	0.01	—	51	51	< 0.005	< 0.005	< 0.005	51
Vendor	< 0.005	< 0.005	0.05	0.03	< 0.005	< 0.005	0.01	0.01	< 0.005	< 0.005	< 0.005	—	48	48	< 0.005	0.01	< 0.005	50
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	0.01	0.01	0.01	0.12	0.00	0.00	0.03	0.03	0.00	0.01	0.01	—	28	28	< 0.005	< 0.005	0.04	29
Vendor	< 0.005	< 0.005	0.03	0.01	< 0.005	< 0.005	0.01	0.01	< 0.005	< 0.005	< 0.005	—	26	26	< 0.005	< 0.005	0.03	28
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	0.02	0.00	0.00	0.01	0.01	0.00	< 0.005	< 0.005	—	4.7	4.7	< 0.005	< 0.005	0.01	4.7
Vendor	< 0.005	< 0.005	0.01	< 0.005	< 0.005	< 0.005	< 0.005	< 0.005	< 0.005	< 0.005	< 0.005	—	4.4	4.4	< 0.005	< 0.005	< 0.005	4.6
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. Paving (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)	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Daily, Winter (Max)	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Off-Road Equipment	0.77	0.65	5.7	8.2	0.01	0.23	—	0.23	0.21	—	0.21	—	1,244	1,244	0.05	0.01	—	1,248
Paving	0.27	0.27	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
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	0.02	0.02	0.16	0.22	< 0.005	0.01	—	0.01	0.01	—	0.01	—	34	34	< 0.005	< 0.005	—	34
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	< 0.005	< 0.005	0.03	0.04	< 0.005	< 0.005	—	< 0.005	< 0.005	—	< 0.005	—	5.6	5.6	< 0.005	< 0.005	—	5.7
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)	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Daily, Winter (Max)	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Worker	0.06	0.05	0.06	0.76	0.00	0.00	0.20	0.20	0.00	0.05	0.05	—	189	189	< 0.005	0.01	0.02	191
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	—	5.3	5.3	< 0.005	< 0.005	0.01	5.3
Vendor	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	—	0.00	0.00	0.00	0.00	0.00	0.00
Hauling	0.00	0.00	0.00	0.00	0.00	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	—	0.87	0.87	< 0.005	< 0.005	< 0.005	0.88
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

3.19. Architectural Coating (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)	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Daily, Winter (Max)	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Off-Road Equipment	0.14	0.11	0.83	1.1	< 0.005	0.02	—	0.02	0.02	—	0.02	—	134	134	0.01	< 0.005	—	134
Architectural Coatings	8.9	8.9	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Onsite truck	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	—	0.00	0.00	0.00	0.00	0.00	0.00
Average Daily	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Off-Road Equipment	< 0.005	< 0.005	0.02	0.03	< 0.005	< 0.005	—	< 0.005	< 0.005	—	< 0.005	—	3.7	3.7	< 0.005	< 0.005	—	3.7
Architectural Coatings	0.24	0.24	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
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	< 0.005	0.01	< 0.005	< 0.005	—	< 0.005	< 0.005	—	< 0.005	—	0.61	0.61	< 0.005	< 0.005	—	0.61

Architectural Coating	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
Offsite	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Daily, Summer (Max)	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Daily, Winter (Max)	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Worker	< 0.005	< 0.005	< 0.005	0.04	0.00	0.00	0.01	0.01	0.00	< 0.005	< 0.005	—	10	10	< 0.005	< 0.005	< 0.005	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
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	—	0.28	0.28	< 0.005	< 0.005	< 0.005	0.29
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	—	0.05	0.05	< 0.005	< 0.005	< 0.005	0.05
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	0.95	0.79	2.9	9.8	0.04	0.04	3.6	3.6	0.04	0.92	0.96	—	4,432	4,432	0.17	0.36	12	4,555
Total	0.95	0.79	2.9	9.8	0.04	0.04	3.6	3.6	0.04	0.92	0.96	—	4,432	4,432	0.17	0.36	12	4,555
Daily, Winter (Max)	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
General Light Industry	0.94	0.77	3.1	8.8	0.04	0.04	3.6	3.6	0.04	0.92	0.96	—	4,289	4,289	0.18	0.36	0.31	4,402
Total	0.94	0.77	3.1	8.8	0.04	0.04	3.6	3.6	0.04	0.92	0.96	—	4,289	4,289	0.18	0.36	0.31	4,402
Annual	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
General Light Industry	0.17	0.14	0.56	1.7	0.01	0.01	0.65	0.66	0.01	0.17	0.17	—	716	716	0.03	0.06	0.84	736
Total	0.17	0.14	0.56	1.7	0.01	0.01	0.65	0.66	0.01	0.17	0.17	—	716	716	0.03	0.06	0.84	736

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	—	—	—	—	—	—	—	—	—	—	—	—	1,821	1,821	0.17	0.02	—	1,832

Total	—	—	—	—	—	—	—	—	—	—	—	—	1,821	1,821	0.17	0.02	—	1,832
Daily, Winter (Max)	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
General Light Industry	—	—	—	—	—	—	—	—	—	—	—	—	1,821	1,821	0.17	0.02	—	1,832
Total	—	—	—	—	—	—	—	—	—	—	—	—	1,821	1,821	0.17	0.02	—	1,832
Annual	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
General Light Industry	—	—	—	—	—	—	—	—	—	—	—	—	302	302	0.03	< 0.005	—	303
Total	—	—	—	—	—	—	—	—	—	—	—	—	302	302	0.03	< 0.005	—	303

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
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
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
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 Products	0.21	0.21	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Architectural Coatings	0.02	0.02	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Landscape Equipment	0.07	0.07	< 0.005	0.42	< 0.005	< 0.005	—	< 0.005	< 0.005	—	< 0.005	—	1.7	1.7	< 0.005	< 0.005	—	1.7
Total	0.30	0.30	< 0.005	0.42	< 0.005	< 0.005	—	< 0.005	< 0.005	—	< 0.005	—	1.7	1.7	< 0.005	< 0.005	—	1.7
Daily, Winter (Max)	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Consumer Products	0.21	0.21	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—

Architectural Coatings	0.02	0.02	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Total	0.23	0.23	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Annual	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Consumer Products	0.04	0.04	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Architectural Coatings	< 0.005	< 0.005	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Landscape Equipment	0.01	0.01	< 0.005	0.05	< 0.005	< 0.005	—	< 0.005	< 0.005	—	< 0.005	—	0.19	0.19	< 0.005	< 0.005	—	0.20
Total	0.05	0.05	< 0.005	0.05	< 0.005	< 0.005	—	< 0.005	< 0.005	—	< 0.005	—	0.19	0.19	< 0.005	< 0.005	—	0.20

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	—	—	—	—	—	—	—	—	—	—	—	0.00	0.00	0.00	0.00	0.00	—	0.00
Total	—	—	—	—	—	—	—	—	—	—	—	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
Total	—	—	—	—	—	—	—	—	—	—	—	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
Total	—	—	—	—	—	—	—	—	—	—	—	0.00	0.00	0.00	0.00	0.00	—	0.00

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	—	—	—	—	—	—	—	—	—	—	—	0.00	0.00	0.00	0.00	0.00	—	0.00
Total	—	—	—	—	—	—	—	—	—	—	—	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
Total	—	—	—	—	—	—	—	—	—	—	—	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
Total	—	—	—	—	—	—	—	—	—	—	—	0.00	0.00	0.00	0.00	0.00	—	0.00

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	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	2.5	2.5
Total	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	2.5	2.5
Daily, Winter (Max)	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
General Light Industry	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	2.5	2.5
Total	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	2.5	2.5
Annual	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
General Light Industry	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	0.41	0.41
Total	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	0.41	0.41

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)	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Emergency Generator	1.8	1.6	4.6	4.2	0.01	0.24	0.00	0.24	0.24	0.00	0.24	0.00	840	840	0.03	0.01	0.00	842
Total	1.8	1.6	4.6	4.2	0.01	0.24	0.00	0.24	0.24	0.00	0.24	0.00	840	840	0.03	0.01	0.00	842

Daily, Winter (Max)	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Emergency Generator	1.8	1.6	4.6	4.2	0.01	0.24	0.00	0.24	0.24	0.00	0.24	0.00	840	840	0.03	0.01	0.00	842
Total	1.8	1.6	4.6	4.2	0.01	0.24	0.00	0.24	0.24	0.00	0.24	0.00	840	840	0.03	0.01	0.00	842
Annual	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Emergency Generator	0.09	0.08	0.23	0.21	< 0.005	0.01	0.00	0.01	0.01	0.00	0.01	0.00	38	38	< 0.005	< 0.005	0.00	38
Total	0.09	0.08	0.23	0.21	< 0.005	0.01	0.00	0.01	0.01	0.00	0.01	0.00	38	38	< 0.005	< 0.005	0.00	38

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
Linear, Grubbing & Land Clearing	Linear, Grubbing & Land Clearing	1/1/2027	3/12/2027	5.0	51	—
Linear, Grading & Excavation	Linear, Grading & Excavation	3/13/2027	12/30/2027	5.0	209	—
Linear, Drainage, Utilities, & Sub-Grade	Linear, Drainage, Utilities, & Sub-Grade	12/31/2027	9/12/2028	5.0	183	—
Linear, Paving	Linear, Paving	9/13/2028	12/31/2028	5.0	78	—
Site Preparation	Site Preparation	1/1/2027	1/4/2027	5.0	2.0	—
Grading	Grading	1/5/2027	1/8/2027	5.0	4.0	—
Building Construction	Building Construction	1/9/2027	10/15/2027	5.0	200	—
Paving	Paving	10/16/2027	10/29/2027	5.0	10.0	—
Architectural Coating	Architectural Coating	10/30/2027	11/12/2027	5.0	10.0	—

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

Linear, Grubbing & Land Clearing	Crawler Tractors	Diesel	Average	1.00	8.0	87	0.43
Linear, Grubbing & Land Clearing	Excavators	Diesel	Average	1.00	8.0	36	0.38
Linear, Grubbing & Land Clearing	Signal Boards	Electric	Average	5.0	8.0	6.0	0.82
Linear, Grading & Excavation	Crawler Tractors	Diesel	Average	1.00	8.0	87	0.43
Linear, Grading & Excavation	Excavators	Diesel	Average	3.0	8.0	36	0.38
Linear, Grading & Excavation	Graders	Diesel	Average	1.00	8.0	148	0.41
Linear, Grading & Excavation	Rollers	Diesel	Average	2.0	8.0	36	0.38
Linear, Grading & Excavation	Rubber Tired Loaders	Diesel	Average	1.00	8.0	150	0.36
Linear, Grading & Excavation	Scrapers	Diesel	Average	2.0	8.0	423	0.48
Linear, Grading & Excavation	Signal Boards	Electric	Average	5.0	8.0	6.0	0.82
Linear, Grading & Excavation	Tractors/Loaders/Backhoes	Diesel	Average	2.0	8.0	84	0.37
Linear, Drainage, Utilities, & Sub-Grade	Air Compressors	Diesel	Average	1.00	8.0	37	0.48
Linear, Drainage, Utilities, & Sub-Grade	Generator Sets	Diesel	Average	1.00	8.0	14	0.74
Linear, Drainage, Utilities, & Sub-Grade	Graders	Diesel	Average	1.00	8.0	148	0.41
Linear, Drainage, Utilities, & Sub-Grade	Plate Compactors	Diesel	Average	1.00	8.0	8.0	0.43
Linear, Drainage, Utilities, & Sub-Grade	Pumps	Diesel	Average	1.00	8.0	11	0.74
Linear, Drainage, Utilities, & Sub-Grade	Rough Terrain Forklifts	Diesel	Average	1.00	8.0	96	0.40

Linear, Drainage, Utilities, & Sub-Grade	Scrapers	Diesel	Average	2.0	8.0	423	0.48
Linear, Drainage, Utilities, & Sub-Grade	Signal Boards	Electric	Average	5.0	8.0	6.0	0.82
Linear, Drainage, Utilities, & Sub-Grade	Tractors/Loaders/Backhoes	Diesel	Average	2.0	8.0	84	0.37
Linear, Paving	Pavers	Diesel	Average	1.00	8.0	81	0.42
Linear, Paving	Paving Equipment	Diesel	Average	1.00	8.0	89	0.36
Linear, Paving	Rollers	Diesel	Average	3.0	8.0	36	0.38
Linear, Paving	Signal Boards	Electric	Average	5.0	8.0	6.0	0.82
Linear, Paving	Tractors/Loaders/Backhoes	Diesel	Average	2.0	8.0	84	0.37
Site Preparation	Graders	Diesel	Average	1.00	8.0	148	0.41
Site Preparation	Scrapers	Diesel	Average	1.00	8.0	423	0.48
Site Preparation	Tractors/Loaders/Backhoes	Diesel	Average	1.00	7.0	84	0.37
Grading	Graders	Diesel	Average	1.00	8.0	148	0.41
Grading	Rubber Tired Dozers	Diesel	Average	1.00	8.0	367	0.40
Grading	Tractors/Loaders/Backhoes	Diesel	Average	2.0	7.0	84	0.37
Building Construction	Cranes	Diesel	Average	1.00	8.0	367	0.29
Building Construction	Forklifts	Diesel	Average	2.0	7.0	82	0.20
Building Construction	Generator Sets	Diesel	Average	1.00	8.0	14	0.74
Building Construction	Tractors/Loaders/Backhoes	Diesel	Average	1.00	6.0	84	0.37
Building Construction	Welders	Diesel	Average	3.0	8.0	46	0.45
Paving	Cement and Mortar Mixers	Diesel	Average	1.00	8.0	10.0	0.56
Paving	Pavers	Diesel	Average	1.00	8.0	81	0.42
Paving	Paving Equipment	Diesel	Average	1.00	8.0	89	0.36
Paving	Rollers	Diesel	Average	2.0	8.0	36	0.38

Paving	Tractors/Loaders/Back	Diesel	Average	1.00	8.0	84	0.37
Architectural Coating	Air Compressors	Diesel	Average	1.00	6.0	37	0.48

5.3. Construction Vehicles

5.3.1. Unmitigated

Phase Name	Trip Type	One-Way Trips per Day	Miles per Trip	Vehicle Mix
Linear, Grubbing & Land Clearing	Worker	18	19	LDA,LDT1,LDT2
Linear, Grubbing & Land Clearing	Vendor	0.00	10	HHDT,MHDT
Linear, Grubbing & Land Clearing	Hauling	0.00	20	HHDT
Linear, Grubbing & Land Clearing	Onsite truck	—	—	HHDT
Linear, Grading & Excavation	Worker	43	19	LDA,LDT1,LDT2
Linear, Grading & Excavation	Vendor	1.00	10	HHDT,MHDT
Linear, Grading & Excavation	Hauling	0.00	20	HHDT
Linear, Grading & Excavation	Onsite truck	—	—	HHDT
Linear, Drainage, Utilities, & Sub-Grade	Worker	38	19	LDA,LDT1,LDT2
Linear, Drainage, Utilities, & Sub-Grade	Vendor	0.00	10	HHDT,MHDT
Linear, Drainage, Utilities, & Sub-Grade	Hauling	0.00	20	HHDT
Linear, Drainage, Utilities, & Sub-Grade	Onsite truck	—	—	HHDT
Linear, Paving	Worker	30	19	LDA,LDT1,LDT2
Linear, Paving	Vendor	0.00	10	HHDT,MHDT
Linear, Paving	Hauling	0.00	20	HHDT
Linear, Paving	Onsite truck	—	—	HHDT
Site Preparation	Worker	7.5	19	LDA,LDT1,LDT2
Site Preparation	Vendor	—	10	HHDT,MHDT
Site Preparation	Hauling	0.00	20	HHDT

Site Preparation	Onsite truck	—	—	HHDT
Grading	Worker	10.0	19	LDA,LDT1,LDT2
Grading	Vendor	—	10	HHDT,MHDT
Grading	Hauling	0.00	20	HHDT
Grading	Onsite truck	—	—	HHDT
Building Construction	Worker	4.0	19	LDA,LDT1,LDT2
Building Construction	Vendor	1.6	10	HHDT,MHDT
Building Construction	Hauling	0.00	20	HHDT
Building Construction	Onsite truck	—	—	HHDT
Paving	Worker	15	19	LDA,LDT1,LDT2
Paving	Vendor	—	10	HHDT,MHDT
Paving	Hauling	0.00	20	HHDT
Paving	Onsite truck	—	—	HHDT
Architectural Coating	Worker	0.81	19	LDA,LDT1,LDT2
Architectural Coating	Vendor	—	10	HHDT,MHDT
Architectural Coating	Hauling	0.00	20	HHDT
Architectural Coating	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)
Architectural Coating	0.00	0.00	14,400	4,800	—

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)
Linear, Grubbing & Land Clearing	—	—	1.0	0.00	0.00
Linear, Grading & Excavation	—	—	1.0	0.00	0.00
Linear, Drainage, Utilities, & Sub-Grade	—	—	1.0	0.00	0.00
Site Preparation	—	—	3.0	0.00	0.00
Grading	—	—	4.0	0.00	0.00
Paving	0.00	0.00	0.00	0.00	1.0

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

Phase Name	Land Use	Area Paved (acres)	% Asphalt
Paving	General Light Industry	0.00	0%
Paving	Road Construction	1.0	100%

5.8. Construction Electricity Consumption and Emissions Factors

kWh per Year and Emission Factor (lb/MWh)

Year	kWh per Year	CO2	CH4	N2O
2027	440	346	0.03	< 0.005
2028	294	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	470	470	470	171,550	4,957	4,957	4,957	1,809,224

5.10. Operational Area Sources

5.10.1. Hearths

Land Use	Hearth Type	Unmitigated (number)	Mitigated (number)
General Light Industry	Wood Fireplaces	0	0
General Light Industry	Gas Fireplaces	0	0
General Light Industry	Propane Fireplaces	0	0
General Light Industry	Electric Fireplaces	0	0
General Light Industry	No Fireplaces	0	0
General Light Industry	Conventional Wood Stoves	0	0
General Light Industry	Catalytic Wood Stoves	0	0
General Light Industry	Non-Catalytic Wood Stoves	0	0
General Light Industry	Pellet Wood Stoves	0	0

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)
undefined	0.00	0.00	14,400	4,800	—

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	1,920,000	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	0.00	0.00

5.13. Operational Waste Generation

5.13.1. Unmitigated

Land Use	Waste (ton/year)	Cogeneration (kWh/year)
General Light Industry	0.00	0.00

5.14. Operational Refrigeration and Air Conditioning Equipment

5.14.1. Unmitigated

Land Use	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	4.0	4.0	18

5.15. Operational Off-Road Equipment

5.15.1. Unmitigated

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
Emergency Generator	Diesel	2.0	2.0	200	250	0.73

5.16.2. Process Boilers

5.17. User Defined

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	25	annual days of extreme heat
Extreme Precipitation	5.5	annual days with precipitation above 20 mm
Sea Level Rise	—	meters of inundation depth
Wildfire	33	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	0	0	0	N/A
Extreme Precipitation	N/A	N/A	N/A	N/A
Sea Level Rise	0	0	0	N/A
Wildfire	0	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	1	1	1	2
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	85

AQ-PM	45
AQ-DPM	24
Drinking Water	71
Lead Risk Housing	0.10
Pesticides	31
Toxic Releases	35
Traffic	88
Effect Indicators	—
CleanUp Sites	0.00
Groundwater	70
Haz Waste Facilities/Generators	89
Impaired Water Bodies	67
Solid Waste	97
Sensitive Population	—
Asthma	4.3
Cardio-vascular	10
Low Birth Weights	62
Socioeconomic Factor Indicators	—
Education	9.3
Housing	23
Linguistic	38
Poverty	5.1
Unemployment	21

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	93.67380983
Employed	76.78686
Median HI	92.96804825
Education	—
Bachelor's or higher	84.97369434
High school enrollment	21.05735917
Preschool enrollment	58.19325035
Transportation	—
Auto Access	98.98626973
Active commuting	34.73630181
Social	—
2-parent households	74.38727063
Voting	67.39381496
Neighborhood	—
Alcohol availability	92.46759913
Park access	36.76376235
Retail density	47.77364301
Supermarket access	23.22597203
Tree canopy	62.74862056
Housing	—
Homeownership	68.57436161
Housing habitability	81.30373412
Low-inc homeowner severe housing cost burden	60.46451944
Low-inc renter severe housing cost burden	67.75311177
Uncrowded housing	74.48992686
Health Outcomes	—
Insured adults	86.30822533
Arthritis	0.0

Asthma ER Admissions	98.4
High Blood Pressure	0.0
Cancer (excluding skin)	0.0
Asthma	0.0
Coronary Heart Disease	0.0
Chronic Obstructive Pulmonary Disease	0.0
Diagnosed Diabetes	0.0
Life Expectancy at Birth	71.8
Cognitively Disabled	87.2
Physically Disabled	81.6
Heart Attack ER Admissions	83.3
Mental Health Not Good	0.0
Chronic Kidney Disease	0.0
Obesity	0.0
Pedestrian Injuries	19.6
Physical Health Not Good	0.0
Stroke	0.0
Health Risk Behaviors	—
Binge Drinking	0.0
Current Smoker	0.0
No Leisure Time for Physical Activity	0.0
Climate Change Exposures	—
Wildfire Risk	88.1
SLR Inundation Area	0.0
Children	92.2
Elderly	92.1
English Speaking	69.3
Foreign-born	49.0

Outdoor Workers	66.6
Climate Change Adaptive Capacity	—
Impervious Surface Cover	89.1
Traffic Density	75.3
Traffic Access	23.0
Other Indices	—
Hardship	14.5
Other Decision Support	—
2016 Voting	38.9

7.3. Overall Health & Equity Scores

Metric	Result for Project Census Tract
CalEnviroScreen 4.0 Score for Project Location (a)	26
Healthy Places Index Score for Project Location (b)	87
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

8.1. Justifications

Screen	Justification
Land Use	It is assumed th centralized treatment facility would have a footprint of 100 ft by 70 ft and 65 ft by 40 ft. The centralized treatment facility would disturb approximately 65,000 square feet of ground surface, and the pipeline construction would require approximately 45,000 square feet of ground disturbance.
Construction: Construction Phases	Project would not include demolition. Conservatively overlapped pipeline construction with the centralized treatment facility construction.
Operations: Vehicle Data	Approximately 470 annual one-way trips during project operations.
Operations: Fleet Mix	Assumed chemical deliveries and resin changeouts would utilized HHD trucks.
Operations: Energy Use	The project would require approximately 1,920 megawatt-hours of electricity annually
Operations: Water and Waste Water	no water consumed onsite
Operations: Solid Waste	No soild waste consumption

8.3. Land Use

Model Parameter	Units	Default Value	New Value
Lot Area	acre	0.22	1.5
Landscape Area	sq. ft	—	0.00

8.4. Construction

8.4.1. Construction Phases

Phase Type	Phase Name	Model Parameter	Default Value	New Value
Site Preparation	Site Preparation	Start Date	1/30/2027	1/1/2027
Site Preparation	Site Preparation	End Date	2/1/2027	1/4/2027
Grading	Grading	Start Date	2/2/2027	1/5/2027
Grading	Grading	End Date	2/7/2027	1/8/2027
Building Construction	Building Construction	Start Date	2/8/2027	1/9/2027

