Honby Tanks Pipeline Project

Final Initial Study – Mitigated Negative Declaration

prepared by

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

prepared with the assistance of

Rincon Consultants, Inc.
180 North Ashwood Avenue
Ventura, California 93003

December 2023

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Environmental Scientists | Planners | Engineers
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Acronyms and Abbreviations

APN	Assessor's Parcel Number
AQMP	Air Quality Management Plan
AWWA	American Water Works Association
BAAQMD	Bay Area Air Quality Management District
BP	Business Park
CAA	Clean Air Acts
CAAQS	California Ambient Air Quality Standards
CalEEMod	California Emissions Estimator Model
CalEPA	California Environmental Protection Agency
CalRecycle	California Department of Resources Recycling and Recovery
Caltrans	California Department of Transportation
CAO	Cleanup and Abatement Orders
CARB	California Air Resources Board
CDFW	California Department of Fish and Wildlife
CDO	Cease and Desist Orders
CEQA	California Environmental Quality Act
CO	Carbon monoxide
CO_2	carbon dioxide
CO_2e	carbon dioxide equivalent
CRHR	California Register of Historical Resources
dB	decibel
DOC	California Department of Conservation
DPM	diesel particulate matter
DTSC	California Department of Toxic Substance Control
ESLs	Environmental Screening Levels
FEMA	Federal Emergency Management Agency
FHWA	Federal Highway Administration
Fps	feet per second
FTA	Federal Transit Administration
FTBMI	Fernandeño Tataviam Band of Mission Indians
GHG	Greenhouse Gases

gpm	gallons per minute
GSA	Groundwater Sustainability Agency
GSP	Groundwater Sustainability Plan
HMMSCP	Hazardous Materials Management and Spill Control Plan
IPCC	Intergovernmental Panel on Climate Change
LACRWQB	Los Angeles Regional Water Quality Control Board
L_{eq}	one-hour equivalent noise level
LF	linear feet
LHMP	Local Hazard Mitigation Plan
LSTs	Localized Significance Thresholds
LUST	leaking underground storage tank
MRZ-2	Mineral Resource Zone 2
NAAQS	National Ambient Air Quality Standards
NAHC	Native American Heritage Commission
NO_X	nitrogen oxides
NPDES	National Pollutant Discharge Elimination System
NU5	Non-Urban 5
PE	Professional Engineer
PG	Professional Geologist
PM_{10}	particulate matter with diameters of ten microns or less
$PM_{2.5}$	particulate matter with diameters of 2.5microns or less
PPV	peak particle velocity
PRC	Public Resources Code
RCNM	Roadway Construction Noise Model
RMS	Root Mean Squared
ROGs	reactive organic gases
RTP/SCS	Regional Transportation Plan/Sustainable Communities Strategy
RWQCB	Regional Water Quality Control Board
SCAB	South Coast Air Basin
SCAG	Southern California Association of Governments
SCAQMD	South Coast Air Quality Management District
SCCIC	South Central Coastal Information Center
SCMC	Santa Clarita Municipal Code

SCV Water	Santa Clarita Valley Water Agency
SFB RWQCB	San Francisco Bay Regional Water Quality Control Board
SGMP	Soil and Groundwater Management Plan
SLF	Sacred Lands File
SRA	source receptor area
SRA	State Responsibility Area
SVP	Society of Vertebrate Paleontology
SWPPP	Storm Water Pollution Prevention Plan
SWRCB	California State Water Resources Control Board
TACs	toxic air contaminants
UR2	Urban Residential 2
USACE	US Army Corps of Engineers
USDA	United States Department of Agriculture
USEPA	United States Environmental Protection Agency
USFWS	United States Fish and Wildlife Service
USGS	United States Geologic Survey
VHFHSZ	Very High Fire Hazard Severity Zone
VMT	vehicle miles traveled
VOCs	volatile organic compounds
WEAP	Worker Environmental Awareness Program