Building Construction	Building Construction	End Date	11/15/2027	10/15/2027
Paving	Paving	Start Date	11/16/2027	10/16/2027
Paving	Paving	End Date	11/30/2027	10/29/2027
Architectural Coating	Architectural Coating	Start Date	12/1/2027	10/30/2027
Architectural Coating	Architectural Coating	End Date	12/14/2027	11/12/2027
Linear, Grubbing & Land Clearing	Linear, Grubbing & Land Clearing	End Date	3/14/2027	3/12/2027
Linear, Grubbing & Land Clearing	Linear, Grubbing & Land Clearing	Work Days per Phase	52	51
Linear, Grading & Excavation	Linear, Grading & Excavation	Start Date	3/15/2027	3/13/2027
Linear, Grading & Excavation	Linear, Grading & Excavation	End Date	12/31/2027	12/30/2027
Linear, Grading & Excavation	Linear, Grading & Excavation	Work Days per Phase	208	209
Linear, Drainage, Utilities, & Sub-Grade	Linear, Drainage, Utilities, & Sub-Grade	Start Date	1/1/2028	12/31/2027
Linear, Drainage, Utilities, & Sub-Grade	Linear, Drainage, Utilities, & Sub-Grade	End Date	9/11/2028	9/12/2028
Linear, Drainage, Utilities, & Sub-Grade	Linear, Drainage, Utilities, & Sub-Grade	Work Days per Phase	182	183
Linear, Paving	Linear, Paving	Start Date	9/12/2028	9/13/2028
Linear, Paving	Linear, Paving	End Date	12/30/2028	12/31/2028

8.5. Operations

8.5.1. Mobile Sources

8.5.1.1. Vehicle Data

Land Use	Model Parameter	Units	Default Value	New Value
General Light Industry	Weekday Trip Rate	size/day	5.0	49
General Light Industry	Saturday Trip Rate	size/day	2.0	49
General Light Industry	Sunday Trip Rate	size/day	5.0	49

8.5.1.2. Fleet Mix

Land Use	Season	Model Parameter	Units	Default Value	New Value
General Light Industry	A	Heavy-Heavy-Duty Trucks	%	1%	11%
General Light Industry	A	Passenger Cars	%	49%	89%
General Light Industry	A	Light-Duty Trucks 1	%	4%	0%
General Light Industry	A	Light-Duty Trucks 2	%	24%	0%
General Light Industry	A	Light Heavy-Duty Trucks 1	%	3%	0%
General Light Industry	A	Light Heavy-Duty Trucks 2	%	1%	0%
General Light Industry	A	Motorcycles	%	2%	0%
General Light Industry	A	Medium-Duty Trucks	%	14%	0%
General Light Industry	A	Motor Homes	%	< 0.5%	0%
General Light Industry	A	Medium-Heavy-Duty Trucks	%	1%	0%
General Light Industry	A	Other Buses	%	< 0.5%	0%
General Light Industry	A	School Buses	%	< 0.5%	0%
General Light Industry	A	Urban Buses	%	< 0.5%	0%
General Light Industry	S	Heavy-Heavy-Duty Trucks	%	1%	11%
General Light Industry	S	Passenger Cars	%	49%	89%
General Light Industry	S	Light-Duty Trucks 1	%	4%	0%
General Light Industry	S	Light-Duty Trucks 2	%	24%	0%
General Light Industry	S	Light Heavy-Duty Trucks 1	%	3%	0%
General Light Industry	S	Light Heavy-Duty Trucks 2	%	1%	0%
General Light Industry	S	Motorcycles	%	2%	0%
General Light Industry	S	Medium-Duty Trucks	%	14%	0%
General Light Industry	S	Motor Homes	%	< 0.5%	0%
General Light Industry	S	Medium-Heavy-Duty Trucks	%	1%	0%
General Light Industry	S	Other Buses	%	< 0.5%	0%
General Light Industry	S	School Buses	%	< 0.5%	0%
General Light Industry	S	Urban Buses	%	< 0.5%	0%

General Light Industry	W	Heavy-Heavy-Duty Trucks	%	1%	11%
General Light Industry	W	Passenger Cars	%	49%	89%
General Light Industry	W	Light-Duty Trucks 1	%	4%	0%
General Light Industry	W	Light-Duty Trucks 2	%	24%	0%
General Light Industry	W	Light Heavy-Duty Trucks 1	%	3%	0%
General Light Industry	W	Light Heavy-Duty Trucks 2	%	1%	0%
General Light Industry	W	Motorcycles	%	2%	0%
General Light Industry	W	Medium-Duty Trucks	%	14%	0%
General Light Industry	W	Motor Homes	%	< 0.5%	0%
General Light Industry	W	Medium-Heavy-Duty Trucks	%	1%	0%
General Light Industry	W	Other Buses	%	< 0.5%	0%
General Light Industry	W	School Buses	%	< 0.5%	0%
General Light Industry	W	Urban Buses	%	< 0.5%	0%

8.5.3. Energy Usage

Land Use	Model Parameter	Units	Default Value	New Value
General Light Industry	Electricity	kWh/yr	92,090	1,920,000
General Light Industry	Electricity (Subject to Title 24)	kWh/yr	78,556	1,637,822
General Light Industry	Electricity (Not Subject to Title 24)	kWh/yr	13,534	282,178
General Light Industry	Natural Gas	kBTU/yr	410,899	0.00
General Light Industry	Natural Gas (Subject to Title 24)	kBTU/yr	154,690	0.00
General Light Industry	Natural Gas (Not Subject to Title 24)	kBTU/yr	256,208	0.00

8.5.4. Water and Waste Water

Land Use	Model Parameter	Units	Default Value	New Value
General Light Industry	Indoor Water	gal/year	2,220,000	0.00

8.5.5. Solid Waste

Land Use	Model Parameter	Units	Default Value	New Value
General Light Industry	Solid Waste Generation Rate	ton/1000sqft/yr	1.2	0.00

Appendix B

Biological Resources Assessment

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

January 8, 2026
Project No: 23-14795

Wai Lan Lee, P.E., Engineer
Santa Clarita Valley Water Agency
26521 Summit Circle
Santa Clarita, California 91350
Via email: wlee@scvwa.org

Subject: Biological Resources Assessment for the E-Wells PFAS Groundwater Treatment Improvements Project, Santa Clarita, Los Angeles County, California

Dear Ms. Lee:

This Biological Resources Assessment (BRA) documents the findings of a biological survey conducted by Rincon Consultants, Inc. (Rincon), for the Santa Clarita Valley Water Agency (SCV Water) E-Wells PFAS 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 pursuant to 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 References section.

The Maximum Project Boundary for the project, hereby referred to as the Study Area, includes the project site and an approximately 100-foot buffer beyond the limits of the project site, where practicable, to address potential direct and indirect project effects.

Project Location and Description

Project Location

The project site is comprised of an approximately 142-acre maximum area located within unincorporated Los Angeles County, west of the City of Santa Clarita (Attachment 1: Figure 1). The project components include four existing wells (E-14, E-15, E-16, and E1-7), referred to collectively as E-Wells bank; a proposed new groundwater treatment facility; associated proposed pipeline alignments; and proposed construction staging and laydown areas. State Route (SR) 126 runs east-west through the project site, in between the proposed centralized treatment facility and the existing E-Wells bank (Attachment 1: Figure 2Figure 2). The four existing wells are located on the E-Wells bank and north of SR 126. The proposed centralized treatment facility is located along Henry Mayo Drive and south of SR 126. The proposed pipeline alignment, inclusive of all potential alignment alternatives, is located along Commerce Center Drive, Henry Mayo Drive, The Old Road, and Turnberry Lane.

Project Background

In August 2019, the California Division of Drinking Water (DDW) set notification level and response levels for various per- and polyfluoroalkyl substances (PFAS) constituents. In February 2020 Santa Clarita Valley Water Agency (SCV Water) wells were tested and over 60 percent of tested wells exceeded the notification level or response level established by the DDW, resulting in 18 wells being

taken out of service (SCV Water 2021). To make up for the resulting loss of groundwater production, SCV Water has relied on the purchase of additional imported water supplies to meet local demand.

Within their groundwater system, SCV Water owns four wells (E-14, E-15, E-16, and E-17), referred to collectively as a bank of E-Wells, located near the Castaic junction. Wells E-15 and E-17 are operational and currently in production. Wells E-15 and E-17 were tested as part of the testing program conducted in 2020 and exceeded the notification level for PFAS compounds but not the response level. Wells E-14 and E-16 are not equipped with pumps and have never been active so were not tested in 2020. However, due to their proximity to Wells E-15 and E-17, Wells E-14 and E-16 are presumed to also be impacted by PFAS compounds and would exceed DDW levels if they were to come into production (SCV Water 2021).

SCV Water's 2020 Urban Water Management Plan (UWMP) accounts for future water production from all four E-Wells. Wells E-15 and E-17 are characterized as "existing wells." Wells E-14 and E-16 are characterized as "future wells" in the UWMP because they are not yet equipped with pumps and have not been in production. However, the UWMP identifies a future facility for PFAS treatment of water produced by the E-wells and estimates all four E-wells will be operational by 2026 (SCV Water 2021). Because all four wells have been drilled and the casings have been installed, the analysis discussed in this document refers to them as "existing wells" except when referring specifically to the UWMP.

The E-Wells bank overlies the Santa Clara River Valley East Groundwater Subbasin (Basin). In 2022, the Santa Clarita Valley Groundwater Sustainability Agency (SCV-GSA) finalized the Santa Clara River Valley East Groundwater Subbasin Groundwater Sustainability Plan (GSP). The GSP includes a presentation of the historical, current, and projected future water budgets for the Basin. These water budgets were developed using a groundwater flow model that simulates the natural and human-induced interactions taking place throughout the Basin between surface and groundwater. The GSP modeling also considers impacts on groundwater dependent ecosystems (GDEs). The GSP water budgets account for future production from all four E-wells. The GSP modeling indicates anticipated future pumping is unlikely to cause an overdraft condition in the local groundwater system (SCV-GSA 2022).

Table 1 below identifies the groundwater source capacities identified for each of the E-Wells in the UWMP, including normal year and dry year source capacities as determined by the GSP water budget analysis.

Table 1 E-Wells Groundwater Source Capacities in Urban Water Management Plan

Well	Permitted Capacity (gpm)	Maximum Annual Capacity (AF)	GSP Water Budget Analysis	
			Normal Year (AF)	Dry Year (AF)
"Existing" Wells				
Well E-15	1,400	2,260	725	620
Well E-17	1,200	1,940	725	620
"Future" Wells				
Well E-14	1,200	1,940	725	610
Well E-16	1,200	1,940	725	610

Well	Permitted Capacity (gpm)	Maximum Annual Capacity (AF)	GSP Water Budget Analysis	
			Normal Year (AF)	Dry Year (AF)
Total	5,000	8,080	2,900	2,460

gpm - gallons per minute; AF – acre-feet; GSP – Groundwater Sustainability Plan

Source: SCV Water 2021

The E-Wells bank is permitted to generate up to a total of 5,000 gallons per minute of water. The well-by-well GSP modeling currently identifies that this bank of E-Wells can produce up to 2,900 acre-feet per year (AFY) in a normal year, or 2,460 AFY in a dry year, without resulting in adverse impacts to sustainable groundwater management.

Project Description

The E-Wells PFAS Groundwater Treatment Facility Project (herein referred to as "proposed project" or "project") involves construction of a PFAS groundwater treatment facility (centralized treatment facility) and associated pipelines to collect and treat groundwater pumped from Wells E-14, E-15, E-16, and E-17. The project would not expand the capacity or increase historical production from active Wells E-15 and E-17. The project would enable SCV Water to activate Wells E-14 and E-16, with anticipated groundwater production capacities of up to 1,200 gpm each, as identified in the UWMP and shown in Table 1. The project would treat PFAS in pumped groundwater to levels below the federal Maximum Contaminant Level, restore the use of the E Wells, and reduce SCV Water's dependency on imported water.

Centralized Treatment Facility

The proposed PFAS treatment facility would be located on Assessor's Identification Number (AIN) 2866-003-011, between Henry Mayo Drive and SR 126. The centralized treatment facility would include the following treatment components:

- Cartridge filtration system as a pretreatment to remove suspended particles;
- Up to six ion exchange (IX) vessels (lead/lag configuration) for the removal of PFAS compounds; and
- Disinfection facility composed of on-site sodium hypochlorite generation system and liquid ammonium sulfated system located inside a building.

The facility would be enclosed with an up to approximately 15-foot-high decorative wall and architectural paneling to screen the treatment vessels and other site improvements. The project would include a concrete masonry unit to house a chemical building, approximately 65 feet by 40 feet in area, and a pump station building approximately 100 feet by 70 feet. Vehicular access to the site would be provided by two driveways along Henry Mayo Drive. For additional security, the pedestrian doors at the facility would be equipped with a key fob system.

In addition, the facility may include a 12-inch pump station and up to two 250-horsepower kW emergency generator. For the purposes of this BRA, the proposed PFAS treatment facility is considered a permanent impact.

Water Pipelines

The project would include installation of up to 5,000 linear feet (LF) of raw water collector pipelines, 6,000 LF of treated water pipelines, and up to 3,000 LF of recycled water pipelines. These pipelines would facilitate the conveyance of raw water produced from the E-Wells to the centralized treatment facility, and conveyance of recycled and treated water to and from existing SCV Water pipeline infrastructure in this area.

The project is currently under design. The proposed general location of the water pipelines are shown in Figure 2 (Attachment 1). To provide a complete analysis of all potential biological impacts associated with the project, it is assumed that all water pipelines would ultimately be located within the Maximum Project Boundary (i.e., Study Area) shown in Figure 2 (Attachment 1). For the purposes of this BRA, water pipeline installation is considered a temporary impact.

Well Improvements

The project includes improvements at the existing E-Wells. All work would be completed within the existing, fenced facility footprints for these wells in previously disturbed areas. Wells E-14 and E-16 would be equipped with new pumps. Shrubs and ground cover may be removed, as needed, during installation of these improvements, but no trees would be altered or removed.

Construction

Construction of the proposed project would occur between January 2027 and December 2028. Construction activities would typically occur between 7:00 a.m. and 4:00 p.m., Monday through Friday. Construction activities would include ground disturbing activities such as excavation, construction staging, material stockpiling, temporary lane closures, and possible groundwater dewatering.

The maximum depth of excavation would be ten feet, with an average excavation depth of four to five feet. Centralized treatment facility construction would require approximately 65,000 square feet of ground disturbance, and the pipeline construction would require approximately 45,000 square feet of ground disturbance. Improvements to existing wells would only require surficial ground disturbance, if any.

The pipeline at the highway crossing would be installed via trenchless methods underneath SR 126. Trenchless installation would involve the use of a drilling rig to create an underground crossing between the California Department of Transportation (Caltrans) rights-of-way (ROW) and SR 126. The drilling rig would install a casing through the underground pathway without disturbing the ground surface within the SR 126 ROW. Entry and exit pits up to 30 feet in depth and up to 900 square feet in surface area would be installed on the north and south sides of SR 126 to accommodate the equipment. During trenchless installation, a diesel generator would be used to power construction equipment. All other pipelines would be installed via conventional open-cut trench methods.

Construction staging would primarily occur at the western end of the centralized treatment facility site and at the existing E-Wells sites. In addition, temporary staging and materials stockpiling would occur along the open-cut trench pipeline alignments in a linear fashion as pipelines are installed.

Project construction may require groundwater dewatering if groundwater is encountered during ground disturbing activities (e.g., open-cut trench digging). In addition, upon completion of pipeline installation, there would be discharges of water associated with disinfecting and pressure testing the newly installed pipeline. Dewatered groundwater and pipeline testing discharges would either be discharged to the nearest storm drain or to Castaic Creek. Water would be tested prior to discharge and may require treatment. All water discharged to Castaic Creek would comply with SCV Water's

existing National Pollutant Discharge Elimination System (NPDES) permit requirements (Order WQ 2014-0194-DWQ, General Order No. CAG140001, Waste Discharge Identification Number 4DW0439). These permit requirements include but are not limited to implementation of best management practices to prevent discharges from entering the Santa Clara River Reach 5,[1] compliance with applicable effluent limitations for chlorine residual and turbidity, and conducting monitoring and reporting in compliance with the provisions in the Monitoring and Reporting Program of the Statewide Drinking Water Systems Discharge Permit.

Operation and Maintenance

As part of the proposed project, Wells E-14 and E-16 would be equipped and brought online, with a permitted groundwater pumping capacity of up to 1,200 gallons per minute (gpm) each. Wells E-15 and E-17 would continue to produce groundwater at their current rates. The E-Wells and treatment facility would operate up to 24 hours per day, 365 days per year. The four well pumps would be individually controlled and monitored through supervisory control and data acquisition (SCADA), allowing SCV Water to turn on any combination of one to four well pumps at a time.

It is anticipated approximately 2,460 to 2,900 acre-feet per year of groundwater would be pumped in total, depending on hydrologic year type. Annual groundwater pumping rates under this project would not exceed the pumping quantities provided in the groundwater level simulations used in the GSP or the permitted capacity of the E-Wells bank. Through consistent monitoring of groundwater levels at SCV Water's new monitoring wells in the local area, pumping rates would be adjusted, as needed, to prevent adverse impacts to downstream GDEs consistent with the GSP monitoring program.

Operation of the proposed project would require approximately 1,920 megawatt-hours (MWh) of electricity annually.[2] Up to four maintenance staff would visit the project site per week. Resin media would be replaced two to three times a year, which would require the use of a semitruck. In addition, chemical deliveries to the proposed disinfection building would occur approximately twice a month via a midsize delivery truck. Maintenance vehicles would park within the centralized treatment facility site. The vessels would have a life expectancy of approximately 30 to 50 years and may be re-coated approximately every 10 years.

Lighting would be provided within the centralized treatment facility and would be set on a timer controlled at the entrance of the project site. Sodium hypochlorite (chlorine) and liquid ammonium sulfate would be stored at the proposed facility in a completely enclosed structure (concrete masonry building) with proper containment and venting.

Methodology

Regulatory Overview

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

[1] Santa Clara River Reach 5 is a roughly six-mile portion of the Santa Clara River between the Los Angeles-Ventura County boundary to the east and Interstate 5 to the west.
[2] All project components are estimated by SCV water to require 160 MWh per month. Multiplied by 12 months, the project would require approximately 1,920 MWh per year.

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)
- Federal 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

- County of Los Angeles 2035 General Plan
- Los Angeles County Significant Ecological Areas (SEA) Program
- Los Angeles County Oak Tree Management Guidelines

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 Review

A literature review was conducted to establish the environmental and regulatory setting of the proposed project. Specific literature reviewed for the subject analysis is provided in the references section. The reviewed literature also included the United States Department of Agriculture, Natural Resources Conservation Service (USDA NRCS) Web Soil Survey (USDA NRCS 2025a) and literature detailing the habitat requirements of subject species. Aerial imagery, topographic maps, and soil survey maps were also examined (Google Earth Pro 2025).

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 project site. Databases reviewed included the USFWS Environmental Conservation Online System: Information for Planning and Consultation (IPaC) 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 (NHD) (USGS 2025), CDFW California Natural Diversity Database (CNDDB) (CDFW 2025a), CDFW Biogeographic Information and Observation System (BIOS) (CDFW 2025b), and California Native Plant Society (CNPS) Online Inventory of Rare, Threatened and Endangered Plants of California (CNPS 2025).

Field Reconnaissance Surveys

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 Rincon Biologist/Botanist Alicia McCraken conducted a field reconnaissance survey of the northern sections of the proposed water pipeline, and Wells E-14, E-15, and E-16 on November 9, 2023, from 8:00 a.m. to 4:00 p.m. Weather conditions during the survey included an average temperature of 67 degrees Fahrenheit, with winds up to eight miles per hour and clear skies (less than one percent cover).

Rincon Biologist/Botanist Kyle Gern conducted an additional field reconnaissance survey of the southern sections of the proposed water pipelines and centralized treatment facility on January 10, 2025, from 9:15 a.m. to 4:00 p.m. Weather conditions during the survey included an average temperature of 66 degrees Fahrenheit, with winds ranging five to ten miles per hour and clear skies (less than one percent cover).

The surveys were 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 presence of potentially jurisdictional waters).

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.

The biologists also delineated the extent of potential waters of the U.S./State and/or CDFW jurisdictional streambeds within the Study Area during the field surveys in accordance with current federal and state policies, methods and guidelines. A formal aquatic resources delineation was not performed as part of the reconnaissance field surveys; potential outer extents of potentially jurisdictional aquatic resources were conservatively mapped using handheld Global Positioning System (GPS) units. Site photographs from the surveys are provided in Attachment 2.

Existing Conditions

Physical Characteristics

The project site is primarily located within existing developed and/or previously disturbed areas such as paved roadways and parking lots. The maximum project boundary extends into undeveloped natural areas such as Castaic Creek and adjacent native vegetation communities that have not been developed or disturbed (Attachment 1: Figure 3). Wells E-14 and E-16 are located along an open, flat, and undeveloped area immediately south of Castaic Creek, while Wells E-15 and E-17 are situated adjacent to developed areas within industrial facilities. The location of the proposed centralized treatment facility is located on disturbed soils adjacent to an existing gas station to the east, and bounded by SR 126 to the north and Henry Mayo Drive to the south. The proposed water pipeline alignment is primarily located within paved roadways along Commerce Center Drive, Henry Mayo Drive, The Old Road, and Turnberry Lane, and connects to the three wells that define the limits of the project site. At most locations, the northern Study Area buffer contains the gradually sloping, north-facing banks of Castaic Creek. A small unnamed drainage, outside the main Castaic Creek channel, occurs east of Well E-15 (Attachment 1: Figure 4). Castaic Creek joins Santa Clara River approximately 1.3 miles southwest of the centralized treatment facility and outside the Study Area. The project site is otherwise bounded by open space and existing development. Vegetation communities and land covers in the Study Area are described in detail below.

Elevations within the Study Area range from approximately 1,025 to 975 feet above mean sea level (amsl). Soils underlying the Study Area surrounding Wells E-14 and E-16 include Riverwash and Sandy alluvial land, 0 to 2 percent slopes. Handford sandy loam, 0 to 2 percent slopes is mapped within the proposed centralized treatment center and throughout the southern portion of the Study Area. The soil underlying the Study Area surrounding Well E-15 is mapped as Metz loamy sand, 0 to 2 percent slopes. According to USDA NRCS, Riverwash and Sandy alluvial land soils are considered hydric, while Metz loamy sand and Handford sandy loam soils are not considered hydric (USDA NRCS 2025b).

The USFWS NWI maps Castaic Creek as intermittent riverine wetlands (USFWS 2025c), which intersects the northern alignment of the proposed water pipeline within the Study Area.

Vegetation Communities and Land Cover Types

Vegetation communities documented within the Study Area during the reconnaissance surveys include brittle bush scrub, California sagebrush - California buckwheat scrub, Fremont cottonwood woodland, sandbar willow thickets, tamarisk thickets, and upland mustards. In addition to these vegetation communities, other land cover types documented within the Study Area include agriculture, developed/disturbed, and riverwash. Brief descriptions of the vegetation communities and land cover types present in the Study Area, as well as vegetation community sensitivity rankings, are provided below, and locations are depicted in Attachment 1: Figure 3. CNDDB vegetation alliances are globally (G) and state (S) ranked 1 through 5 based on NatureServe's (2025) methodology, with those alliances ranked S1 through S3 being sensitive natural communities that should be addressed under CEQA, though there are some exceptions. A list of plant species observed during the field reconnaissance surveys is included in Attachment 3.

Vegetation Communities

Brittle Bush Scrub

Brittle bush scrub (*Encelia farinosa* Shrubland Alliance) is dominated by brittlebush (*Encelia farinosa*), with sparsely disturbed low shrubs occurring on well-drained slopes and alluvial fans occurring between 225 and 4,200 feet (75 to 1,400 meters) amsl. Vegetation cover is typically open, with brittlebush constituting at least one percent absolute cover in the shrub layer with greater cover than other woody species. Associate species may include white bursage (*Ambrosia dumosa*), California sagebrush (*Artemisia californica*), California buckwheat (*Eriogonum fasciculatum*), and annual forbs depending on seasonal precipitation. Within the Study Area, brittle bush scrub is dominated by brittlebush and is characterized as the *Encelia farinosa* Shrubland Association. This association is unranked and is not considered sensitive (CDFW 2025).

Brittle bush scrub occurs at the eastern alignment of the proposed pipeline, and north of The Old Road (Attachment 1: Figure 3). The shrub layer is dominated by brittlebush, and subdominant shrubs include California buckwheat, California sagebrush, California sunflower (*Encelia californica*), and fourwing saltbush (*Atriplex canescens*). The herbaceous layer is dominated by tocalote (*Centaurea melitensis*), and also includes summer mustard (*Hirschfeldia incana*) and redstem filaree (*Erodium cicutarium*) as subdominant species. The tree layer is absent at this location.

California Sagebrush – California Buckwheat Scrub

California sagebrush – California buckwheat scrub, an association within the California sagebrush – (purple sage) Shrubland Alliance (*Artemisia californica – [Salvia leucophylla] Shrubland Alliance*), is typically dominated by California sagebrush and/or purple sage (*Salvia leucophylla*), and is generally located on dry slopes and alluvial terraces with moderate to low soil moisture between 0 and 3,600 feet (0 to 1,200 meters) amsl. Vegetation structure consists of low, aromatic shrubs with interspaces supporting annual grasses and forbs. This association requires California sagebrush and/or California buckwheat to have 30 to 60 percent relative cover in the shrub canopy (Sawyer et al. 2009). This association is ranked G4S4 by CDFW and is not considered sensitive (CDFW 2025).

California sagebrush – California buckwheat scrub occurs to along the northern alignment of the proposed water pipeline, south of Well E-15 and southwest of the Well E-16 (Attachment 1: Figure 3). The shrub layer is dominated by California sagebrush and California buckwheat, and includes brittlebush and spearscale (*Atriplex triangularis*) as subdominant shrubs. The herbaceous layer is dominated by tocalote and also includes summer mustard, red brome (*Bromus rubens*), common sandaster (*Corethrogyne filaginifolia*), and Russian thistle (*Salsola tragus*) as subdominant herbaceous species. The tree layer is absent at this location.

Fremont Cottonwood Woodland

Fremont cottonwood woodland (*Populus fremontii - Fraxinus velutina - Salix gooddingii* Forest & Woodland Alliance) is characterized by dominant Fremont cottonwood (*Populus fremontii*) in the tree canopy with willows (*Salix* spp.) and other riparian trees such as western sycamore (*Platanus racemosa*) present as codominant or subdominant trees. Fremont cottonwood accounts for approximately 10 to 80 percent absolute cover and greater than 50 percent relative cover in the tree layer. The tree canopy ranges from continuous to open, the shrub layer intermittent to open, and the herbaceous layer is variable (Sawyer et al. 2009). This alliance can be found on floodplains; along low-gradient rivers, perennial or seasonally intermittent streams, and springs; and in canyons, alluvial fans, and valleys with a dependable subsurface water supply that varies considerably during the year.

Elevations range from 0 to 7,200 feet (0 to 2,400 meters) amsl. Fremont cottonwood woodland is designated as G4S3 by CDFW and is considered a sensitive natural community (CDFW 2025).

Fremont cottonwood woodland occurs at the northern alignment of the proposed water pipeline, north of Well E-16 and west of Well E-15 (Attachment 1: Figure 3). The tree layer is dominated by Fremont cottonwood and includes by blue elderberry (*Sambucus mexicana*). The shrub layer is dominated by mulefat (*Baccharis salicifolia*), narrowleaf willow (*Salix exigua*), salt cedar (*Tamarix ramosissima*), and includes California sagebrush and California buckwheat as subdominant shrubs. The herbaceous layer is dominated by tocalote. Other herbs include red brome, ripgut brome (*Bromus diandrus*), and giant reed (*Arundo donax*) at relatively low cover.

Sandbar Willow Thickets

Sandbar willow thickets (*Salix exigua* Shrubland Alliance) are dominated or codominated by sandbar willow (*Salix exigua*), along with other woody shrubs associated with riparian, mesic, or disturbed habitats. Vegetation is typically multi-stemmed, forming tall, narrow thickets. The community often occupies recently deposited alluvium and is an early successional stage in riparian habitat development. Elevation ranges from 0 to 8,100 feet (0 to 2,700 meters) amsl (Sawyer et al. 2009). Sandbar willow thickets is ranked G5S4 by CDFW and is not considered a sensitive natural community (CDFW 2025).

Sandbar willow thickets occur at the northern alignment of the proposed water pipeline, west of Well E-15 and within the potentially jurisdictional unnamed drainage that occurs to the south of Castaic Creek (Attachment 1: Figure 3). The shrub layer is dominated by sandbar willow and includes salt cedar and mulefat as subdominant shrubs. In the herbaceous layer, summer mustard is the dominant species with tocalote and tall flatsedge (*Cyperus eragrostis*) as subdominants. A sparse tree layer is present, which consists of scattered Fremont cottonwood by the bank of Castaic Creek.

Tamarisk Thickets

Tamarisk thickets (*Tamarix spp.* Shrubland Alliance) is characterized by dominant salt cedar or other tamarisk species in shrub layer. Tamarisk thickets consist of dense stands of non-native tamarisk species, often forming monocultures along riparian corridors, drainages, and disturbed wetlands. Tamarisk is highly competitive and can alter groundwater availability, soil salinity, and native plant community structure. Elevations range from 225 to 2,400 feet (75 to 800 meters) amsl. Tamarisk contributes to at least 60 percent relative cover in the shrub layer with minor presence of native species (Sawyer et al. 2009). This community is ranked GNASNA (Globally Not Applicable, State Not Applicable) due to the dominance of non-native species and is not considered sensitive (CDFW 2025).

Tamarisk thickets occur at the western end of the northern alignment of the proposed water pipeline (Attachment 1: Figure 3). The shrub layer is dominated by salt cedar and includes mulefat, sandbar willow, and blue elderberry as subdominant shrubs. Red brome is dominant in the herbaceous layer, while ripgut brome, tocalote, common sandaster, slender wild oat (*Avena barbata*) are subdominant. The tree layer is absent at this location.

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 (2,800 meters) 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 2025).

Upland mustards are found in disturbed areas, adjacent to all alignments of the proposed water pipeline (Attachment 1: Figure 3). This semi-natural vegetation community also occurs within the centralized treatment facility. There are no tree or shrub layers at this location. Summer mustard and tocalote are dominant in the herbaceous layer, while redstem filaree, Russian thistle, ripgut brome, red brome, common sandaster, stinkwort (*Dittrichia graveolens*), and telegraph weed (*Heterotheca grandiflora*) are subdominant.

Land Cover Types

Agriculture

The agriculture land cover type is characterized by actively managed fields and associated infrastructure. These areas are typically subject to routine ground disturbance such as plowing, disking, irrigation, and harvesting. Vegetation within agricultural lands is dominated by cultivated crops or maintained fallow fields with limited presence of native plant species. The agriculture land cover present within the Study Area primarily occurs north of SR-216 and encompasses a large area where Wells E-14, E-15, and E-16 are located (Attachment 1: Figure 3). At this location, the agricultural land is largely unvegetated, with only sparse alfalfa (*Medicago sativa*) present.

Developed/Disturbed

The developed/disturbed land cover type includes buildings, other infrastructure, paved areas with little to no vegetation (e.g., fenced areas and paved roads), unpaved access roads, and disturbed road shoulders. With the exception of the northern alignment, most of the proposed water pipeline alignments are surrounded by developed/disturbed areas, including paved roads and buildings. (Attachment 1: Figure 3). Scattered ornamental vegetation occurring in this land cover type includes, but is not limited to, blue gum (*Eucalyptus globulus*), Indian hawthorn (*Rhapiolepis indica*), bank catclaw (*Acacia redolens*), and rosemary (*Rosmarinus officinalis*).

Riverwash

Riverwash occurs in the bed of Castaic Creek and consists of sandy soil with scattered vegetation including salt cedar and mulefat (Attachment 2: Photograph 1). Riverwash is a naturally dynamic landform and may shift and change position depending on flood volumes and regularity. This land cover type encompasses the southern bank of Castaic Creek where it occurs along the northern alignment of the proposed water pipeline (Attachment 1: Figure 3).

General Wildlife

A total of 9 wildlife species were observed during the field reconnaissance surveys, including common species such as California scrub-jay (*Aphelocoma californica*), common raven (*Corvus corax*), and American crow (*Corvus brachyrhynchos*), among others. A full list of observed species is provided in Attachment 3. These species would be expected to use the Study Area for foraging, nesting, and/or shelter. They would not be expected to use most of the developed/disturbed land cover type because these areas are primarily unvegetated and do not contain natural soil substrate for foraging, nesting, and/or shelter. However, ornamental trees within the developed/disturbed land cover type, such as blue gum, could potentially support common avian species and raptor nesting.

Regulated Biological Resources Impacts Analysis

Based on review of aerial photographs and field reconnaissance surveys, Rincon evaluated the potential presence of regulated biological resources on and adjacent to the project site. This section also evaluates the potential adverse impacts to biological resources that may occur from implementation of the project and recommends appropriate avoidance and mitigation measures (AMMs) to reduce potentially significant impacts to less than significant.

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; or "Species of Special Concern" (SSC) by CDFW; and CDFW Special Plants, specifically those with California Rare Plant Ranks (CRPR) of 1B, 2B, 3, 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 onsite 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 2025b) and the CNPS online Inventory of Rare and Endangered Vascular Plants of California (CNPS 2025). A species list was obtained from the USFWS IPaC (USFWS 2025a), which uses the known or expected ranges of species, as well as areas of influence for species, to generate the list (Attachment 4). A five-mile radius was used to further refine the evaluation of species' potential to occur based on the surrounding urban land uses and significant change in habitat types outside of the project site vicinity (e.g., mountain and desert habitats that are not relevant to the project site). 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 project site. 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).

Queries of the CNDBB, CNPS online Inventory of Rare and Endangered Vascular Plants of California, and the USFWS IPaC provided records for 39 special-status plant species and 48 special-status wildlife species (Attachments 4 and 5).

Special-Status Plant Species

Rincon evaluated 39 special-status plant species tracked by CNDDB, CNPS, and the USFWS IPaC for their potential to occur (Attachments 4 and 5). 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 39 species evaluated, white rabbit-tobacco (*Pseudognaphalium leucocephalum*) (CRPR 2B.2), Parry's spineflower (*Chorizanthe parryi* var. *parryi*) (CRPR 1B.1), and San Fernando Valley spineflower (*Chorizanthe parryi* var. *fernandina*) (State Endangered [SE], CRPR 1B.1) have moderate potential to occur within the Study Area; slender-horned spineflower (*Dodecahema leptoceras*) (Federally Endangered [FE]/SE, CRPR 1B.1) has low potential to occur in the Study Area. No special-status plant species were detected within the Study Area during the reconnaissance surveys.

White rabbit-tobacco is a perennial herb in the sunflower (*Asteraceae*) family that blooms between August and November. The species is generally found in chaparral, coastal scrub, and riparian woodland habitats, and typically grows in sandy or gravelly soils. This pistillate flower plant has linear leaves approximately 3 to 7 centimeters (cm) long. The fruit is a single-seeded achene (Jepson Flora Project 2025). Potentially suitable habitat for white rabbit-tobacco occurs in the Study Area, including coastal scrub (i.e., California sagebrush – California buckwheat scrub) within the banks of Castaic Creek and riparian woodland (i.e., Fremont cottonwood woodland, sandbar willow thickets, and tamarisk thickets). Therefore, this species has a moderate potential to occur in the Study Area.

Parry's spineflower is an annual herb in the buckwheat (*Polygonaceae*) family that blooms between April and June. This species is generally found in openings in chaparral, coastal scrub, and grassland habitats, and typically grows in sandy soils. This basal rosette plant has linear basal leaves approximately 0.5 to 4 (cm) long. The flowers are tube-shaped and composed of three petals, each of which are between 2 to 3 millimeters (mm) in size. The petals are green to white. The fruit is a single-seeded achene (Jepson Flora Project 2025). Potentially suitable scrub (i.e., brittle bush scrub and California sagebrush – California buckwheat scrub) habitats occur primarily along the northern alignment and adjacent to a small portion of the eastern alignment of the proposed water pipeline within the Study Area. Therefore, Parry's spineflower has a moderate potential to occur in the Study Area.

San Fernando Valley spineflower is an annual herb in the buckwheat family that blooms between April and July. This species is generally found in washes and on hills or mesas, and grows in a variety of substrates, including sandy soils and loamy or silty clay loam soils. This basal rosette plant has linear basal leaves approximately 0.5 to 4 cm long. The flowers are tube-shaped and composed of three petals, each of which are between 2 to 3 mm in size. The petals are green to white. The fruit is a single-seeded achene (Jepson Flora Project 2025). Potentially suitable scrub (i.e., brittle bush scrub and California buckwheat scrub) habitats occur primarily along the northern alignment and adjacent to a small portion of the eastern alignment of the proposed water pipeline within the Study Area. There are multiple CNDDB records within a 5-mile radius of the Study Area, with the closest being approximately 0.2 miles from the Study Area in Newhall Ranch. Therefore, San Fernando Valley spineflower has a moderate potential to occur in the Study Area.

Slender-horned spineflower is an annual herb in the buckwheat family that blooms between April and June. Slender-horned spineflower commonly occurs in alluvial fans, floodplains, stream terraces, washes, and associated benches, from 700 to 2,500 feet amsl. It grows in riverbed alluvium high in silt and low in nutrients and organic matter; in silt-filled, shallow depressions on relatively flat surfaces surrounded by scattered, river-rounded, cobble-sized rocks. The species is generally found in open areas among alluvial fan scrub, often associated with other spineflower species, and in low density of exotic grasses and other introduced weedy species (Allen 1996). Potentially suitable habitat for

slender-horned spineflower occurs in the Study Area, including coastal scrub (i.e., California sagebrush – California buckwheat scrub) within the banks of Castaic Creek, particularly within the lower terraces above the low-flow channel of the creek. Although suitable habitat present in the Study Area, the closest CNDDB record is located approximately 5 miles away and indicates that the species is possibly extirpated from the region. Therefore, this species has a low potential to occur in the Study Area.

None of the remaining 35 special-status plant species identified in the CNDDB, CNPS, or USFWS IPaC database queries for the project have a moderate or high potential to occur in the Study Area 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 reconnaissance field surveys.

Ground disturbance from project construction could result in damage to or removal of special-status plants, including white rabbit-tobacco, Parry's spineflower, San Fernando Valley spineflower, and slender-horned spineflower, if present in the disturbance footprint. Specifically, the Study Area contains potentially suitable habitat for white rabbit-tobacco within the Fremont cottonwood woodland, sandbar willow thickets, tamarisk thickets, and California sagebrush – California buckwheat scrub vegetation communities, slender-horned spineflower within the banks of Castaic Creek in the California sagebrush – California buckwheat scrub vegetation community, and Parry's spineflower and San Fernando Valley spineflower within the brittle bush scrub and California sagebrush – California buckwheat scrub and vegetation communities. If temporary impacts to brittle bush scrub, California sagebrush – California buckwheat scrub, Fremont cottonwood woodland, sandbar willow thickets, or tamarisk thickets vegetation communities occur during project construction, direct impacts could occur through injury or mortality to individuals by heavy equipment during construction. Indirect impacts could result from habitat modifications, such as the introduction of invasive species disseminated from construction equipment, contamination of soils, or habitat degradation due to accidental fuel spills during construction. Given the proposed construction methods and potential temporary impacts related to construction activities (including site disturbances, staging areas, and equipment/vehicle access), white rabbit-tobacco, Parry's spineflower, San Fernando Valley spineflower, and slender-horned spineflower, if present, could be removed, damaged, or disturbed by project construction.

Therefore, the project could potentially result in substantial adverse effects, either directly or indirectly through habitat modifications, on special-status plants if project construction occurs within occupied habitat for special-status plant species with potential to occur in the study area, and impacts could be significant. Implementation of AMMs BIO-1 through BIO-3 would reduce potential temporary impacts to special-status plant species to a less-than-significant level by minimizing the risk of vehicle-related damage through reduced vehicle speeds, preventing the spread of invasive species that could complete with special-status species for local resources, and increasing worker awareness and avoidance of special-status plant species through WEAP training. In addition, implementation of AMMs BIO-4 through BIO-7 are recommended to further reduce potential impacts to special-status plant species to a less-than-significant level. These measures involve implementation of pre-project special-status plant surveys, avoidance measures, a special-status plant species mitigation and monitoring plan (including compensatory mitigation, if applicable), and invasive plant species control.

AMM BIO-1 General Best Management Practices

SCV Water should require the project construction contractor(s) and their personnel to adhere to the following general BMPs during project construction:

- Project-related vehicles should observe a 10-mile-per-hour speed limit within the unpaved limits of construction.

- All open trenches or excavations should be fenced and/or sloped to prevent entrapment of wildlife species.
- 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 project site.
- No deliberate feeding of wildlife should be allowed.
- No pets should be allowed on the project site.
- No firearms should be allowed on the project site.
- Vehicle or equipment maintenance should be performed in designated staging areas.
- Access to the construction area outside of established work hours for the project should be prohibited.
- If construction must occur at night (i.e., between dusk and dawn), all lighting should be shielded and directed downward to minimize the potential for glare or spillover.
- During construction, heavy equipment should be operated in accordance with standard BMPs. All equipment used on-site should be properly maintained to avoid leaks of oil, fuel, or residues. Provisions should be in place to remediate accidental spills.
- 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 biological monitor (recommended under AMM BIO-9). The construction foreman or biological monitor should immediately notify SCV Water.

AMM BIO-2 Work Limit Delineation

SCV Water should clearly identify work area limits on project design and construction plans and should require its project construction contractor(s) to delineate and clearly mark approved construction work area limits with flagging or temporary orange construction fencing in the field prior to initial ground disturbing activities (including, but not limited to, site preparation, staging and mobilization, vegetation clearance/mowing/trimming, grading, and excavation). The marked boundaries should be maintained for the duration of project construction activities in each work area and should be clearly visible to personnel on foot and by heavy equipment operators. Fencing or other barriers should be placed on the impact side of the work area limit (i.e., within the project site boundaries) to reduce the potential for encroachment and additional vegetation loss within adjacent open space. Fencing should be installed pursuant to the approved construction and grading plans. Prior to initial ground disturbing activities (including, but not limited to, site preparation, staging and mobilization, vegetation clearance/mowing/trimming, grading, and excavation), the biological monitor (recommended under AMM BIO-9) should verify the limits of construction have been properly staked and are readily identifiable. Employees should strictly limit their activities and vehicles to the designated project site, staging areas, and routes of travel. Intrusion by unauthorized vehicles outside of construction limits should be prohibited, with control exercised by an on-site foreman. All temporary fencing should be removed only after the conclusion of all grading, clearing, and construction activities at each work area along the project alignment.

AMM BIO-3 Construction Worker Environmental Awareness Program

SCV Water should retain a qualified biologist to conduct a pre-project WEAP training for all personnel working at the project site. The WEAP should aid workers in recognizing special-status species and regulated biological resources known to occur (e.g., special-status species, sensitive natural

communities, jurisdictional waters or wetlands) or potentially occurring on the project site (as determined by the qualified biologist identified in AMM BIO-9 and as confirmed by the results of the focused surveys conducted pursuant to AMM BIO-8 and BIO-13) and focus on conditions and protocols necessary to avoid and minimize potential impacts to biological resources. All personnel associated with project construction should attend the WEAP training prior to initiation of project construction activities (including, but not limited to, site preparation, staging and mobilization, vegetation clearance/mowing/trimming, grading, and excavation). The training should include information about the special-status species potentially occurring within the project site, 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 and measures required to avoid and minimize impacts 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 WEAP and understand the information presented to them. The signed form should be provided to SCV Water as documentation of training completion. The crew foreman should be responsible for ensuring crew members adhere to the guidelines and restrictions designed to avoid impacts to special-status species and other regulated biological resources. If new personnel are brought onto the project after completion of the initial WEAP training, the training should be conducted for all new personnel before they can participate in construction activities.

AMM BIO-4 Special-Status Plant Surveys

SCV Water should retain a qualified biologist to conduct surveys for special-status plants prior to any vegetation removal, grubbing, or other construction activity within the Fremont cottonwood woodland, sandbar willow thickets, tamarisk thickets, and California sagebrush – California buckwheat scrub vegetation communities within the project footprint in Castaic Creek, as well as the brittle bush scrub vegetation community on the eastern boundary of the Study Area. The surveys should be floristic in nature and seasonally timed to coincide with the blooming periods of white rabbit-tobacco, Parry's spineflower, San Fernando Valley spineflower, and slender-horned spineflower. The surveys should be conducted during the relevant target species' blooming periods no more than two years prior to construction. Special-status plant species identified on site should be mapped onto a site-specific aerial photograph. Surveys should be conducted in accordance with the most current CDFW and CNPS protocols (CNPS 2018). A report of the survey results should be submitted to SCV Water for review and approval.

AMM BIO-5 Special-Status Plant Avoidance Measures

If special-status plants are detected during special-status plant surveys conducted pursuant to AMM BIO-4, the observed special-status plants should be avoided through project design where feasible. An avoidance buffer of at least 50 feet (15 meters), or other distance as approved by a qualified biologist, should be established around any identified special-status plants that can be feasibly avoided, and the avoidance buffer should be delineated with bright orange protective fencing. The avoidance buffers should be maintained for the duration of project construction activities in each work area and should be removed only after the conclusion of all grading, clearing, and construction activities. If vegetation clearing within 50 feet (15 meters) of any identified special-status plant cannot be avoided, the vegetation clearing should be conducted by hand by the project construction contractor(s), if practicable.

AMM BIO-6 Special-Status Plant Mitigation and Monitoring Plan

If special-status plants are detected during special-status plant surveys conducted pursuant to AMM BIO-4 and would be impacted by project construction, SCV Water should retain a qualified restoration specialist to develop a Special-status Plant Mitigation and Monitoring Plan that provides for the on-site or off-site replacement of the species impacted by the project. The Special-status Plant Mitigation and Monitoring Plan should specify the following:

- A summary of impacts;
- The location of the mitigation site;
- Methods for harvesting seeds or salvaging and transplanting individuals to be impacted;
- Measures for propagating plants or transferring living plants from the salvage site to the mitigation site;
- Site preparation procedures for the mitigation site;
- A schedule and action plan to maintain and monitor the mitigation site;
- Criteria and performance standards by which to measure the success of the mitigation, including replacement of impacted plants at a minimum 1:1 ratio;
- Measures to exclude unauthorized entry into the mitigation areas; and
- Contingency measures such as replanting or weeding if mitigation efforts are not successful.

The performance standards for the Special-status Plant Mitigation and Monitoring Plan should be, at a minimum, the following:

- Within five years after introducing the plants to the mitigation site, the number of established, reproductive plants should equal the number impacted during project construction; and
- Restoration should be considered successful after the success criteria have been met for a period of at least two years without any maintenance or remediation activities other than invasive species control.

The Special-status Plant Mitigation and Monitoring Plan should be initiated prior to project construction (including, but not limited to, site preparation, staging and mobilization, vegetation clearance/mowing/trimming, grading, and excavation) and should be implemented over a five-year period. The plan may also be combined with the Habitat Revegetation, Restoration, and Monitoring Program described under AMM BIO-16.

Annual reports discussing the implementation and management of the Special-status Plant Mitigation and Monitoring Plan should be submitted to SCV Water for review and approval. Five years after the start of the mitigation project, a final report should be submitted to SCV Water for review and approval and should, at a minimum, discuss the implementation and management of the Special-status Plant Mitigation and Monitoring Plan over the five-year period and indicate whether the Special-status Plant Mitigation and Monitoring Plan has been successful based on the established performance standards. Should the success criteria be met before Year Five, the mitigation effort can be deemed complete.

AMM BIO-7 Invasive Plant Species Control Measures

SCV Water should require its project construction contractor(s) and their construction personnel to ensure equipment is free of invasive plant seeds, propagules, and any material which may contain them (e.g., soil). For purposes of this measure, invasive plant species should include all species with a Cal-IPC rating of moderate or high. Prior to entering the project site, equipment should be inspected to confirm it is free of mud, dirt, and debris. Tire track stations should be installed at project site entrances and exits. Staging areas and access routes should avoid weed infestations,

and infestations within the work area(s) should be flagged and avoided to the maximum extent feasible. Only certified weed-free materials (e.g., fiber rolls, straw, and fill) should be used for the project.

Special-Status Wildlife Species

Rincon evaluated 48 special-status wildlife species tracked by the CNDDB, CNPS, and USFWS IPaC for their potential to occur (Attachments 4 and 5). The assessment is based on the presence of suitable habitat as identified during the survey and existing knowledge of species occurrences and distributions in the region. Of the 48 species evaluated, burrowing owl (*Athene cunicularia*, State Candidate, SSC), Swainson's hawk (*Buteo swainsoni*, State Threatened [ST]), California condor (*Gymnogyps californianus*, FE, SE), and coastal California gnatcatcher (*Polioptila californica californica*, FT, SSC) have low potential to occur in the Study Area; Crotch's bumble bee (*Bombus crotchii*, State Candidate), unarmored threespine stickleback (*Gasterosteus aculeatus williamsoni*, FE, SE), arroyo chub (*Gila orcuttii*, SSC), Santa Ana sucker (*Pantosteus santaanae*, FT, SSC), loggerhead shrike (*Lanius ludovicianus*, CDFW SSC), and least Bell's vireo (*Vireo bellii pusillus*, FE, SE) have moderate potential to occur in the Study Area; coastal whiptail (*Aspidoscelis tigris stejnegeri*, CDFW SSC), coast horned lizard (*Phrynosoma* blainvillii, CDFW SSC), and Cooper's hawk (*Astur cooperii*, CDFW Watch List) have high potential to occur in the Study Area (Table 2).

Table 2 Special-status Wildlife Species with Potential to Occur in the Study Area

Species	Status	Low Potential	Moderate Potential	High Potential
Invertebrates				
Crotch's bumble bee (*Bombus crotchii*)	SCE		X	
Fish				
unarmored threespine stickleback (*Gasterosteus aculeatus williamsoni*)	FE, SE, FP		X	
arroyo chub (*Gila orcuttii*)	SSC		X	
Santa Ana sucker (*Pantosteus santaanae*)	FT, SSC		X	
Reptiles				
coastal whiptail (*Aspidoscelis tigris stejnegeri*)	SSC			X
coast horned lizard (*Phrynosoma blainvillii*)	SSC			X
Birds				
Cooper's hawk (*Astur cooperiil*)	WL			X (n,f)
burrowing owl (*Athene cunicularia*)	SCE, SSC	X (n,f)		
Swainson's hawk (*Buteo swainsoni*)	ST	X (n,f)		
California condor (*Gymnogyps californianus*)	FE, SE, FP	X (f)		
loggerhead shrike (*Lanius ludovicianus)*	SCC		X (n,f)	
coastal California gnatcatcher (*Polioptila californica californica*)	FT, SSC	X (n,f)		
least Bell's vireo (*Vireo bellii pusillus*)	FE, SE		X (n,f)	

SCE = State Candidate Endangered; FCS = Federal Candidate Species; FPT = Federally Proposed Threatened; FSS = United States Forest Service Sensitive; SSC = CDFW Species of Special Concern; FE = Federally Endangered; FT = Federally Threatened; WL = CDFW Watch List; FP = State Fully Protected; ST = State Threatened; SE = State Endangered BGEPA = Bald and Golden Eagle Protection Act; G1/S1

Species	Status	Low Potential	Moderate Potential	High Potential

CDFW Special Animal = critically imperiled globally or statewide (NatureServe 2025) and included in the CDFW Special Animals list (CDFW 2025c)

n = nesting potential, r = roosting potential, f = foraging potential

Below is a discussion of all special-status wildlife species observed or with a moderate or high potential to occur in the Study Area. In addition, this section includes a discussion of any federal or State-listed species with low potential to occur. The remaining special-status wildlife species not discussed below have either a low potential to occur or are not expected to occur due to limited habitat components meeting the species' requirements and/or because the majority of habitat on and adjacent to the Study Area is unsuitable or of very poor quality.

Invertebrates

Crotch's bumble bee (*Bombus crotchii*) is a state candidate endangered (SCE) species that occurs primarily in California but is known to occur southwest Nevada near the state border (Xerces Society 2025). It inhabits a variety of habitats including open grasslands, shrublands, chaparral, creosote scrub, and semi-urban settings. Floral associations for foraging include California cleome or bladderpod (*Peritoma arborea*), larkspurs (*Delphinium* spp.), yerba (*Eriodictyon* spp.), phacelia, and blue curls (*Trichostema* spp.). Food plants include milkweeds (*Asclepias* spp.), chaenactis (*Chaenactis* spp.), lupines (*Lupinus* spp.), burclovers (*Medicago* spp.) and sages (*Salvia* spp.) (Williams et al. 2014). Like most bumblebees, suitable nesting substrates for Crotch's include rodent holes/tunnels, rock piles, bunch grasses, and leaf piles (Xerces Society 2012).

In the Study Area, Crotch's bumble bee has a moderate potential to occur in suitable foraging and potential habitats, including California sagebrush - California buckwheat scrub and brittle bush scrub. The presence of these habitats, including burrows, stick piles, and sources of nectar from plant species such as sages and buckwheat were all observed within the Study Area. Historical CNDDB occurrences were recorded within a five-mile radius of the Study Area, including areas near Wickham Canyon and Castaic along the Interstate-5 Highway (CDFW 2025a, 2025b).

Project construction activities occurring within the California sagebrush - California buckwheat scrub and brittle bush scrub vegetation communities have the potential to result in temporary impacts to these vegetation communities, which have the potential to result in direct impacts (through injury and mortality from initial ground disturbance and vegetation removal) and indirect impacts (through construction noise, dust, and other human disturbances) to Crotch's bumble bee. If, at the commencement of project construction, Crotch's bumble bee is still considered a CESA candidate species or has been listed as threatened or endangered under CESA, the project would potentially result in substantial adverse effects, either directly or through habitat modifications, to Crotch's bumble bee, and impacts would be potentially significant.

Implementation of AMM BIO-8 and BIO-9, which involves pre-construction surveys, avoidance buffers, compensatory mitigation, and biological construction monitoring is recommended to reduce project impacts to a less-than-significant level.

AMM BIO-8 Crotch's Bumble Bee Avoidance, Minimization, and Compensation Measures

If Crotch's bumble bee is still considered a CESA candidate species or has been listed as threatened or endangered under CESA at the time project construction commences, SCV Water should implement the following avoidance, minimization, and compensation measures for this species specifically within suitable habitat for the species, including California sagebrush - California buckwheat scrub and brittle bush scrub vegetation communities:

- A qualified biologist should conduct a protocol-level presence/absence survey for Crotch's bumble bee in areas of the project site with suitable habitat during the peak active period for Crotch's bumble bee (highest detection probability) that occurs prior to the start of the project's initial ground disturbing activities (including, but not limited to, site preparation, staging and mobilization, vegetation clearance/mowing/trimming, grading, and excavation). The peak active period for Crotch's bumble bee at the project location is anticipated to be April through June given the expected desiccation of Crotch's bumble bee floral resources within the project site by mid-summer, though this timing could depend on annual climatic factors. Survey methodology should be based on Section 4.1.1 of CDFW's *Survey Considerations for CESA Candidate Bumble Bee Species* (CDFW 2023), or the most current CDFW guidance in effect at the time. Inaccessible areas outside of the project site can be surveyed using binoculars from the project edge or from public roads. The timing of the presence/absence survey can be phased with project build-out, if feasible.
- If construction starts one year or more after the conclusion of the surveys described above, SCV Water should consult with CDFW as to whether additional surveys are required and should retain a qualified biologist to conduct additional surveys if recommended by CDFW.
- If Crotch's bumble bee is present, the qualified biologist should identify the location of nests in or adjacent to the project site to the extent feasible. Inaccessible land adjacent to the project site should be observed using binoculars. If nests are identified within the project site or immediately adjacent to the site, a qualified biologist should determine the need to establish a no-disturbance buffer around the nest, where feasible, to reduce the risk of disturbance or accidental take. The buffer should provide at least 50 feet (15 meters) of clearance around active nest entrances. If project activities may result in disturbance or potential take, the qualified biologist, in coordination with CDFW, should expand the buffer zone as necessary to prevent disturbance or take. If establishment of a no-disturbance buffer is feasible, construction activities should not occur within the buffer until a qualified biologist determines the colony is no longer active (i.e., no Crotch's bumble bees are seen flying in or out of the nest for three consecutive days, indicating the colony has completed its nesting season and the next season's queens have dispersed from the colony). Once the nest has been determined to be inactive, construction activities within the no-disturbance buffer(s) should be allowed to resume. Otherwise, the no-disturbance buffer should be maintained for the duration of project construction activities in each work area and should be removed only after the conclusion of all grading, clearing, and construction activities at each work area along the project alignment.
- If establishment of a no-disturbance buffer and/or avoidance of the nest is not feasible, the qualified biologist should consult with CDFW regarding potential encroachment into the no-disturbance buffer and for project activities that may result in take of Crotch's bumble bee.
- If Crotch's bumble bee is determined to be present on the project site, floral resources associated with the species that will be removed or damaged by project activities in the areas of the project site where Crotch's bumble bee is detected and documented should be replaced at a 1:1 ratio within or near the project site on property owned by SCV Water. Planning and implementation of suitable habitat replacement may be integrated into the Habitat Revegetation, Restoration, and Monitoring Program described under AMM BIO-16.

AMM BIO-9 Qualified Biological Monitor

SCV Water should retain a qualified biological monitor with relevant experience with the taxa and species in the Los Angeles region and mountain foothills for which pre-construction surveys, monitoring, or other support is required during project construction (potentially including, but not limited to, rare plants, raptors, nesting birds, and those special-status species with potential to occur

based on the results of pre-activity and focused surveys conducted prior to project initiation in accordance with AMMs BIO-8 and BIO-13). The qualified biologist role may be satisfied by one or more individuals depending on qualifications and experience with one or more species and taxa. The qualified biologist should be present during initial ground disturbance or vegetation removal activities and should have the authority to temporarily stop work if one or more special-status species are observed that may be impacted by project activities. The biologist should relocate special-status amphibian, reptile, or mammals present within anticipated project impact areas to suitable undisturbed habitat outside the areas directly and indirectly affected by construction activities. The biologist should hold the requisite incidental take permits or authorizations for the capture and handling of the species, if applicable.

The biologist should recommend measures to ensure compliance with avoidance and minimization measures, applicable permit conditions, and conditions required for observed special-status species. When the biologist is present on site, they should be responsible for:

- Verifying project compliance with environmental AMMs and requirements;
- Establishing lines of communication and reporting methods in coordination with the construction crew foreman and SCV Water;
- Conducting pre-construction clearance sweeps for special-status species and nesting birds, as needed;
- Documenting special-status species observations;
- Recommending preventative or protective actions to avoid and minimize potential project impacts to regulated biological resources where feasible;
- Recommending actions to be taken in the event of non-compliance; and
- Daily and weekly reporting of compliance.

Monitoring logs documenting the above should be submitted to SCV Water for review and approval for the duration of project construction.

Fish

Unarmored threespine stickleback (*Gasterosteus aculeatus williamsoni*; UTS) is a state and federally listed endangered species and a state fully protected species. UTS are scaleless, freshwater fish that grow up to five centimeters (two inches) long and primarily feed on bottom dwelling insects, crustaceans, and snails. UTS have a very limited distribution, with the southern California population represented in only three drainages; Upper Santa Clara River (extremely limited), Bouquet Creek (extremely limited) and Soledad Canyon Creek (possibly extirpated). Potentially suitable aquatic habitat occurs in the low-flow channel of Castaic Creek near its confluence with the Santa Clara River, including presence of aquatic vegetation (e.g., tall flatsedge) and slow-moving water. The closest CNDDB record is located approximately 0.1 mile south of the Study Area in the Santa Clara River and was recorded 18 years ago. However, because there is no permanent water flow in the stretch of the creek within the Study Area, this species would only occupy Castaic Creek after a large storm event, and therefore has a moderate potential to occur in the Study Area.

The arroyo chub (*Gila orcutti*) is a CDFW SSC native to coastal drainages of Los Angeles, Orange, Riverside, and San Diego counties in California. Considered true omnivores, arroyo chub eat algae, insects, and small crustaceans (Moyle 2002). Spawning generally occurs in June and July, but the eggs of females ripen in small batches, allowing spawning to occur anywhere from February through August (Tres 1992). Typically, arroyo chub are found in slow-moving sections of cool to warm (50°F to 78.8°F) streams dominated by sand and silt substrates. Potentially suitable aquatic habitat occurs in the low-

flow channel of Castaic Creek, including sandy substrate and presence of algae. The closest CNDDB record is located approximately 0.1 mile south of the Study Area in the Santa Clara River and was recorded 14 years ago. However, because there is no permanent water flow in the stretch of the creek within the Study Area, this species would only occupy Castaic Creek after a large storm event, and therefore has a moderate potential to occur in the Study Area.

The Santa Ana sucker (*Catostomus santaanae*) is a federally threatened fish species that historically occupied upper watershed areas of the San Gabriel and San Bernardino Mountains down to the Pacific Ocean. At present, the Santa Ana sucker is found in three disjunct populations that occupy portions of the San Gabriel, Los Angeles, and Santa Ana River basins in southern California. Santa Ana suckers rely on perennial flows with suitable water quality and substrate to support breeding, feeding, and sheltering. Over different life history stages, suckers depend on a variety of coarse substrate types, such as gravel, cobble, or mixtures of gravel or cobble with sand, and a variety of riverine features, such as shallow riffles and deeper runs and pools (USFWS 2025d). Potentially suitable aquatic habitat occurs in the low-flow channel of Castaic Creek, including presence of aquatic vegetation (e.g., tall flatsedge) and slow-moving water. Additionally, the closest CNDDB record overlaps the northwestern portion of the Study Area along the lower reach of Castaic Creek and was documented 18 years ago. However, because there is no permanent water flow in the stretch of the creek within the Study Area, this species would only occupy Castaic Creek after a large storm event, and therefore has a moderate potential to occur in the Study Area.

There are documented occurrences of unarmored threespine stickleback, arroyo chub, and Santa Ana sucker within a nine-quadrangle search area of the Study Area. These species have the potential to occur in the low-flow channel of Castaic Creek after large storm events. The unnamed drainage does not provide suitable aquatic habitat for fish because its water originates from a culvert, and the drainage itself is highly vegetated and is physically isolated by the access road with no passage to Castaic Creek. Temporary impacts to Castaic Creek could occur during water pipeline installation. This could result in direct impacts to unarmored threespine stickleback, arroyo chub, and Santa Ana sucker via direct strikes to individuals by construction equipment. Indirect impacts to these species could occur if project construction occurs when surface and/or standing water is present within Castaic Creek, and construction spoils or stormwater runoff is deposited into Castaic Creek. This could result in effects such as increased turbidity, altered pH, and/or decreased dissolved oxygen levels, which could harm special-status fish species. Additionally, potentially significant indirect impacts to special-status fish species may occur as a result of groundwater extraction via the existing Wells E-14, E-15, E-16, and E-17. Implementation of AMM BIO-1 would require implementation of standard BMPs that would avoid or minimize construction leaks or spills, implementation of AMM BIO-10 would restrict the construction window to when surface water is absent, and implementation of AMM BIO-11 would ensure sustainable pumping of groundwater from Wells E-14, E-15, E-16, and E-17, which would avoid impacts to GDEs that may support unarmored threespine stickleback, arroyo chub, and Santa Ana sucker. With implementation of AMMs BIO-1, BIO-10, and BIO-11, impacts to unarmored threespine stickleback, arroyo chub, and Santa Ana sucker would be reduced to less-than-significant levels.

AMM BIO-10 Dry Season Construction

To eliminate the potential for impacts to the unarmored threespine stickleback, arroyo chub, and Santa Ana sucker, and to minimize impacts to wildlife movement corridors, construction within the low-flow channel of the Castaic Creek should be restricted to the dry season. This period generally occurs from May 1 to September 15; however, construction can occur outside this window provided no flowing or ponded water associated with Castaic Creek is present within 50 feet of any work area. In addition, surface elevations within Castaic Creek and Unnamed Drainage should be returned to preconstruction conditions prior to the end of the dry season.

AMM BIO-11 Groundwater Pumping Regime Management

SCV Water should establish a groundwater pumping regime for Wells E-14, E-15, E-16, and E-17 in accordance with the sustainable management criteria for depletion of interconnected surface waters outlined in the most recently adopted iteration of the Santa Clara River Valley East Groundwater Subbasin GSP. SCV Water should monitor groundwater levels utilizing the monitoring well previously installed within the potential GDE area that may be affected by the proposed project (currently identified as GDE-D in the GSP) to monitor groundwater levels at this location. Should the trigger level outlined in the GSP for GDE-D (currently identified as "Santa Clara River Below Mouth of Castaic Creek" in the GSP) exceed at the monitoring location, SCV Water should implement an evaluation program that includes reviewing whether the low water levels and water level trends are caused by groundwater extraction at Wells E-14, E-15, E-16, and/or E-17 and whether the undesirable results to GDEs outlined in the GSP arising from groundwater extraction are anticipated to occur. If significant and unreasonable effects are anticipated from groundwater extraction, SCV Water should implement the necessary management actions in a timely manner to resolve the exceedance of the trigger level for the GDE area. Management actions may include but are not limited to shifting pumping to another location, reducing or halting pumping at Wells E-14, E-15, E-16, and/or E-17, and/or increasing the quantity of imported water.

Reptiles

Coastal whiptail (*Aspidoscelis tigris stejnegeri*) is an SSC that is found in deserts and semi-arid areas with sparse vegetation within Ventura, Los Angeles, Riverside and San Diego counties. The species is commonly found in a variety of habitats including valley-foothill hardwood, valley-foothill hardwood-conifer, valley-foothill riparian, mixed conifer, pine-juniper, chamise-redshank chaparral, mixed chaparral, desert scrub, desert wash, alkali scrub, and annual grasslands (Zeiner 1988). Several occurrences have been documented within five miles of the Study Area, the closest overlapping the Study Area (CDFW 2025a). California sagebrush – California buckwheat scrub, brittle bush scrub, and Fremont cottonwood woodland in the northern and eastern portions of the Study Area provide potentially suitable habitat for this species; therefore, coastal whiptail has a high potential to occur.

Coast horned lizard (*Phrynosoma blainvillii*) is a CDFW SSC that occurs in grasslands, coniferous forests, woodlands, and chaparral with open areas and patches of loose soil. Horned lizard diets are specialized and consist almost exclusively of native ants (greater than 94 percent by prey item) (Suarez et al. 2000). This species is most commonly associated with open areas of sandy soil and low vegetation, often found near ant hills for feeding. The species ranges from the Baja California border west of the deserts and the Sierra Nevada, north to the Bay Area, and inland as far north as Shasta Reservoir (Nafis 2025). Coast horned lizard has a high potential to occur in the northern portion of the Study Area, specifically within the Fremont cottonwood woodland and California sagebrush – California buckwheat scrub vegetation communities. Several recent CNDDB occurrences were recorded within five miles of the Study Area, with the closest overlapping the Study Area (CDFW 2025a and 2025b). The species was not observed during field reconnaissance surveys.

Coastal whiptail (SCC) and coast horned lizard (SSC) both have high potential to occur in the Study Area, specifically within the California sagebrush – California buckwheat scrub, brittle bush scrub, and Fremont cottonwood woodland vegetation communities. Project construction activities have potential to result in temporary impacts to suitable habitat for these species during water pipeline installation. Project construction could result in direct impacts (through injury and mortality) and indirect impacts (through construction noise, dust, and other human disturbances) to these species if and where they are present within suitable habitat of the Study Area. Therefore, project construction would potentially result in substantial adverse effects, either directly or indirectly, to special-status reptiles, and impacts would be potentially significant. Implementation of AMMs BIO-1 through BIO-3, as well as AMMs BIO-

9 and BIO-12, is recommended to reduce these impacts to less-than-significant levels. These AMMs include implementation of BMPs to discourage wildlife from entering the project site, work limit delineation to avoid injury or mortality of wildlife in undisturbed and natural areas, a WEAP training to increase worker's awareness of special-status species, pre-activity surveys for special-status wildlife species, and biological construction monitoring.

AMM BIO-12 Special-status Reptile Pre-activity Survey

SCV Water should retain a qualified biologist to conduct a pre-activity clearance survey for special-status reptile species no more than seven days prior to commencement of ground or vegetation disturbing activities within the California sagebrush – California buckwheat scrub, brittle bush scrub, and Fremont cottonwood woodland vegetation communities. The pre-activity survey should utilize methods to detect special-status reptile species with potential to occur at the site. Prior to commencement of project construction activities, the methods and results of the surveys and, if a special-status reptile species is found, recommended species-specific avoidance and/or relocation measures, should be submitted in a report for review and approval by SCV Water, and implemented during construction activities. These measures may include, but would not be limited to, the qualified biologist conducting a sweep of the proposed impact areas before the daily start of construction in each work area in the locations where special-status reptile individuals were observed during the pre-construction survey, or have moderate or high potential to occur based on habitat suitability as determined by the qualified biologist, and avoidance of work in the sweep areas until the qualified biologist confirms special-status reptiles are not present, or if present, until they have moved out of harm's on their own, as determined by the qualified biologist, or have been moved out of harm's way to adjacent suitable habitat by the qualified biologist.

Birds

Cooper's hawk (*Accipiter cooperii*) is a CDFW WL species that typically inhabits oak woodlands, deciduous riparian areas, and forest edges but can also be found in urban parks and neighborhoods where trees are present. During the winter months, Cooper's hawks utilize a wider variety of habitats for foraging including open fields and grasslands. Nests are constructed 25 to 50 feet high in a variety of tree species, including pines, oaks, beeches, and spruces. Nests are made of sticks and are often lined with bark flakes and green twigs. Cooper's hawks are aerial predators that feed primarily on medium-sized birds. In addition to preying on adult birds, Cooper's hawks will also occasionally rob nests and hunt rabbits, rodents, and bats (Cornell Lab of Ornithology 2025). Suitable nesting and foraging habitat occurs within the Fremont cottonwood woodland vegetation community in the northern portion of the Study Area. The presence of preferred prey animals, such as small songbirds and rodents, were observed throughout the various habitats within the Study Area. Cooper's hawk has a high potential to occur within the Study Area, particularly within the Fremont cottonwood woodland vegetation community.

Burrowing owl (*Athene cunicularia*), a SCE and CDFW SSC species, is a yearlong resident of open, dry grasslands, sage scrub, agricultural, and desert habitats and in grass, forb, and open shrub stages of pinyon-juniper and ponderosa pine habitats. The species' population has markedly decreased in recent decades. Burrowing owls often use rodent and other small mammal burrows for roosting and nesting, commonly using ground squirrel burrows. Two CNDDB records from 2007 are within five miles of the Study Area (CDFW 2025a and 2025b). Low quality foraging and nesting opportunities exist along the margins of the agricultural land within the Study Area. Additionally, no potential burrowing owl burrows were observed, and limited prey species associated with the agricultural land cover type (e.g., California ground squirrel) were detected during field reconnaissance surveys. Therefore, burrowing owl has a low potential to occur within the Study Area.

Swainson's hawk (*Buteo swainsoni*) is a ST species found in grasslands with scattered trees, juniper-sage flats, riparian areas, savannahs, and agricultural or ranch lands with groves or lines of trees. They require adjacent suitable foraging areas such as grasslands or alfalfa or grain fields supporting rodent populations. The species breeds across the western United States from Kansas to California. Swainson's hawk has a low potential to nest within the Fremont cottonwood woodland vegetation community and a low potential to forage within the upland mustards, brittle bush scrub, California sagebrush – California buckwheat scrub vegetation communities, as well as the agriculture land cover type. Limited nesting and foraging habitat is present within the Study Area, and only one historic CNDDB record is documented from 1898, which indicates that the species is considered possibly extirpated from the region. Swainson's hawks were not detected during field reconnaissance surveys.

California condor (*Gymnogyps californianus*) is a FE, SE, and CDFW FP species that inhabits open landscapes, including grasslands, shrublands, and rugged terrain with suitable updrafts for soaring. The species typically nests in rocky cliffs, caves, or large crevices in remote mountainous areas, often far from human disturbance. The Study Area does not contain suitable cliff or cave features and therefore provides no nesting potential for the California condor. While condors may travel long distances to forage on large carcasses, the Study Area provides limited suitable foraging opportunities, specifically in the grassland (i.e., upland mustard vegetation communities), coastal scrub (i.e., California sagebrush – California buckwheat scrub), and riparian woodland (i.e., Fremont cottonwood woodland). Habitats within the Study Area only provide opportunistic foraging opportunities rather than preferred habitat; therefore, the California condor has a low potential to forage within the Study Area on an infrequent basis. Additionally, there are no CNDDB occurrences of this species within five miles of the Study Area and the species was not detected during field reconnaissance surveys.

Loggerhead shrike (*Lanius ludovicianus*) is a CDFW SSC found throughout the United States and Mexico. It prefers open habitats such as broken woodlands, savannah, pinyon-juniper, Joshua tree and riparian woodlands, washes, and desert scrub with conspicuous perches for foraging. The species is a carnivorous songbird mainly feeding on insects, birds, and small mammals, which it impales on thorns, branches, and barbed wire. It is uncommon and declining in much of its range. Loggerhead shrike has a moderate potential to forage and nest within the Study Area. Potentially suitable riparian woodland habitat, including areas for perching, are present in the Fremont cottonwood woodland vegetation community in the Study Area. Prey species, such as insects, lizards, small mammals, and birds also occur throughout the Study Area. Three CNDDB records, with the most recent in 2008, occur within five miles of the Study Area (CDFW 2025a, 2025b). The species was not detected during field reconnaissance surveys.

California gnatcatcher (*Polioptila californica californica*) is a FT and CDFW SSC species that occurs throughout Southern California. The species is closely associated with coastal sage scrub and similar low-growing, open shrub vegetation communtiies that provide suitable foraging and nesting habitat. California gnatcatcher forage for insects within shrubs and low vegetation and typically nest with dense sage scrub. The Study Area contains limited and fragmented suitable coastal scrub habitat (i.e., brittle bush scrub and California sagebrush – California buckwheat scrub) and lacks large, contagious areas of high-quality coastal sage scrub. Therefore, the California gnatcatcher has a low potential to occur within the Study area. Four CNDDB records, with the most recent in 2015, occur within five miles of the Study Area (CDFW 2025a, 2025b). The species was not detected during field reconnaissance surveys.

Least Bell's vireo (*Vireo bellii pusillus*) is a FE and SE species that formerly nested throughout the coastal slope of southern California, interior coast ranges of central California, the San Joaquin and Sacramento valleys and surrounding foothills, and parts of Inyo County. It now is limited to isolated locations of extensive riparian habitat in the southern California coastal slope and has bred in small numbers at widely scattered sites elsewhere in its former range (USFWS 2006). Least Bell's vireo is

typically found in structurally diverse woodlands located in riparian areas. Habitat requirements critical to the species' continued existence include dense cover within six feet of the ground for nesting and a dense, stratified canopy for foraging. Least Bell's vireo has a moderate potential to occur in the Study Area. Specifically, least Bell's vireo has potential to nest and/or forage in the northern portion of the Study Area within and immediately adjacent to Castaic Creek within the Fremont cottonwood woodland, sandbar willow thickets, and tamarisk thickets vegetation communities. Suitable riparian habitat at this location is comprised of Fremont woodland, willow thickets with an understory of mulefat patches, and upland scrub along with a mixture of open, rocky, and washy areas. Six CNDDB records, with the most recent in 2010, occur within five miles of the Study Area (CDFW 2025a, 2025b). The species was not detected during field reconnaissance surveys.

The project may result in temporary impacts to potentially suitable habitat for Least Bell's vireo, loggerhead shrike, and Cooper's hawk as part of installation of the water pipelines. Therefore, implementation of the project could result in direct impacts (ground disturbance and removal of vegetation that contain active nests) or indirect impacts (construction noise, lighting, and fugitive dust) to these species, if the project is implemented within suitable habitat for these species. Additionally, depleted local groundwater levels could negatively impact suitable habitat for least Bell's vireo within the Fremont cottonwood forest and woodland vegetation community should this habitat be a GDE. These temporary impacts could lead to individual mortality or harassment that might reduce nesting success. Therefore, the project would potentially result in substantial adverse effects to Cooper's hawk, loggerhead shrike, and least Bell's vireo, either directly or indirectly, and impacts would be potentially significant. Implementation of AMM BIO-11, which involves sustainable pumping of groundwater from Wells E-14, E-15, E-16, and E-17, and implementation of AMM BIO-13, which involves protocol level surveys for least Bell's vireo during prior to the start of construction and establishment of protective buffers if nests are found, are recommended to reduce potential impacts to the species to less-than-significant levels and to facilitate project compliance with the MBTA, CFGC, and CESA.

AMM BIO-13 Least Bell's Vireo Pre-construction Surveys

Prior to initiation of project construction and activities within or adjacent to suitable nesting habitat (including Fremont cottonwood woodland, sandbar willow thickets, and tamarisk thickets vegetation communities) during least Bell's vireo breeding season (March 15 through September 15), a qualified biologist with experience surveying for least Bell's vireo should conduct at least eight focused surveys following USFWS-established protocols to determine whether breeding least Bell's vireos are present. Focused surveys should be completed within the project site and a 500-foot buffer. If least Bell's vireo is present, the biologist should determine its breeding territory, and no construction should take place within 500 feet of the breeding territory from March 15 through September 15.

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 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. The ornamental vegetation and oak trees, along with vegetation communities along the northern alignment of the proposed water pipeline, including Fremont cottonwood woodland, California sagebrush - California buckwheat scrub, sandbar willow thickets, and tamarisk thickets, as well as the brittle bush scrub along the western alignment of the proposed water pipeline, have the potential to support

nesting birds and raptors, including Cooper's hawk. 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 Measure BIO-14 is recommended to avoid potential direct and indirect effects to nesting birds, and to achieve compliance with CFGC Section 3503.5 and the MBTA.

AMM BIO-14 Protection of Nesting Birds

Project-related activities should occur outside of the bird breeding season (February 1 to August 31) to the extent practicable. If construction must commence within the bird breeding season, a nesting bird pre-construction survey should be conducted by a qualified biologist within the disturbance footprint plus a 100-foot buffer (300-feet for raptors), where feasible, no more than three days prior to initiation of ground disturbance (including, but not limited to site preparation, vegetation clearance, grading, and excavation). If the proposed project is phased or construction activities stop for more than one week, a subsequent pre-construction nesting bird survey should be conducted prior to each phase of construction, if initiating during the bird breeding season.

Pre-construction nesting bird surveys should be conducted during the time of day when birds are active and should factor in sufficient time to perform this survey adequately and completely. 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 nests are found, an appropriate avoidance buffer ranging in size from 25 to 50 feet for passerine (perching birds) nests, and up to 300 feet for active, non-listed raptor nests (depending upon the species and the proposed work activity) should be determined and demarcated by the qualified biologist with bright orange construction fencing or other suitable flagging. Active nests should be monitored at a minimum of once per week until a qualified biologist has determined the birds have fledged and are no longer reliant upon the nest or parental care for survival. No construction activity should occur within this buffer until the qualified biologist confirms the breeding/nesting is completed and all the young have fledged. If project activities must occur within the buffer, they should be conducted at the discretion of the qualified biologist. If no nesting birds are observed during pre-construction surveys, no further actions would be necessary.

Riparian and Sensitive Natural Communities

Riparian and Sensitive plant communities are considered sensitive biological resources because they have limited distributions, have high wildlife value, include sensitive species, and are particularly susceptible to disturbance. CDFW ranks sensitive communities as "threatened" or "very threatened" and keeps records of their occurrences in CNDDB.

The project site contains three riparian vegetation communities, including tamarisk thickets, sandbar willow thickets, and Fremont cottonwood woodland. Tamarisk thickets was documented at the western end of the northern alignment of the proposed water pipeline, while sandbar willow thickets was documented at the eastern end of the same alignment and within the potentially jurisdictional unnamed drainage. Fremont cottonwood woodland, a riparian and sensitive natural community, was documented in the northwestern portion of the Study Area buffer along Castaic Creek during the field survey. The Fremont cottonwood forest and woodland vegetation community is identified as a potential GDE that provides suitable habitat for special-status aquatic and semi-aquatic species (SCVGSA 2022). No other riparian and/or sensitive natural communities occur within the project site or Study Area. Project construction would be confined to the project site, only a fraction of which would require temporary vegetation removal, potentially in the tamarisk thickets, sandbar willow thickets, and Fremont cottonwood woodland, to allow for construction access and installation of the underground

pipeline. Additionally, although SCV Water would not increase basin-wide groundwater extraction, reactivated operation of Wells E-14, E-15, E-16, and E-17 could deplete local groundwater levels beyond the minimum thresholds for depletion of interconnected surface waters established in the Santa Clara River Valley East Groundwater Subbasin GSP and could thus temporarily impact the Fremont cottonwood forest and woodland vegetation community. Therefore, the project would potentially have a substantial adverse effect on Fremont cottonwood woodland in local or regional plans, policies, and regulations or by the CDFW or USFWS, and temporary impacts would be significant.

Implementation of AMMs BIO-11, BIO-15, and BIO-16, which include sustainable pumping of groundwater from Wells E-14, E-15, E-16, and E-17, avoidance and minimization of potential project impacts to sensitive natural communities and riparian habitat vegetation to the extent feasible, as well as compensatory mitigation for impact areas at a minimum ratio of 1:1, are recommended to reduce project temporary impacts to riparian and/or sensitive natural communities to a less-than-significant level.

AMM BIO-15 Riparian and Sensitive Natural Communities and Jurisdictional Features Avoidance and Minimization Measures

Riparian and/or sensitive natural communities and jurisdictional features identified for avoidance within the Study Area should be demarcated using brightly colored flagging, as necessary, and avoided to the extent feasible during project construction. The marked boundaries should be maintained for the duration of project construction activities in each work area and should be clearly visible to personnel on foot and by heavy equipment operators. Construction personnel should be instructed to avoid these areas as feasible. All temporary flagging should be removed only after the conclusion of all grading, clearing, and construction activities at each work area along the project alignment. Compliance with this measure should be documented in the biological monitoring reporting required under AMM BIO-9.

In addition, SCV Water should require its project construction contractor(s) and their personnel to implement the following measures:

- Any material/spoils generated from project construction should be located away from sensitive natural communities and jurisdictional features and protected from stormwater run-off using temporary perimeter sediment barriers such as berms, silt fences, fiber rolls, covers, sand/gravel bags, and straw bale barriers, as appropriate.
- Materials, hand-held equipment and other non-heavy or non-vehicle equipment should be stored on impervious surfaces or plastic ground covers to prevent any spills or leakage from contaminating the ground and generally at least 50 feet from riparian and/or sensitive natural communities and jurisdictional areas.
- Any spillage of material should be stopped if it can be done safely. The contaminated area should be cleaned, and any contaminated materials should be properly disposed of. For all spills, the project foreman and biological monitor (recommended in AMM BIO-9) should be notified.

AMM BIO-16 Riparian and Sensitive Natural Community Compensatory Mitigation

If temporary impacts to riparian habitat and/or sensitive natural communities cannot be avoided, SCV Water should identify compensatory mitigation prior to disturbance of the features. Mitigation may take the form of permittee-responsible, on-site or off-site mitigation or the purchase of credits from an approved mitigation bank or through applicant sponsored mitigation (e.g., purchase and/or dedication of land for mitigation). If required, compensatory mitigation for unavoidable impacts to riparian and/or sensitive vegetation communities should be accomplished at a minimum ratio of 1:1; however, the

final ratio would be determined and approved by CDFW. If onsite or offsite restoration would occur, SCV Water should retain a qualified biologist to develop a Habitat Revegetation, Restoration, and Monitoring Program and submitted for CDFW approval prior to the commencement of project construction (including, but not limited to, site preparation, staging and mobilization, vegetation clearance/mowing/trimming, grading, and excavation). At a minimum, the program should include the following:

- A description of the purpose and goals of the restoration
- Identification of success criteria and performance standards
- Methods of site preparation, including topsoil salvage and replacement procedures
- Irrigation plan and schedule
- BMPs
- Maintenance and monitoring program
- Adaptive management strategies
- Key stakeholders and responsible parties
- Funding
- Contingencies

USFWS Designated Critical Habitat

USFWS-designated critical habitat for arroyo toad (*Anaxyrus californicus*), least Bell's vireo, and southern western willow flycatcher (*Empidonax traillii extimus*) occur within the Study Area (USFWS 2025b). Critical habitat for the arroyo toad and southwestern willow flycatcher is associated with Castaic Creek and the Santa Clara River, and critical habitat for the least Bell's vireo is associated with the Santa Clara River. Although the project overlaps critical habitat for arroyo toad, least Bell's vireo, and southwestern willow flycatcher associated with the Santa Clara River, these critical habitat areas overlap developed and/or disturbed areas (e.g., roadways, concrete sidewalks, buildings) where the proposed project is situated. Therefore, critical habitat associated with the Santa Clara River would not be impacted. For Castaic Creek, project activities may result in disturbance to the creek itself, including temporary removal of vegetation within the riparian corridor and reduction of groundwater levels within GDEs, and could therefore affect designated critical habitat for arroyo toad and southwestern willow flycatcher. However, both species have a low potential to occur within the Study Area (Attachment 5).

Southwestern willow flycatcher critical habitat requires both abundant insect prey and riparian vegetation composed of dense thickets of trees and shrubs with substantial foliage from the ground to approximately four meters in height. These areas typically support 50 to 100 percent canopy cover and include patches of dense riparian forest interspersed with small openings or wetland features. Because the riparian habitat at the project site lacks this level of dense foliage and does not support the necessary structural complexity, it does not contain the suitable riparian Physical and Biological Features (PBFs) needed for the species. In addition, the surrounding development makes it unlikely that the site supports the high insect prey populations required by the southwestern willow flycatcher.

Arroyo toad critical habitat requires low-gradient streams with sandy or fine-gravel substrates that form willow pools and sparsely vegetated sand or gravel bars used for breeding and rearing. These areas must also support a natural or near-natural hydrologic and flooding regime that maintains suitable breeding pools, channel structure, and terrace habitats with appropriate vegetation. In addition, adjacent upland terraces with loose soils and subsurface moisture are needed to provide foraging habitat and underground refugia for juveniles and adults. Because the project site generally does not

contain the necessary stream conditions and suitable upland terrace habitats, it lacks the PBFs required to support the arroyo toad.

Although the critical habitat occurring within the project site does not contain the necessary PBFs for southwestern willow flycatcher and arroyo toad, the area is still designated for the recovery of these species. Project activities may result in the reduction of groundwater levels for GDEs and introduce invasive species that may reduce locally available resources. Therefore, potential impacts to critical habitat for southwestern willow flycatcher and arroyo toad associated with Castaic Creek could be potentially significant. Implementation of AMMs BIO-7, BIO-11, BIO-15, and BIO-16, which include invasive plant species control measures, sustainable pumping of groundwater from Wells E-14, E-15, E-16, and E-17, avoidance and minimization of potential project impacts to riparian and/or sensitive natural communities to the extent feasible, as well as compensatory mitigation for impact areas at a minimum ratio of 1:1, are recommended to reduce potential temporary project impacts to critical habitat to less-than-significant levels.

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. In addition, under CWA Section 404, the United States Army Corps of Engineers (USACE) has authority to regulate activities that discharge dredge or fill material into wetlands or other "waters of the United States" through issuance of a Section 404 Permit. The 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 the responsibility to issue water quality certifications pursuant to CWA Section 401.

Castaic Creek

Castaic Creek flows from north to south in the northwestern portion of the Study Area (Attachment 2: Photograph 1), eventually flowing into the Santa Clara River south of the Study Area and into the Pacific Ocean. This feature is an intermittent stream and contains seasonal flows (i.e., higher flows during the winter and spring months, low/no flows during the summer and fall months). The southern bank of Castaic Creek occurs in the Study Area adjacent to the northern alignment of the proposed water pipeline, and situated north of Well E-16 and west of Well E-15 (Attachment 1: Figure 4). The top of the bank is well defined and runs parallel to the dirt access road. The potential outer jurisdictional extent of this feature extend to the top of bank, which is located north of the dirt access road in the northern portion of the Study Area.

Unnamed Drainage

During the reconnaissance field surveys, an unnamed drainage was observed southeast of the dirt access road along the northern alignment of the proposed water pipeline and to the west of Well E-15. An 18-inch concrete culvert was observed trickling water into the riparian thicket, with flow continuing downslope and terminating at the base of the slope (Attachment 2, Photograph 10). No culvert conveying flow beneath the dirt access road toward Castaic Creek was observed. The jurisdictional extent of this unnamed feature is bounded by the east and north sides of the dirt access road and extends south to the point where agricultural land cover begins.

Both Castaic Creek and the unnamed drainage features are potentially subject to USACE, RWQCB, and CDFW jurisdictions.

Project implementation may result in temporary impacts of up to approximately 5.51 acres (2,999 linear feet) of potentially jurisdictional resources if they cannot be avoided as part of project design or during project construction activities. Implementation of AMMs BIO-1, BIO-2, BIO-3, BIO-7, BIO-9, and BIO-16 would be implemented. These AMMs include implementing general and jurisdictional waters BMPs to confine vehicle and/or equipment maintenance to designated staging areas away from jurisdictional waters, delineating project work areas to reduce encroachment into potentially jurisdictional waters, providing worker environmental awareness training to help workers identify and avoid jurisdictional waters and wetlands, qualified biological monitoring, and habitat revegetation, restoration, and monitoring program implementation. Implementation of these AMMs would reduce potentially significant temporary impacts to jurisdictional waters and wetlands to less-than-significant.

In addition, prior to ground disturbing activities that could temporarily impact jurisdictional waters or wetlands, SCV Water should consult with the appropriate regulatory agencies (Los Angeles RWQCB, CDFW, and/or USACE) anticipated to assert jurisdiction over the features. The project may require a Lake and Streambed Alteration Agreement from CDFW, a Water Quality Certification under CWA Section 401 from the Lahontan RWQCB, and a permit under CWA Section 404 from the USACE. Based on such consultation, any required permits should be obtained prior to disturbance of jurisdictional resources.

Wildlife Movement

Wildlife corridors, or habitat linkages, are generally defined as connections between habitat patches that allow for physical and genetic exchange between otherwise isolated animal populations. Such linkages may serve a local purpose, such as between foraging and denning areas, or they may be regional in nature, allowing movement across the landscape. Some habitat linkages may serve as migration corridors, wherein animals periodically move away from an area and then subsequently return. Others may be important as dispersal corridors for young animals. A group of habitat linkages in an area can form a wildlife corridor network (Spencer et al. 2010).

The habitats in the linkage do not necessarily need to be the same as the habitats that are being linked. Rather, the linkage merely needs to contain sufficient cover and forage to allow temporary inhabitation by ground-dwelling species. Typically, habitat linkages are contiguous strips of natural areas, although dense plantings of landscape vegetation can be used by certain disturbance-tolerant species. Depending upon the species using a corridor, specific physical resources (e.g., rock outcroppings, vernal pools, or oak trees) may need to be in the habitat link at certain intervals to allow slower-moving species to traverse the link. For highly mobile or aerial species, habitat linkages may be discontinuous patches of suitable resources spaced sufficiently close together to permit travel along a route in a short period of time.

The project involves installation of underground water pipeline, continued use of existing wells, and construction of a centralized water treatment facility. Although construction activities may temporarily reduce species movement within the Study Area, wildlife would continue to utilize existing movement corridors in the area, including Castaic Creek and Santa Clara River. Additionally, the proposed facility would not impede wildlife movement because it would be located adjacent to SR 126, an existing highway that does not support wildlife movement. 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. As such, implementation of AMMs BIO-1 through BIO-3, which include BMPs to discourage wildlife from entering the project site, work limit delineation to avoid injury or mortality of wildlife in undisturbed and natural areas, a WEAP training to increase worker's awareness of special-status species, are recommended to reduce temporary indirect impacts to wildlife movement to a less-than-significant level.

Resources Protected by Local Policies and Ordinances

California Government Code Section 53091 exempts SCV Water from compliance with local zoning and building ordinances for projects involving the construction of facilities for the production, generation, storage, treatment, or transmission of water. This exemption applies to the PFAS treatment facility and proposed water pipeline infrastructure included in the project because they are water conveyance infrastructure and a direct component of SCV Water's overall water treatment, storage, and transmission system. Despite this exemption from local land use planning jurisdiction, for purposes of full disclosure of potential impacts on the environment, this analysis evaluates proposed project compatibility with relevant County of Los Angeles policies and ordinances.

Los Angeles County 2035 General Plan and Significant Ecological Areas

The Los Angeles County 2035 General Plan (County of Los Angeles 2025) includes policies that address biological resources within the county. Policies that seek to preserve biological resources are contained in Chapter 9 of the Conservation and Natural Resources Element of the General Plan. The following policies are relevant to the project:

Policy C/NR 3.6: Assist state and federal agencies and other agencies, as appropriate, with the preservation of special-status species and their associated habitat and wildlife movement corridors through the administration of the SEAs and other programs.

Policy C/NR 3.8: Discourage development in areas with identified significant biological resources, such as SEAs.

Policy C/NR 3.10: Require environmentally superior mitigation for unavoidable impacts on biologically sensitive areas, and permanently preserve mitigation sites.

The SEA Program is a tool that helps guide land development to avoid conflicts with important and irreplaceable biological resources within Los Angeles County. An SEA is an officially designated area within Los Angeles County that contains irreplaceable biological resources. The SEA Ordinance, which is a part of the Los Angeles County Planning and Zoning Code (Los Angeles County Code of Ordinances Section 22.102 et seq.), establishes the permitting, design standards, and SEA Technical Advisory Committee review process for development within SEAs. The northwestern and southwestern portions of the Study Area intersect the Santa Clara River SEA in unincorporated Los Angeles County. The SEA Ordinance (Chapter 22.102 of the Los Angeles County Municipal Code) would only be relevant to proposed project activities in unincorporated Los Angeles County; however, the project is exempt from local zoning codes and is therefore exempt from compliance with the SEA Ordinance.

Los Angeles County Oak Trees and Oak Woodland Management

The Los Angeles County Oak Tree Ordinance is part of the Los Angeles County Planning and Zoning Code (County Code of Ordinances Section 22.174 et seq.). Pursuant to the ordinance, an oak tree permit must be obtained prior to damaging or removing any tree of the oak genus (Quercus spp.) that is:

- Eight inches or more in diameter (25 inches in circumference), as measured 4.5 feet above mean natural grade,
- Oaks with multiple trunks, where the combined diameter of any two trunks is 12 inches (38 inches in circumference) or more, or
- Provided as a replacement tree (pursuant to Los Angeles County Code Section 22.174.020).

The objectives of the Los Angeles County Oak Woodlands Conservation Management Plan (Woodland Plan) (County of Los Angeles 2011) are to prioritize the preservation of oak woodlands, promote conservation by integrating oak woodlands into the development process in a sustainable manner, and effectively mitigate the loss of oak woodlands. The Woodland Plan was prepared by the County pursuant to the California Oak Woodlands Conservation Act (Assembly Bill 242) to qualify for funding to preserve oak woodlands through the Oak Woodlands Conservation Fund; the County Board of Supervisors adopted the Woodland Plan on August 23, 2011 (County of Los Angeles 2011). The accompanying Oak Woodlands Conservation Management Plan Guide (Woodland Guide) (County of Los Angeles 2014) implements portions of the Woodland Plan and focuses on potential impacts to oak woodlands from proposed developments. The Woodland Guide defines oak woodlands as:

An oak stand, including its understory, which consists of two or more oak trees (all native trees of the genus Quercus) of at least five inches in diameter (of the largest trunk) measured at 4.5' above mean natural grade, with greater than 10 percent canopy cover or that may have historically supported greater than 10 percent canopy cover as early as January 1, 2005 (effective date of California Public Resources Code Section 21083.4).

Coast live oak (*Quercus agrifolia*) and valley oak (*Quercus lobata*) are sparsely dispersed along the south bank of Castaic Creek. Sufficient data is not available to determine whether these oaks meet the size and spacing thresholds defined in the Los Angeles County Oak Tree Ordinance, Woodland Management Plan, and Woodland Guide. The project is exempt from local zoning codes and is therefore exempt from compliance with the Los Angeles County Oak Tree Ordinance.

Habitat Conservation Plans

The project site is not located in an area subject to an adopted Habitat Conservation Plan, Natural Community Conservation Plan, or other approved local, regional, or state habitat conservation plan. Therefore, no impact would occur.

Limitations, Assumptions, and Use Reliance

This Biological Resources Assessment 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. Additionally, pursuant to our

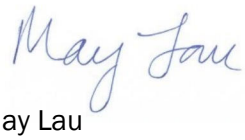
contract, the data sources reviewed included only those that are practically reviewable without the need for extraordinary research and analysis.

Thank you for the opportunity to provide this Biological Resources Assessment. Please contact the undersigned with any questions.

Sincerely,
Rincon Consultants, Inc.



Benson Truong
Biologist



May Lau
Principal Biologist

Attachments

Attachment 1 Figures
Attachment 2 Site Photographs
Attachment 3 Species Detected During Field Reconnaissance Surveys
Attachment 4 USFWS IPaC Species List
Attachment 5 Special-Status Species Potential to Occur

References

Allen, Edith B. 1996. Characterizing the habitat of slender-horned spineflower (*Dodecahema leptoceras*). Ecological analysis prepared for California Department of Fish and Game. Contract No. FG-4632-R5.

Calflora. 2025. Information on California plants for education, research, and conservation (web application). Berkeley, California: The Calflora Database. http://www.calflora.org/ (accessed December 2025).

California Department of Fish and Wildlife (CDFW). 2010. Swainson's Hawk Survey Protocols, Impact Avoidance, and Minimization Measures for Renewable Energy Projects in the Antelope Valley of Los Angeles and Kern Counties, California. June 2, 2010.

_____. 2018. Protocols for Surveying and Evaluating Impacts to Special Status Native Plant Populations and Sensitive Natural Communities. March 20, 2018.

_____. 2023. Survey Considerations for California Endangered Species Act (CESA) Candidate Bumble Bees. June 6, 2023.

_____. 2025 California Sensitive Natural Communities. February 27, 2025. https://nrm.dfg.ca.gov/FileHandler.ashx?DocumentID=153609&inline. (accessed December 2025).

_____. 2025a. California Natural Diversity Database, Rarefind V. 5.2.14 (accessed December 2025).

_____. 2025b. California Natural Diversity Database (CNDDB) Biogeographic Information and Observation System (BIOS). Retrieved from: http://bios.dfg.ca.gov (accessed December 2025).

_____. 2025c. Special Animal List. October 2025. Retrieved from: https://nrm.dfg.ca.gov/FileHandler.ashx?DocumentID=109406 (accessed December 2025).

California Invasive Plant Council (Cal-IPC). 2025. The Cal-IPC Inventory. http://www.cal-ipc.org/plants/inventory/ (accessed December 2025).

California Native Plant Society (CNPS). 2018. Protocols for Surveying and Evaluating Impacts to Special Status Native Plant Populations and Sensitive Natural Communities. https://www.cnps.org/wp-content/uploads/2019/10/Bot-Cert_2018-CDFW-Plant-and-Vegetation-Survey-Protocols-LR.pdf (accessed December 2025).

_____. 2025. Inventory of Rare and Endangered Plants of California (online edition, v8-03 0.45). California Native Plant Society, Sacramento, CA. http://www.rareplants.cnps.org (accessed December 2025).

Cornell Lab of Ornithology. 2025. All About Birds. Life History. https://www.allaboutbirds.org/news/ (accessed December 2025).

County of Los Angeles. 2011. Los Angeles County Oak Woodlands Conservation Management Plan. May 2011. https://planning.lacounty.gov/wp-content/uploads/2022/11/oakwoodlands_conservation-management-plan.pdf (accessed December 2025).

_____. 2014. Los Angeles County Oak Woodlands Conservation Management Plan Guide. https://planning.lacounty.gov/long-range-planning/oak-woodlands-conservation-management-plan/ (accessed December 2025).

_____. 2025. Los Angeles County General Plan 2035. April 15, 2025. https://planning.lacounty.gov/long-range-planning/general-plan/ (accessed December 2025).

Google Earth Pro. 2025. Version 7.3.6.9345. Accessed December 2025.

Jepson Flora Project (eds.) 2025. Jepson eFlora. Available at: https://ucjeps.berkeley.edu/eflora/. Accessed December 2025.

Los Angeles County. 2025. Los Angeles County General Plan 2035. April 15, 2025. https://planning.lacounty.gov/long-range-planning/general-plan/general-plan-elements/

Moyle, P. B. 2002. Inland Fishes of California. University of California Press, Berkeley, CA, USA.

Nafis, G. 2025. California Herps - A Guide to the Amphibians and Reptiles of California https://californiaherps.com/ (accessed December 2025).

NatureServe. 2025. NatureServe Web Service. http://services.natureserve.org. (accessed December 2025).

Santa Clarita Valley Water Agency (SCV). 2021. 2020 Urban Water Management Plan. June 28, 2021. https://yourscvwater.com/sites/default/files/SCVWA/SCVWA-2020-UWMP-Volume-I_FINAL.pdf

Santa Clarita Valley Groundwater Sustainability Agency (SCV-GSA). 2022. Santa Clara River Valley East Groundwater Subbasin Groundwater Sustainability Plan. January 2022. https://scvgsa.org/wp-content/uploads/2022/02/Santa-Clara-River-Valley-East-Groundwater-Subbasin-GSP.pdf (accessed December 2025).

Sawyer, J.O., T. Keeler-Wolf, and J. M. Evens. 2009. A Manual of California Vegetation, 2nd edition. California Native Plant Society, Sacramento, California.

Spencer, W.D., P. Beier, K. Penrod, K. Winters, C. Paulman, H. Rustigian-Romsos, J. Strittholt, M. Parisi, and A. Pettler. 2010. California Essential Habitat Connectivity Project: A Strategy for Conserving a Connected California. Prepared for California Department of Transportation, California Department of Fish and Game, and Federal Highways Administration.

Suarez, A. V., Richmond, J. Q., Case, T. J. 2000. PREY SELECTION IN HORNED LIZARDS FOLLOWING THE INVASION OFARGENTINE ANTS IN SOUTHERN CALIFORNIA. Ecological Society of America.

Tres, J. 1992. Breeding biology of the Arroyo Chub, Gila orcutti (Pisces: Cyprinidae). Thesis, California Polytechnic State University, Pomona, USA.

United States Department of Agriculture, Natural Resources Conservation Service (USDA NRCS). 2025a. Web Soil Survey. http://websoilsurvey.sc.egov.usda.gov/App/HomePage.htm (accessed December 2025).

_____. 2025b. Lists of Hydric Soils. National Cooperative Soil Survey, U.S. Department of Agriculture. https://www.nrcs.usda.gov/wps/portal/nrcs/main/soils/use/hydric/ (accessed December 2025).

United States Fish and Wildlife Service (USFWS). 2006. Least Bell's Vireo (Vireo bellii pusillus) 5-Year Review: Summary and Evaluation. Carlsbad Fish and Wildlife Office, Carlsbad, CA.

_____. 2025a. Information for Planning and Consultation (IPaC). http://ecos.fws.gov/ipac/ (accessed December 2025)

_____. 2025b. Critical Habitat Portal. http://criticalhabitat.fws.gov (accessed December 2025).

_____. 2025c. National Wetlands Inventory. http://www.fws.gov/wetlands/ (accessed December 2025).

_____. 2025d. Species Profile for the Santa Ana Sucker (*Catostomus santaanae*). https://www.fws.gov/species/santa-ana-sucker-catostomus-santaanae (Accessed December 2025).

United States Geological Survey (USGS). 2025. National Hydrography Dataset. https://viewer.nationalmap.gov/advanced-viewer/ (accessed December 2025).

Williams, P. H., R. W. Thorp, L. L. Richardson, and S. R. Colla. 2014. Bumble Bees of North America: An Identification Guide. Princeton University Press.

Xerces Society for Invertebrate Conservation (Xerces Society). 2012. Conserving Bumble Bees: Guidelines for Creating and Managing Habitat for America's Declining Pollinators. 32pp. https://www.xerces.org/sites/default/files/2018-05/12-028_01_XercesSoc_Conserving-Bumble-Bees-Guidelines_web.pdf (accessed December 2025).

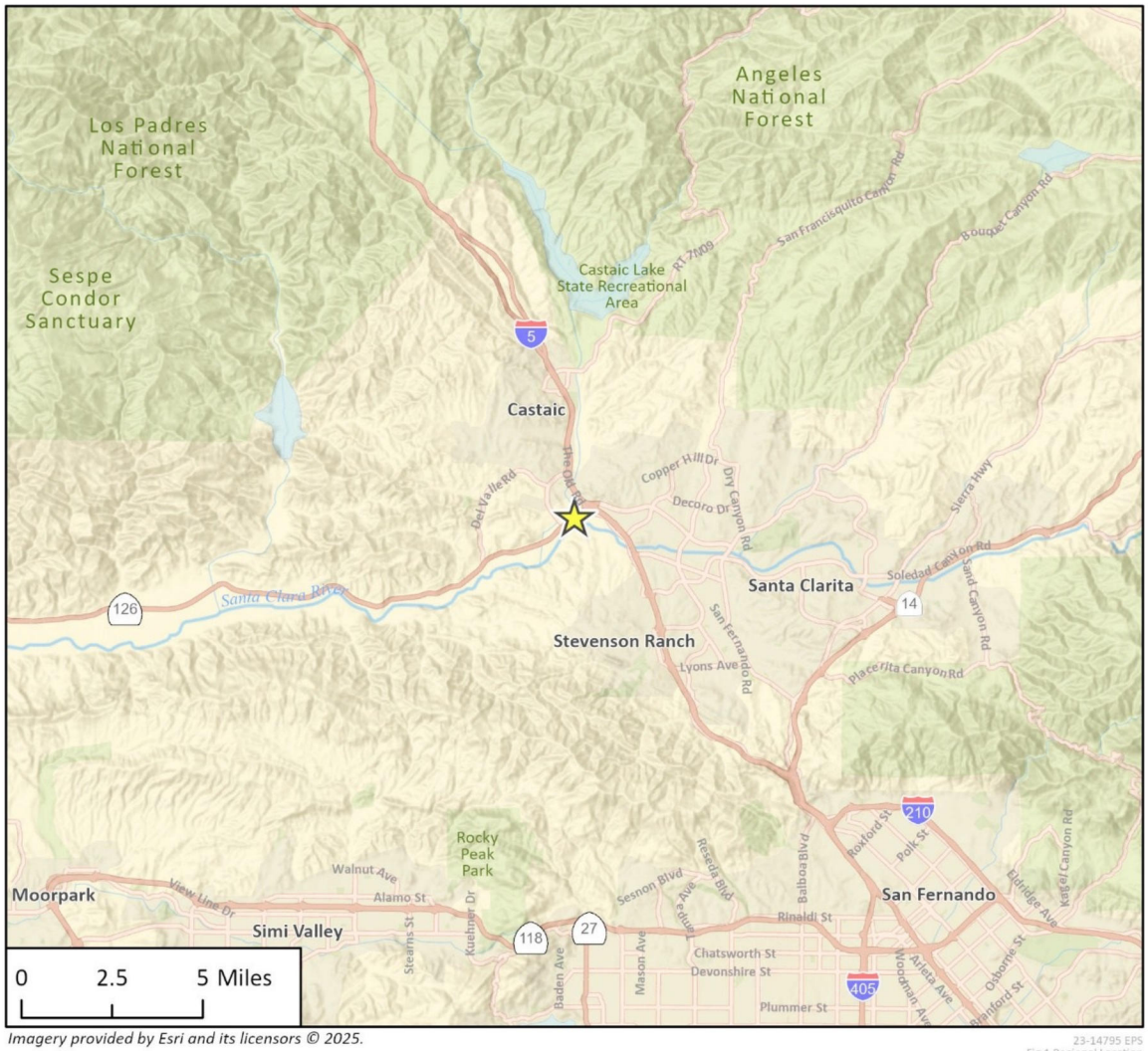
_____. 2025. At Risk Bumble Bees, Crotch's Bumble Bee. https://xerces.org/endangered-species/species-profiles/bumble-bees/crotchs-bumble-bee (accessed December 2025).

Zeiner, D., W.F. Laudenslayer, Jr., and K.E. Mayer. 1988-1990. California's Wildlife. California Statewide Wildlife Habitat Relationship System, Volumes I, II, & III. California Department of Fish and Wildlife.

Attachment 1

Figures

Figure 1 Regional Location



Imagery provided by Esri and its licensors © 2025.

23-14795 EPS
Fig 1 Regional Location

Project Location

N

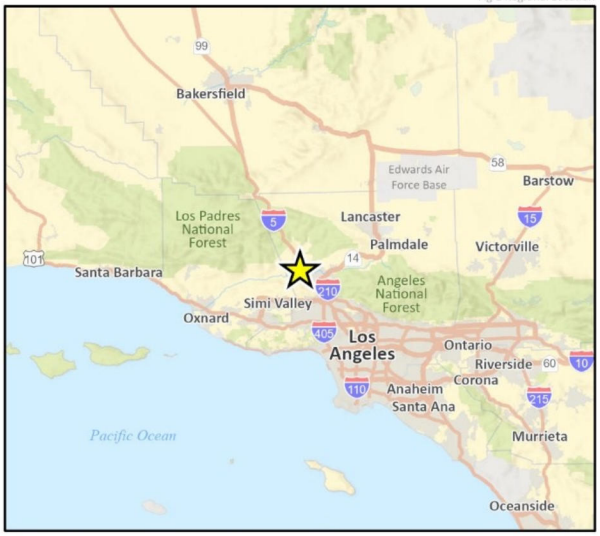


Figure 2 Project Location Overview

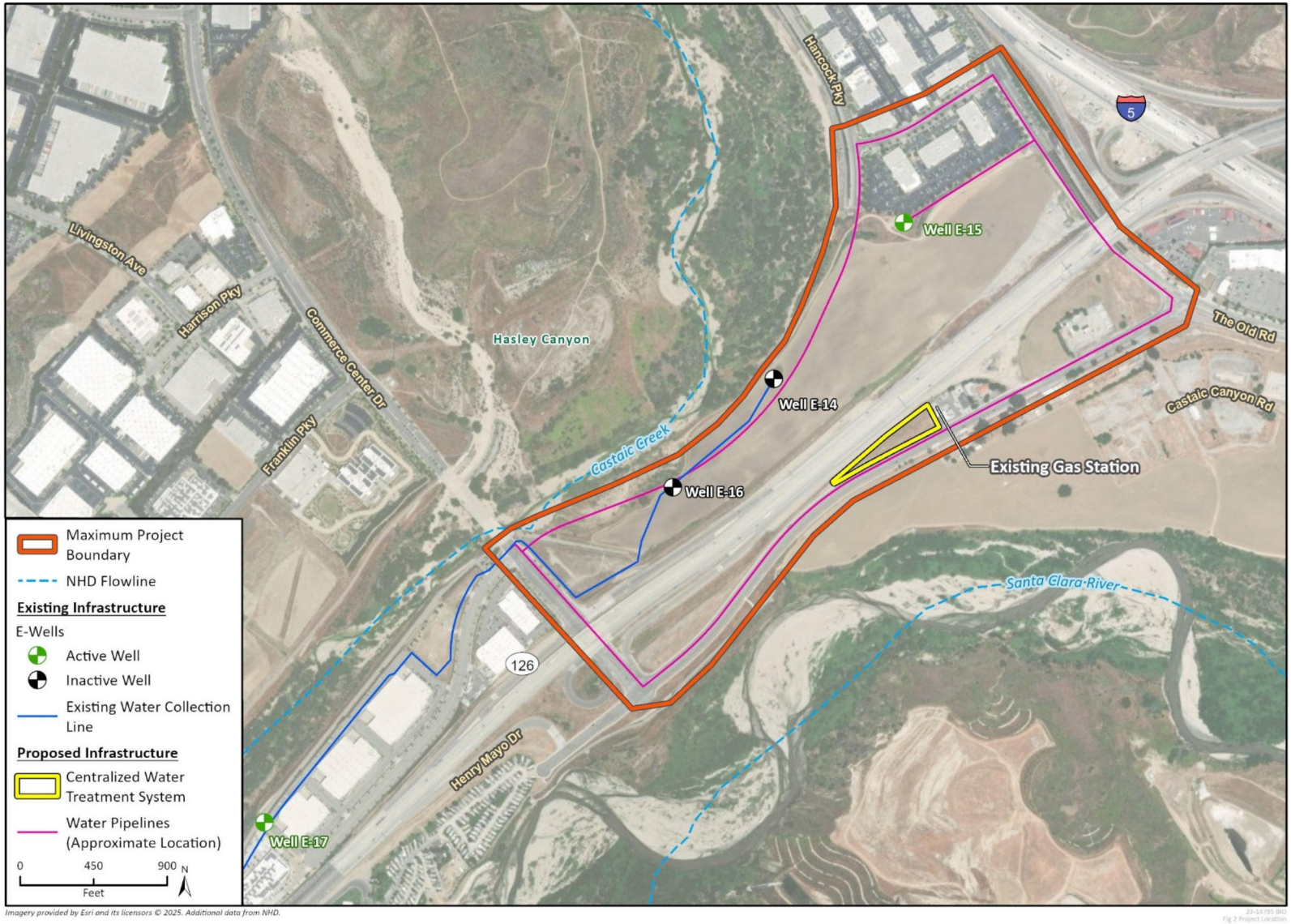


Figure 3 Vegetation Communities and Land Cover Types

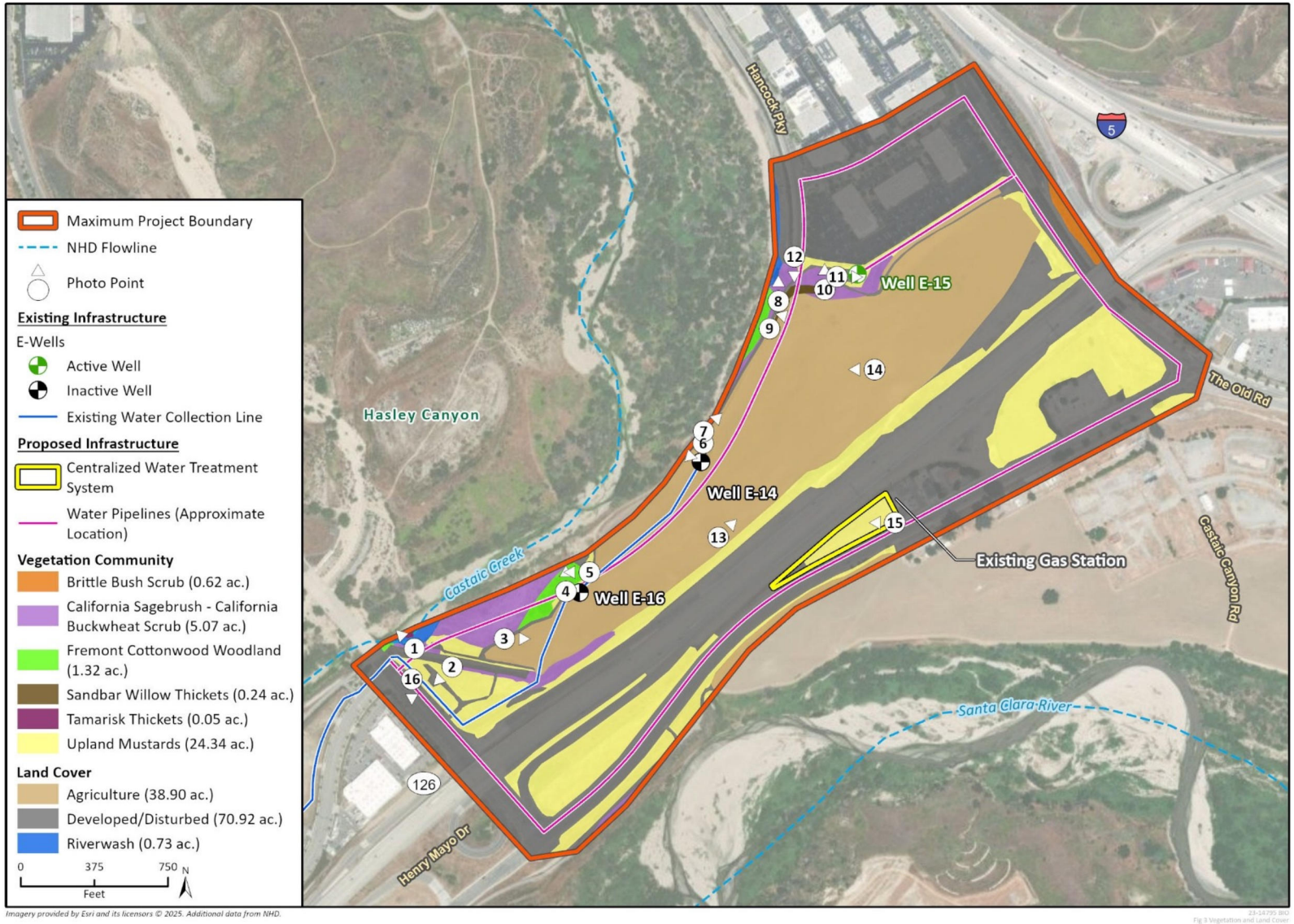
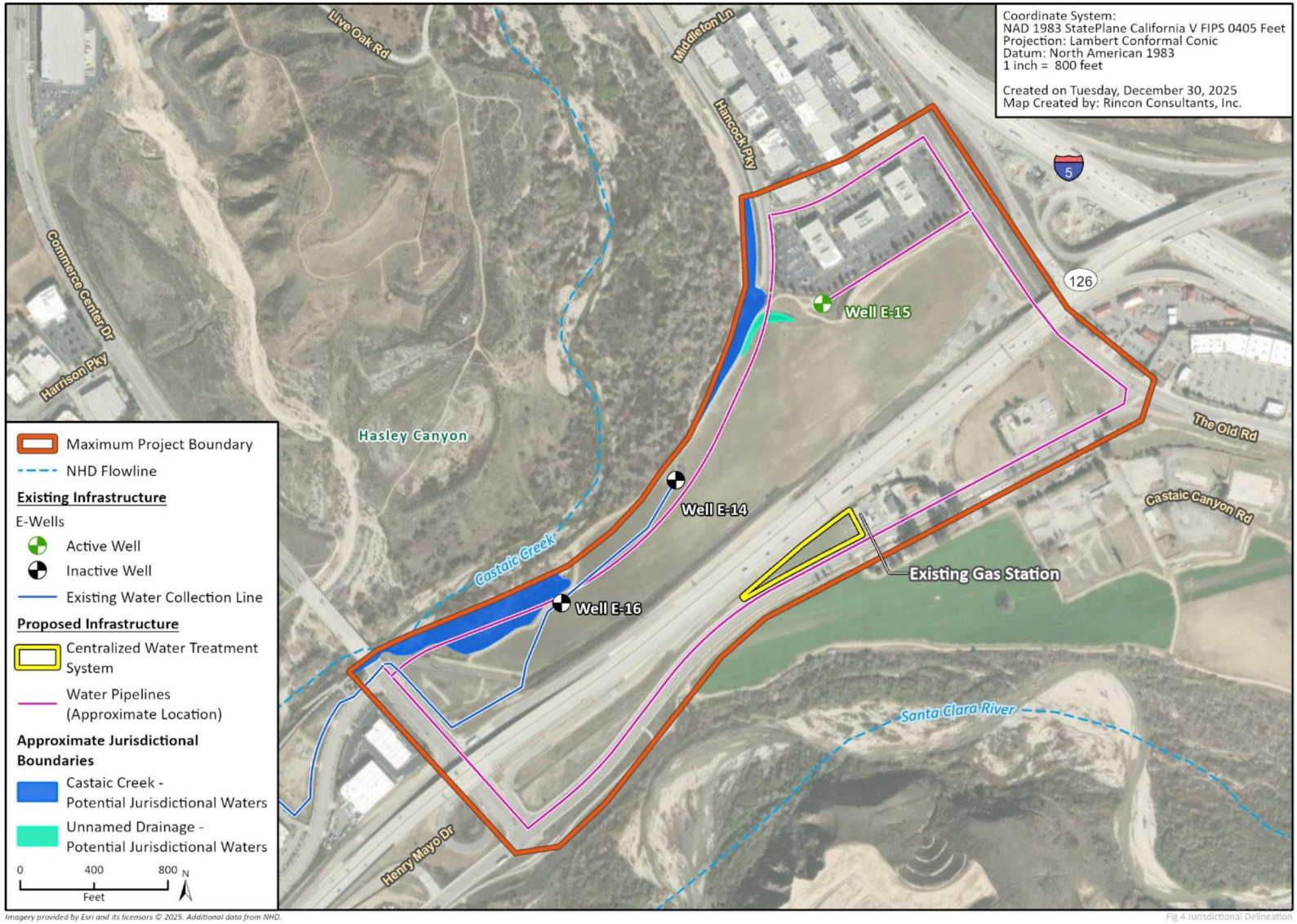


Figure 4 Potentially Jurisdictional Aquatic Resources



Attachment 2

Site Photographs



Photograph 1. View of the bed and southern bank of Castaic Creek on November 9, 2023, facing northwest. Note the riverwash land cover in the midground and Fremont cottonwood woodland vegetation community in the background (PhotoPoint 1).



Photograph 2. View of deer weed (*Acmispon glaber*) within upland mustard vegetation community on November 9, 2023, facing southwest (PhotoPoint 2).



Photograph 3. View of the northern alignment of the proposed water pipeline on November 9, 2023, facing east. Note the agriculture land cover to the right (PhotoPoint 3).



Photograph 4. View of the Fremont cottonwood woodland vegetation community by Well E-16 on November 9, 2023, facing north (PhotoPoint 4).



Photograph 5. View of the developed/disturbed land cover by Well E-16 on November 9, 2023, facing north (PhotoPoint 5).



Photograph 6. View of the agriculture land cover near Well E-14 on November 9, 2023, facing southwest (PhotoPoint 6).



Photograph 7. View of the agriculture land cover by the northern alignment of the proposed water pipeline on November 9, 2023, facing northeast. Note the Fremont cottonwood woodland vegetation community to the left (PhotoPoint 7).



Photograph 8. View of the California sagebrush – California buckwheat scrub vegetation community on November 9, 2023, facing north (PhotoPoint 8).



Photograph 9. View of the sandbar willow thickets vegetation community within the unnamed drainage on November 9, 2023, facing north (PhotoPoint 9).



Photograph 10. View of the 18-inch concrete culvert outlet associated with the unnamed drainage on November 9, 2023, facing south (PhotoPoint 10).



Photograph 11. View of the Well E-15 among the developed/disturbed area on November 9, 2023, facing east (PhotoPoint 11).



Photograph 12. View of California sagebrush – California buckwheat vegetation community by the northern alignment of the proposed water pipeline on November 9, 2023, facing south. Note the sandbar willow thickets to the left of the dirt access road (PhotoPoint 12).



Photograph 13. View of the agriculture land cover and upland mustard vegetation community south of Well E-14 on January 10, 2025, facing northeast (PhotoPoint 13).



Photograph 14. View of the agriculture land cover south of Weel E-15 on January 10, 2025, facing west (PhotoPoint 14).



Photograph 15. View of the upland mustard vegetation community within the area where the centralized treatment facility is proposed on January 10, 2025, facing west (PhotoPoint 15).



Photograph 16. View of the developed land cover along Commerce Center Drive by the western alignment of the proposed water pipeline on January 10, 2025, facing south (PhotoPoint 16).

Attachment 3

Species Detected During Field Reconnaissance Surveys

Plant and Wildlife Species Detected in the SA

Scientific Name	Common Name	Status	Native or Introduced
Plants			
Acacia redolens	bank catclaw	–	Introduced
Acmispon americanus	Spanish clover	–	Native
Acmispon glaber	deer weed	–	Native
Ambrosia acanthicarpa	annual bursage	–	Native
Artemisia californica	California sagebrush	–	Native
Artemisia tridentata ssp. *tridentata*	big sagebrush	–	Native
Arundo donax	giant reed	Cal-IPC High	Introduced
Atriplex canescens	fourwing saltbush	–	Native
Atriplex semibaccata	Australian saltbush	Cal-IPC Moderate	Introduced
Atriplex triangularis	spearscale	–	Introduced
Avena barbata	slender wild oat	Cal-IPC Moderate	Introduced
Baccharis pilularis	coyote brush	–	Native
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
Chenopodium album	lamb's quarters	–	Introduced
Chorizanthe brevicornu	brittle spineflower	–	Native
Corethrogyne filaginifolia	common sandaster	–	Native
Croton californicus	California croton	–	Native
Croton setiger	doveweed	–	Native
Cyperus eragrostis	tall flatsedge	–	Native
Datura wrightii	jimsonweed	–	Native
Dittrichia graveolens	stinkwort	Cal-IPC Moderate	Introduced
Encelia californica	California sunflower	–	Native
Encelia farinosa	brittlebush	–	Native
Erigeron bonariensus	flax-leaved horseweed	–	Introduced
Erigeron canadensis	Canada horseweed	–	Native
Eriodictyon crassifolium	thick-leaved yerba santa	–	Native
Eriogonum elongatum	longstem buckwheat	–	Native
Eriogonum fasciculatum	California buckwheat	–	Native
Erodium cicutarium	redstem filaree	Cal-IPC Limited	Introduced
Eucalyptus globulus	blue gum	Cal-IPC Limited	Introduced
Euphorbia maculata	spotted spurge	–	Introduced
Festuca myuros	rattail fescue	Cal-IPC Moderate	Introduced
Helianthus annuus	annual sunflower	–	Native

Scientific Name	Common Name	Status	Native or Introduced
Heliotropium curassavcium	alkali heliotrope	–	Native
Heterotheca grandiflora	telegraph weed	–	Native
Hirschfeldia incana	summer mustard	Cal-IPC Moderate	Introduced
Lactuca serriola	prickly lettuce	–	Introduced
Lepidospartum squamatum	scale broom	–	Native
Malva parviflora	cheeseweed	–	Introduced
Medicago polymorpha	annual bur clover	Cal-IPC Limited	Introduced
Medicago sativa	alfalfa	–	Introduced
Melilotus albus	white sweetclover	–	Introduced
Melilotus indicus	yellow sweetclover	–	Introduced
Muhlenbergia rigens	deergrass	–	Native
Nicotiana glauca	tree tobacco	Cal-IPC Moderate	Introduced
Platanus acerifolia	London plane	–	Introduced
Poa secunda	sandberg bluegrass	–	Native
Polygonum aviculare	prostrate knotweed	–	Introduced
Populus fremontii	Fremont cottonwood	-	Native
Quercus agrifolia	coast live oak	–	Native
Quercus lobata	valley oak	–	Native
Rhapiolepis indica	Indian hawthorn	–	Introduced
Rosmarinus officinalis	rosemary	–	Introduced
Salix exigua	sandbar willow	–	Native
Salix laevigata	red willow	–	Native
Salix lasiolepis	arroyo willow	–	Native
Salsola tragus	Russian thistle	Cal-IPC Limited	Introduced
Salvia mellifera	black sage	-	Native
Sambucus mexicana	blue elderberry	–	Native
Schismus barbatus	Mediterranean grass	Cal-IPC Limited	Introduced
Schoenoplectus californicus	California bulrush	–	Native
Silybum marianum	milk thistle	Cal-IPC Limited	Introduced
Sisymbrium irio	London rocket	–	Introduced
Sonchus oleraceus	common sow thistle	–	Introduced
Tamarix ramosissima	salt cedar	Cal-IPC High	Native
Tribulus terrestris	puncture vine	Cal-IPC Limited	Introduced
Trichostema lanceolatum	vinegar weed	–	Native
Washingtonia robusta	Mexican fan palm	Cal-IPC Moderate	Introduced
Xanthium strumarium	rough cocklebur	–	Native
Wildlife			
Birds			
Aphelocoma californica	California scrub-jay	–	Native
Buteo jamaicensis	red-tailed hawk	–	Native

Scientific Name	Common Name	Status	Native or Introduced
Cathartes aura	turkey vulture	–	Native
Charadrius vociferus	killdeer	–	Native
Corvus brachyrhynchos	American crow	–	Native
Corvus corax	common raven	–	Native
Haemorhous mexicanus	house finch	–	Native
Setophaga coronata	yellow-rumpled warbler	–	Native
Reptiles			
Sceloporus occidentalis	western fence lizard	–	Native

Source: Rincon Consultants biological resources reconnaissance field surveys conducted on November 9, 2023, and January 1, 2025; Calflora 2025; California Invasive Plant Council (Cal-IPC) 2025, which rates introduced species according to their level of invasiveness.

Attachment 4

USFWS IPaC Species List

Attachment 5

Special-Status Species Potential to Occur

Special-Status Species Potential to Occur in Regional Vicinity of Project Site

Scientific Name Common Name	Status (Federal/State, NatureServe, CRPR)	Habitat Requirements	Potential to Occur in SA	Habitat Suitability/ Observations
Plants and Lichens				
Berberis nevinii Nevin's barberry	FE/SE G1/S1 1B.1 SBBG	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	While chaparral and coastal scrub habitat are present, CNDDB occurrences state that the species is possibly extirpated from the region. Additionally, this is a perennial species that would be identifiable during the reconnaissance field surveys and was not observed in the Study Area.
Calochortus clavatus var. *clavatus* club-haired mariposa lily	None/None G4T3/S3 4.3 USFS S	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.	Not Expected	While chaparral and coastal scrub habitat are present, soil requirements are not.
Calochortus clavatus var. *gracilis* slender mariposa-lily	None/None G4T2T3/S2S3 1B.2 BLM S USFS S	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	While chaparral and coastal scrub habitat are present, foothill canyons and grassy slopes are not. Additionally, the project falls within the lower limit of the species' document elevation range.
Calochortus fimbriatus late-flowered mariposa-lily	None/None G3/S3 1B.3 BLM S USFS S SBBG	Perennial bulbiferous herb. Chaparral, cismontane woodland, riparian woodland. Serpentinite (sometimes). Elevations: 900-6250ft. (275-1905m.) Blooms Jun-Aug.	Not Expected	While suitable coastal scrub habitat is present, the necessary soil types are not.
Calochortus palmeri var. *palmeri* Palmer's mariposa-lily	None/None G3T2/S2 1B.2 BLM S USFS S SBBG	Perennial bulbiferous herb. Chaparral, lower montane coniferous forest, meadows and seeps. Mesic. Elevations: 2330-7840ft. (710-2390m.) Blooms Apr-Jul.	Not Expected	While chaparral habitat is present, the elevation requirements are not.

Scientific Name Common Name	Status (Federal/State, NatureServe, CRPR)	Habitat Requirements	Potential to Occur in SA	Habitat Suitability/ Observations
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.	Not Expected	While chaparral and coastal scrub habitat are present, granitic and rocky terrain is not.
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	While chaparral and coastal scrub habitat are present, the closest CNDDB record is approximately 4 miles and was recorded 43 years ago.
Canbya candida white pygmy-poppy	None/None G3G4/S3S4 4.2 USFS S	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	Vegetation communities listed are not present within the Study Area.
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	While chaparral habitat is present, there are no CNDDB occurrences of this species within five miles of the Study Area. In addition, this is a perennial shrub that would be identifiable during the reconnaissance field surveys and was not observed in the Study Area.
Chorizanthe parryi var. *fernandina* San Fernando Valley spineflower	None/SE G3T1/S1 1B.1 USFS S	Annual herb. Coastal scrub, valley and foothill grassland. Sandy soils. Elevations: 490-4005ft. (150-1220m.) Blooms Apr-Jul.	Moderate Potential	While coastal scrub and sandy soils are present, preferred habitat for this species, including compacted mesas, are absent from the Study Area. Multiple CNDDB records occur within the 5-mile radius search, with the closest being approximately 0.2 miles from the Study Area. Therefore, this species has a moderate potential to occur in the Study Area.

Scientific Name Common Name	Status (Federal/State, NatureServe, CRPR)	Habitat Requirements	Potential to Occur in SA	Habitat Suitability/ Observations
Chorizanthe parryi var. *parryi* Parry's spineflower	None/None G3T2/S2 1B.1 BLM S USFS S	Annual herb. Chaparral, cismontane woodland, coastal scrub, valley and foothill grassland. Openings, Rocky (sometimes), sandy (sometimes). Elevations: 900-4005ft. (275-1220m.) Blooms Apr-Jun.	Moderate Potential	Suitable coastal scrub and sandy soils are present in the Study Area. The closest CNDDB record is approximately 4.5 miles and was recorded 11 years ago.
Deinandra minthornii Santa Susana tarplant	None/SR G2/S2 1B.2 BLM S	Perennial deciduous shrub. Chaparral, coastal scrub. On sandstone outcrops and crevices, in shrubland. Elevations: 920-2495ft. (280-760m.) Blooms Jul-Nov.	Not Expected	While chaparral and coastal scrub are present, sandstone outcrops are not.
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	While coastal scrub is present, vernal pools are not.
Delphinium parryi ssp. *purpureum* Mt. Pinos larkspur	None/None G4T4/S4 4.3 USFS S SBBG	Perennial herb. Chaparral, mojavean desert scrub, pinyon and juniper woodland. Elevations: 3280-8530ft. (1000-2600m.) Blooms May-Jun.	Not Expected	While chaparral habitat is present, the elevation requirements are not.
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	While chaparral and coastal scrub, *Encelia* and *Lepidospartum* are present in the Study Area, the closest CNDDB record is approximately 5 miles and states that the species is possibly extirpated from the region.
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	Clay soil requirements are not present.
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.	Low Potential	While riparian woodland habitat is present, the project falls within the lower limit of the species' document elevation range.

Scientific Name Common Name	Status (Federal/State, NatureServe, CRPR)	Habitat Requirements	Potential to Occur in SA	Habitat Suitability/ Observations
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, alkaline flats are not present.
Horkelia cuneata var. *puberula* mesa horkelia	None/None G4T1/S1 1B.1 BLM S USFS S	Perennial herb. Chaparral, cismontane woodland, coastal scrub. Sandy or gravelly sites. Elevations: 230-2660ft. (70-810m.) Blooms Feb-Jul(Sep).	Not Expected	While chaparral and coastal scrub habitat are present, there are no CNDDB occurrences of this species within five miles of the Study Area.
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	While riparian woodland and coastal scrub habitat are present, this perennial tree species was not observed during the reconnaissance field surveys. There are no CNDDB occurrences of this species within five miles of the Study Area.
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	Vegetation communities listed are not present within the Study Area.
Lepechinia fragrans fragrant pitcher sage	None/None G3/S3 4.2 USFS S	Perennial shrub. Chaparral. Elevations: 65-4300ft. (20-1310m.) Blooms Mar-Oct.	Not Expected	While chaparral habitat is present, this perennial shrub species was not observed during the reconnaissance field surveys. There are no CNDDB occurrences of this species within five miles of the Study Area.
Lepechinia rossii Ross' pitcher sage	None/None G1/S1 1B.2 USFS S	Perennial shrub. Chaparral. Soil derived from fine-grained, reddish sedimentary rock. Elevations: 1000-2590ft. (305-790m.) Blooms May-Sep.	Not Expected	Soil requirements are not present.
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.	Not Expected	While vegetation community requirements are present, this species was not observed during the reconnaissance field surveys.

Scientific Name Common Name	Status (Federal/State, NatureServe, CRPR)	Habitat Requirements	Potential to Occur in SA	Habitat Suitability/ Observations
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	While vegetation community requirements are present, this species was not observed during the reconnaissance field surveys. There are no CNDDB occurrences of this species within five miles of the 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	While vegetation community requirements are present, this species was not observed during the reconnaissance field surveys. There are no CNDDB occurrences of this species within five miles of the Study Area.
Malacothamnus davidsonii Davidson's bushmallow	None/None G2/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	While vegetation community requirements are present, this species was not observed during the reconnaissance field surveys. There are no CNDDB occurrences of this species within five miles of the Study Area.
Malacothamnus marrubioides Santa Clarita bushmallow	None/None G3?/S3 4.2	Chaparral, Cismontane woodland, Riparian woodland. 55-1170m. Blooms (Jan-Mar)Apr-Jul(Aug-Dec).	Not Expected	While vegetation community requirements are present, this species was not observed during the reconnaissance field surveys. There are no CNDDB occurrences of this species within five miles of the Study Area.
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 surrouded by other habitat types. Elevations: 100-2150ft. (30-655m.) Blooms Apr-Jun.	Not Expected	Swales and vernal pools are not present.
Navarretia ojaiensis Ojai navarretia	None/None G2/S2 1B.1 USFS S	Annual herb. Chaparral, coastal scrub, valley and foothill grassland. Openings in shrublands or grasslands. Elevations: 900-2035ft. (275-620m.) Blooms May-Jul.	Low Potential	While chaparral and coastal scrub habitat are present, the project falls within the lower limit of the species' document elevation range. The closest CNDDB record is approximately 5 miles and was recorded 22 years ago.

Scientific Name Common Name	Status (Federal/State, NatureServe, CRPR)	Habitat Requirements	Potential to Occur in SA	Habitat Suitability/ Observations
Navarretia setiloba Piute Mountains navarretia	None/None G2/S2 1B.1 BLM S USFS S	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	Vegetation requirements are not present.
Opuntia basilaris var. *brachyclada* short-joint beavertail	None/None G5T3/S3 1B.2 BLM S USFS S	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	While chaparral habitat is present, the project falls outside of the species' document elevation range.
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.
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	Vegetation requirements are not present and the project falls outside of the species' document elevation range.
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).	Moderate Potential	Chaparral and riparian woodland habitat are present. The closest CNDDB record is approximately 0.25 miles northwest of the Study Area in Castaic Creek, and was recorded 20 years ago.
Schoenoplectiella saximontana Rocky Mountain bulrush	None/None G5/S2 2B.1	Marshes and swamps (margins), Vernal pools. Sandy (often) 45-720m. Blooms (Mar-May)Jun-Sep(Oct).	Not Expected	Vernal pools are not present.
Senecio aphanactis chaparral ragwort	None/None G3/S2 1B.2	Annual herb. Chaparral, cismontane woodland, coastal scrub. Drying alkaline flats. Elevations: 50-2625ft. (15-800m.) Blooms Jan-Apr(May).	Not Expected	While coastal scrub is present, alkaline flats are not.

Scientific Name Common Name	Status (Federal/State, NatureServe, CRPR)	Habitat Requirements	Potential to Occur in SA	Habitat Suitability/ Observations
Streptanthus campestris southern jewelflower	None/None G3/S3 1B.3 BLM S USFS S	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	Terrain and elevation requirements are not present.
Symphyotrichum greatae Greata's aster	None/None G2/S2 1B.3 BLM S	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	Mesic canyons are not present.
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.	Moderate Potential	California Sagebrush – California Buckwheat scrub and brittle bush scrub vegetation exists within the Study Area and includes suitable food plant genera. The closest CNDDB record is approximately 2 miles and was recorded 63 years ago.
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.
Danaus plexippus plexippus pop. 1 monarch - California overwintering population	FPT/None G4T1T2Q/S2 USFS S	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	Wind-protected tree groves (e.g., eucalyptus) are not present.
Euphydryas editha quino quino checkerspot butterfly	FE/SCE 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	Food plants (i.e., Dot-seed plantain [*Plantago erecta*], Desert plantain [*Plantago insularis*], and Purple owl's clover [*Orthocarpus purpurescens*]) are absent from the Study Area.

Scientific Name Common Name	Status (Federal/State, NatureServe, CRPR)	Habitat Requirements	Potential to Occur in SA	Habitat Suitability/ Observations
Streptocephalus woottoni Riverside fairy shrimp	FE/None G1G2/S2	Endemic to Western Riverside, Orange, and San Diego counties in areas of tectonic swales/earth slump basins in grassland and coastal sage scrub. Inhabit seasonally astatic pools filled by winter/spring rains. Hatch in warm water later in the season.	Not Expected	Vernal pools are not present.
Fish				
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.	Moderate Potential	Potentially suitable aquatic habitat occurs in the low-flow channel of Castaic Creek, including presence of aquatic vegetation (e.g., tall flatsedge) and slow-moving water. However, because there is no permanent water flow in this stretch of the creek, this species would only occupy the creek after a large storm event. The closest CNDDB record is located approximately 0.1 miles south of the Study Area in the Santa Clara River and was recorded 18 years ago
Gila orcuttii arroyo chub	None/None G1/S2 SSC USFS S	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.	Moderate Potential	Potentially suitable aquatic habitat occurs in the low-flow channel of the Castaic Creek, including sandy substrate and presence of algae. The closest CNDDB record is located approximately 0.1 miles south of the Study Area in the Santa Clara River and was recorded 14 years ago
Pantosteus 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.	Moderate Potential	Potentially suitable aquatic habitat occurs in the low-flow channel of the Castaic Creek, including sandy substrate and presence of algae. The closest CNDDB record overlaps the northwestern portion of the Study Area along the lower reach of Castaic Creek and was documented 18 years ago.

Scientific Name Common Name	Status (Federal/State, NatureServe, CRPR)	Habitat Requirements	Potential to Occur in SA	Habitat Suitability/ Observations
Rhinichthys gabrielino Santa Ana speckled dace	FPT/None G1/S1 SSC USFS S	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 willow cobble and gravel riffles.	Not Expected	Perennial sources of freshwater are absent from the Study Area. Castaic Creek is an intermittent drainage and does not contain flowing water year-round.
Amphibians				
Anaxyrus californicus arroyo toad	FE/None G1G2/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.	Not Expected	Suitable habitat is present; however, all CNDDB occurrences within five miles of the Study Area are more than 30 years old.
Rana boylii pop. 6 foothill yellow-legged frog - south coast DPS	FE/SE G3T1/S1 BLM S USFS S	Southern Coast Ranges from Monterey Bay south through San Gabriel Mountains; west of the Salinas River in Monterey Co, south through Transverse Ranges, and east through San Gabriel Mountains. Historically may have ranged to Baja California. Partly shaded willow streams and riffles with a rocky substrate in a variety of habitats. Needs at least some cobble-sized substrate for egg-laying and at least 15 weeks to attain metamorphosis.	Not Expected	Suitable soil substrate (i.e., cobble-sized) is absent from the Study Area.
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	Perennial sources of freshwater are absent from the Study Area. Castaic Creek is an intermittent drainage and does not contain flowing water year-round.
Rana muscosa southern mountain yellow-legged frog	FE/SE G1/S2 WL USFS S	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. May overwinter under frozen lakes. Often encountered within a few feet of water. Tadpoles may require 2 - 4 yrs to complete their aquatic development.	Not Expected	Perennial sources of freshwater are absent from the Study Area. Castaic Creek is an intermittent drainage and does not contain flowing water year-round.

Scientific Name Common Name	Status (Federal/State, NatureServe, CRPR)	Habitat Requirements	Potential to Occur in SA	Habitat Suitability/ Observations
Spea hammondii western spadefoot	FPT/None G2G3/S3S4 SSC BLM S	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 are absent from 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	Castaic Creek is an intermittent drainage and does not contain slow moving waters.
Reptiles				
Actinemys pallida southwestern pond turtle	FPT/None G2/SNR SSC BLM S USFS S	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. Occurs in southern California from Monterey County south to Los Angeles, Riverside, and San Diego Counties into northern Baja California, Mexico.	Not Expected	Perennial sources of freshwater are absent from the Study Area. Castaic Creek is an intermittent drainage and does not contain flowing water year-round.
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.	Low Potential	Potentially suitable scrub habitat occurs within the Study Area. However, moist soils are generally absent from the Study Area.
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	Moderately suitable scrub and grassland habitat occurs within the Study Area. However, all CNDDB occurrences within five miles of the Study Area are more than 50 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	While vegetation is not particularly sparse, sandy soil is present. The closest CNDDB record overlaps with the Study Area and was recorded 10 years ago.

Scientific Name Common Name	Status (Federal/State, NatureServe, CRPR)	Habitat Requirements	Potential to Occur in SA	Habitat Suitability/ Observations
Phrynosoma blainvillii coast horned lizard	None/None G4/S4 SSC BLM S	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	Moderately suitable chaparral, scrub and grassland habitat occurs within the Study Area. The closest CNDDB record overlaps with the Study Area and was recorded 10 years ago.
Thamnophis hammondii two-striped gartersnake	None/None G4/S3S4 SSC BLM S USFS S	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.	Not Expected	Perennial sources of freshwater are absent from the Study Area. Castaic Creek is an intermittent drainage and does not contain flowing water year-round.
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	Perennial sources of freshwater are absent from the Study Area. Castaic Creek is an intermittent drainage and does not contain flowing water year-round.
Birds				
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.	Not Expected	While the Study Area contains coastal scrub habitat, these areas are not located near steep, rocky hillsides.
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 with a mix of grasses, forbs, and scattered shrubs are absent from the Study Area.
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.	Low Potential	Chamise-dominated chaparral is absent from the Study Area. Coastal scrub community present on site may provide some low-quality habitat.
Astur 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.	High Potential	Suitable nesting and foraging habitat is present in the Study Area.

Scientific Name Common Name	Status (Federal/State, NatureServe, CRPR)	Habitat Requirements	Potential to Occur in SA	Habitat Suitability/ Observations
Athene cunicularia burrowing owl	None/SCE G4/S2 SSC BLM S USFWS BCC	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.	Low Potential	While coastal scrub habitat is present in the Study Area, California ground squirrel and suitable burrows were not observed during the reconnaissance surveys. The closest CNDDB record is approximately 0.5 miles and was recorded 18 years ago.
Buteo swainsoni Swainson's hawk	None/ST G5/S4 BLM S	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.	Low Potential	Riparian woodland and agricultural habitat is present in the Study Area. Trees in the Study Area could support nesting and the adjacent agricultural and disturbed areas habitat could provide sufficient rodent numbers to support foraging. However, only one historic CNDDB record exists within the 5-mile search radius, and the species is considered possibly extirpated from the region.
Coccyzus americanus occidentalis western yellow-billed cuckoo	FT/SE G5T2T3/S1 BLM S USFS S	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, nettles, or wild grape.	Not Expected	Riparian habitat associated with flood-bottoms of larger river systems is absent from the Study Area. No CNDDB records have been reported within five miles of the Study Area. Additionally, jungles of willow and blackberry are absent from the Study Area.
Elanus leucurus white-tailed kite	None/None G5/S3S4 FP BLM S	Rolling foothills and valley margins with scattered oaks and river bottomlands or marshes next to deciduous woodland. Open grasslands, meadows, or marshes for foraging close to isolated, dense-topped trees for nesting and perching.	Not Expected	Open grasslands for foraging are present, while meadows, or marshes close to isolated, dense-topped trees for nesting and perching are absent from the Study Area.

Scientific Name Common Name	Status (Federal/State, NatureServe, CRPR)	Habitat Requirements	Potential to Occur in SA	Habitat Suitability/ Observations
Empidonax traillii extimus southwestern willow flycatcher	FE/SE	Riparian woodlands of California	No Expected	Although suitable Fremont cottonwood woodland vegetation is present, there are no known or documented breeding sites within the Study Area. The primary flycatcher drainages in California are located within the Kern, Owen's, San Luis Rey, Santa Ana, and Santa Margarita Rivers. There are no known CNDDB occurrences within 5 miles.
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.	Not Expected	Prairie, bald hills, mountain meadows, open coastal plains, and fallow grain fields are absent from the Study Area.
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	No cliffs occur near or within the Study Area that are suitable for breeding. Study Area could be used for foraging, however, this has low potential due to the surrounding area being developed for commercial, residential, and industrial purposes.
Gymnogyps californianus California condor	FE/SE G1/S2 FP	Require vast expanses of open savannah, grasslands, and foothill chaparral in mountain ranges of moderate altitude. Deep canyons containing clefts in the rocky walls provide nesting sites. Forages up to 100 miles from roost/nest.	Low Potential	While limited fields of non-native grassland are present, vast expanses of open savannah, grassland, and foothill chaparral for foraging are absent from the Study Area. Canyons with rock-walls for nesting are also absent from the Study Area.
Icteria virens yellow-breasted chat	None/None G5/S4 SSC	Summer resident; inhabits riparian thickets of willow and other brushy tangles near watercourses. Nests in low, dense riparian, consisting of willow, blackberry, wild grape; forages and nests within 10 ft of ground.	Low Potential	Riparian thickets of willow or other brushy tangles are generally absent from the Study Area.

Scientific Name Common Name	Status (Federal/State, NatureServe, CRPR)	Habitat Requirements	Potential to Occur in SA	Habitat Suitability/ Observations
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.	Moderate Potential	The scrub habitat present in the Study Area may provide suitable nesting habitat. However, open areas for foraging are present.
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	The Study Area contains limited scrub vegetation within the California sagebrush - California buckwheat scrub vegetation community. However, the project site is surrounded by development, including industrial developments to the north and industrial uses and developed roadways to the east and south, and disturbed vegetation to the south.
Riparia riparia bank swallow	None/ST G5/S3 BLM S	Colonial nester; nests primarily in riparian and other lowland habitats west of the desert. Requires vertical banks/cliffs with fine-textured/sandy soils near streams, rivers, lakes, ocean to dig nesting hole.	Not Expected	While sandy soils are present, there are no substantial banks or cliffs suitable for nesting.
Setophaga petechia yellow warbler	None/None G5/S3 SSC	Riparian plant associations in close proximity to water. Also nests in montane shrubbery in open conifer forests in Cascades and Sierra Nevada. Frequently found nesting and foraging in willow shrubs and thickets, and in other riparian plants including cottonwoods, sycamores, ash, and alders.	Not Expected	Dense riparian vegetation is generally absent in the Study Area. However, the Study Area is not situated near permanent water sources. Therefore, this species is not expected to occur.
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.	Moderate Potential	A dry creek bottom and riparian vegetation is present in the Study Area. Additionally, there are CNDDB records within the Study Area recorded 15 years ago.

Scientific Name Common Name	Status (Federal/State, NatureServe, CRPR)	Habitat Requirements	Potential to Occur in SA	Habitat Suitability/ Observations
Mammals				
Antrozous pallidus pallid bat	None/None G4/S3 SSC BLM S USFS S	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.	Not Expected	Rocky areas are not present near or within the Study Area. Additionally, the Study Area is surrounded by developed land to the east and south, making it unsuitable for this species.
Corynorhinus townsendii Townsend's big-eared bat	None/None G4/S2 SSC BLM S USFS S	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.	Not Expected	Forested areas are present near the Study Area. However, the Study Area is surrounded by developed land to the east and south, making it unsuitable for this species.
Euderma maculatum spotted bat	None/None G4/S3 SSC BLM S	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	Suitable roosting habitat (rock crevices in cliffs or caves) is absent from the Study Area. Use of the Study Area by this species would be for foraging only.
Eumops perotis californicus western mastiff bat	None/None G4G5T4/S3S4 SSC BLM S	Occurs in open, semi-arid to arid habitats, including coniferiferous 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 near the Study Area, they are frequently disturbed, consistently generate noise, 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 BLM S	Occurs in desert riparian, desert wash, desert scrub, desert succulent scrub, alkali scrub and palm oasis habitats. Needs rocky, rugged terrain with abandonded mines or caves for roosting.	Not Expected	Rocky, rugged terrain is absent from the Study Area.

Scientific Name Common Name	Status (Federal/State, NatureServe, CRPR)	Habitat Requirements	Potential to Occur in SA	Habitat Suitability/ Observations
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	Scrub habitat is present; however, no CNDDB records have been reported 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	Scrub habitat is present; however, sandy soil is not friable. Additionally, no CNDDB records within five miles of the Study Area have been reported.
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	Only marginally suitable habitat for this species is present in the Study Area given the adjacent development and disturbed landscape. Additionally, suitable burrows were not observed during the reconnaissance surveys.

Regional Vicinity refers to within a nine-quad search radius of site.

Status (Federal/State)

FE = Federal Endangered
FT = Federal Threatened
FPE = Federal Proposed Endangered
FPT = Federal Proposed Threatened
FD = Federal Delisted
FC = Federal Candidate
SE = State Endangered
ST = State Threatened
SCE = State Candidate Endangered
SCT = State Candidate Threatened
SR = State Rare
SD = State Delisted
SSC = CDFW Species of Special Concern
FP = CDFW Fully Protected
WL = CDFW Watch List

California Native Plant Society California Rare Plant Rank (CRPR)

1A = Presumed extirpated in California, and rare or extinct elsewhere
1B = Rare, Threatened, or Endangered in California and elsewhere
2A = Presumed extirpated in California, but common elsewhere
2B= Rare, Threatened, or Endangered in California, but more common elsewhere
3 = Need more information (Review List)
4 = Limited Distribution (Watch List)

CRPR Threat Code Extension

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

Scientific Name Common Name	Status (Federal/State, NatureServe, CRPR)	Habitat Requirements	Potential to Occur in SA	Habitat Suitability/ Observations

Other Statuses

G1 or S1	Critically Imperiled Globally or Subnationally (state)
G2 or S2	Imperiled Globally or Subnationally (state)
G3 or S3	Vulnerable to extirpation or extinction Globally or Subnationally (state)
G4/5 or S4/5	Apparently secure, common and abundant
GH or SH	Possibly Extirpated – missing; known from only historical occurrences but still some hope of rediscovery

Additional notations may be provided as follows

T – Intraspecific Taxon (subspecies, varieties, and other designations below the level of species)

Q – Questionable taxonomy that may reduce conservation priority

? – Inexact numeric rank

Appendix C

RCNM Noise Modeling and Vibration Analysis

Roadway Construction Noise Model (RCNM),Version 1.1

Report date: 01/07/2026
Case Description: Linear. Grubbing and Land Clearing

**** Receptor #1 ****

Description	Land Use	Baselines (dBA) Daytime	Evening	Night
Linear. Grubbing and Land Clearing	Residential	65.0	55.0	50.0

Equipment

Description	Impact Device	Usage (%)	Spec Lmax (dBA)	Actual Lmax (dBA)	Receptor Distance (feet)	Estimated Shielding (dBA)
Excavator	No	40		80.7	50.0	0.0
Tractor	No	40	84.0		50.0	0.0

Results

Noise Limits (dBA)

Noise Limit Exceedance (dBA)

Equipment	Calculated (dBA) Day Lmax	Day Leq	Evening Lmax	Evening Leq	Night Lmax	Night Leq	Day Lmax	Day Leq	Evening Lmax	Evening Leq	Night Lmax	Night Leq
Excavator	80.7	76.7	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A
Tractor	84.0	80.0	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A
Total	84.0	81.7	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: 01/07/2026
Case Description: Linear, Grading and Excavation

**** Receptor #1 ****

Description	Land Use	Baselines (dBA) Daytime	Evening	Night
Linear, Grading and Excavation	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
Roller	No	20		80.0	50.0	0.0
Front End Loader	No	40		79.1	50.0	0.0

Results

Noise Limits (dBA)

Noise Limit Exceedance (dBA)

Equipment	Calculated (dBA) 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
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
Front End Loader	79.1	75.1	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A
Total	80.0	78.6	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: 01/07/2026
Case Description: Linear, Drainage, Utilities and Sub-Grade

**** Receptor #1 ****

Description	Baselines (dBA) Land Use	Daytime	Evening	Night
Linear, Drainage, Utilities and Sub-Grade	Residential	65.0	55.0	50.0

Description	Impact Device	Usage (%)	Equipment Spec Lmax (dBA)	Actual Lmax (dBA)	Receptor Distance (feet)	Estimated Shielding (dBA)
Grader	No	40	85.0		50.0	0.0
Man Lift	No	20		74.7	50.0	0.0
Scraper	No	40		83.6	50.0	0.0

Results

Noise Limit Exceedance (dBA)							Noise Limits (dBA)		
Calculated (dBA)							Day	Evening	Night
Equipment	Lmax	Leq	Lmax	Leq	Lmax	Leq	Lmax	Leq	Lmax	Leq	Lmax	Leq	Lmax	Leq
Grader	85.0	81.0	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A
Man Lift	74.7	67.7	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A
Scraper	83.6	79.6	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A
Total	85.0	83.5	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: 01/07/2026
Case Description: Linear, Paving

**** Receptor #1 ****

Description	Land Use	Baselines (dBA) Daytime	Evening	Night
Linear, Paving	Residential	65.0	55.0	50.0

Equipment

Description	Impact Device	Usage (%)	Spec Lmax (dBA)	Actual Lmax (dBA)	Receptor Distance (feet)	Estimated Shielding (dBA)
Roller	No	20		80.0	50.0	0.0
Roller	No	20		80.0	50.0	0.0
Roller	No	20		80.0	50.0	0.0

Results

Noise Limits (dBA)

Noise Limit Exceedance (dBA)

Equipment	Calculated (dBA) 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
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
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
Total	80.0	77.8	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: 01/07/2026
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)
Grader	No	40	85.0		50.0	0.0
Scraper	No	40		83.6	50.0	0.0
Backhoe	No	40		77.6	50.0	0.0

Results

Noise Limits (dBA)

Noise Limit Exceedance (dBA)

Equipment	Calculated (dBA) Day Lmax	Day Leq	Evening Lmax	Evening Leq	Night Lmax	Night Leq	Day Lmax	Day Leq	Evening Lmax	Evening Leq	Night Lmax	Night Leq
Grader	85.0	81.0	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A
Scraper	83.6	79.6	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A
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	85.0	83.8	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: 01/07/2026
Case Description: Grading

**** Receptor #1 ****

Description	Land Use	Baselines (dBA) Daytime	Evening	Night
Grading	Residential	65.0	55.0	50.0

Equipment

Description	Impact Device	Usage (%)	Spec Lmax (dBA)	Actual Lmax (dBA)	Receptor Distance (feet)	Estimated Shielding (dBA)
Grader	No	40	85.0		50.0	0.0
Dozer	No	40		81.7	50.0	0.0
Backhoe	No	40		77.6	50.0	0.0

Results

Noise Limits (dBA)

Noise Limit Exceedance (dBA)

Equipment	Calculated (dBA) Day Lmax	Day Leq	Evening Lmax	Evening Leq	Night Lmax	Night Leq	Day Lmax	Day Leq	Evening Lmax	Evening Leq	Night Lmax	Night Leq
Grader	85.0	81.0	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A
Dozer	81.7	77.7	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A
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	85.0	83.2	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: 01/07/2026
Case Description: Building Construction

**** Receptor #1 ****

Description	Land Use	Baselines (dBA) Daytime	Evening	Night
Building Construction	Residential	65.0	55.0	50.0

Equipment

Description	Impact Device	Usage (%)	Spec Lmax (dBA)	Actual Lmax (dBA)	Receptor Distance (feet)	Estimated Shielding (dBA)
Man Lift	No	20		74.7	50.0	0.0
Man Lift	No	20		74.7	50.0	0.0
Backhoe	No	40		77.6	50.0	0.0

Results

Noise Limits (dBA)

Noise Limit Exceedance (dBA)

Equipment	Calculated (dBA) Day Lmax	Day Leq	Evening Lmax	Evening Leq	Night Lmax	Night Leq	Day Lmax	Day Leq	Evening Lmax	Evening Leq	Night Lmax	Night Leq
Man Lift	74.7	67.7	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A
Man Lift	74.7	67.7	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A
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	75.4	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: 01/07/2026
Case Description: Paving

**** Receptor #1 ****

Description	Land Use	Baselines (dBA) Daytime	Evening	Night
Paving	Residential	65.0	55.0	50.0

Equipment

Description	Impact Device	Usage (%)	Spec Lmax (dBA)	Actual Lmax (dBA)	Receptor Distance (feet)	Estimated Shielding (dBA)
Roller	No	20		80.0	50.0	0.0
Roller	No	20		80.0	50.0	0.0
Backhoe	No	40		77.6	50.0	0.0

Results

Noise Limits (dBA)

Noise Limit Exceedance (dBA)

Equipment	Calculated (dBA) 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
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
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	80.0	78.0	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A

Distance	Vibration @ 25 ft	Commercial Building to the South of Well E-17	Commercial Building to the East of Centralized Water Treatment System
		35	20
Large Bulldozer	**0.089**	**0.054**	**0.124**
Loaded Trucks	**0.076**	**0.046**	**0.106**
Small Bulldozer	**0.003**	**0.002**	**0.004**