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Initial Study

1. Project Title

Honby Tanks Pipeline Project

2. Lead Agency/Project Sponsor Name and Address

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

3. Contact Person and Contact Information

Wai Lan Lee, PE, Engineer
Phone: (661) 259-2737
Email: wlee@scvwa.org

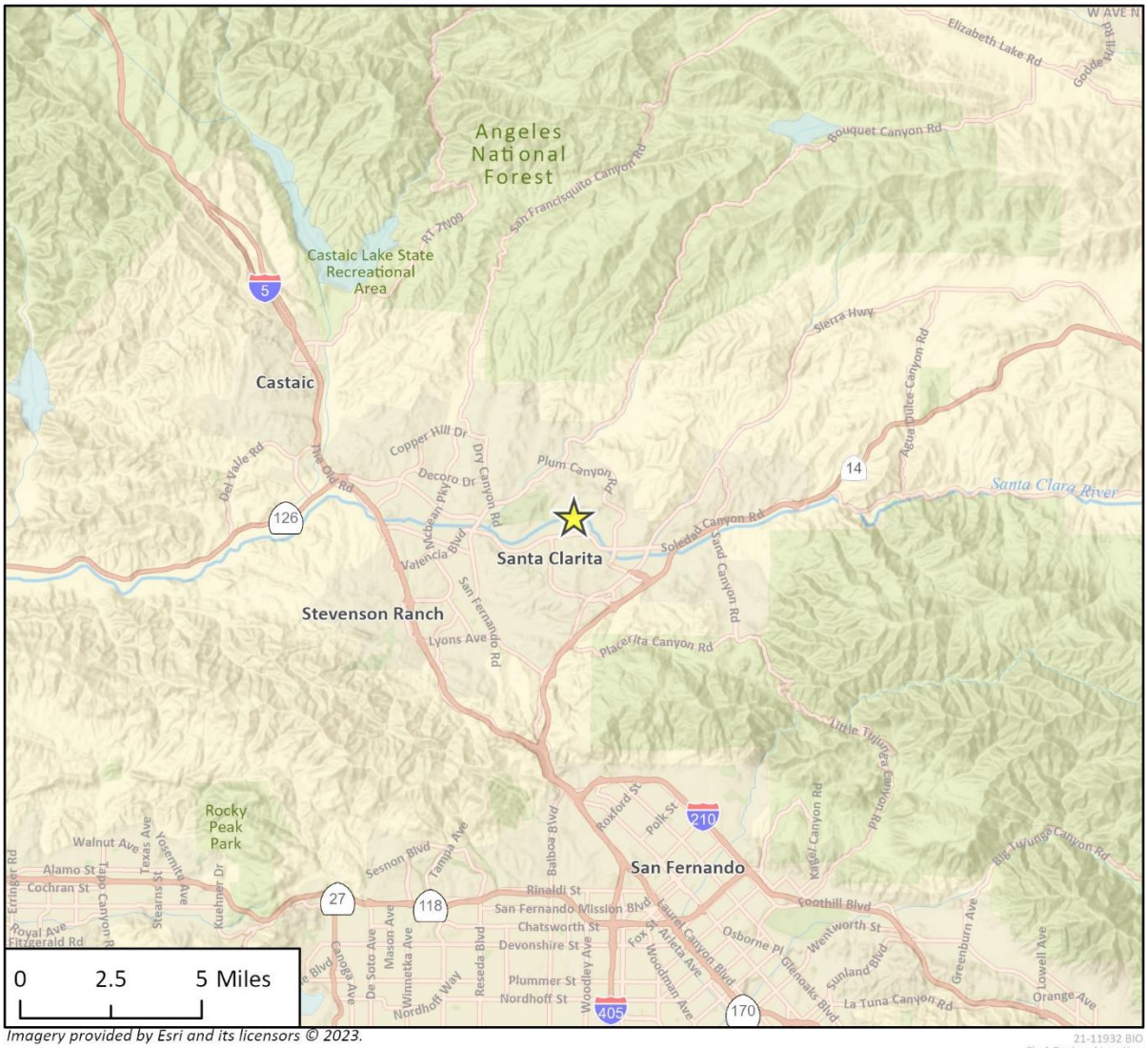
4. Project Location

The project site is located on Assessor's Parcel Number (APN) 2801-001-900, 2805-002-008, 2805-002-902, and 2805-013-900 and within public rights-of-way within Santa Clarita, California. See Figure 1 for a map of the regional project location and Figure 2 for a map of the project site location in a local context.

5. General Plan Designation and Zoning

The City of Santa Clarita's General Plan land use designation and zoning designation for the project site is: Non-Urban 5 (NU5), Urban Residential 2 (UR2), and Business Park (BP).

Figure 1 Regional Location



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21-11932 BIO
Fig 1 Regional Location

Project Location

N

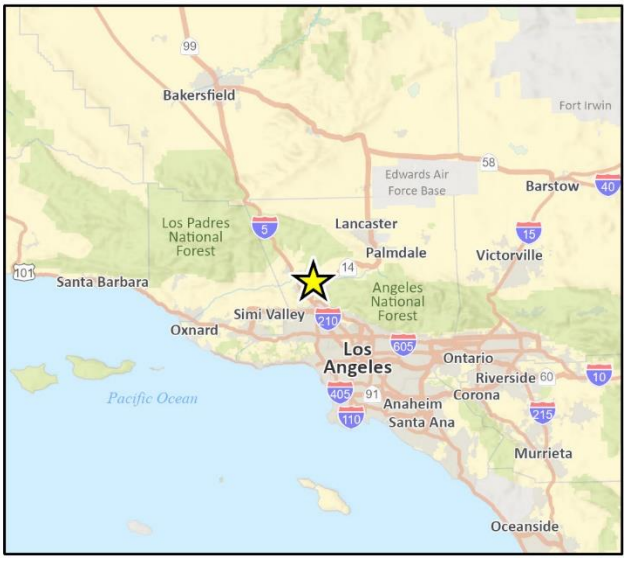

Figure 2 Project Site Location

6. Project Description

Background

The Honby Pipeline is a critical piece of Santa Clarita Valley Water Agency's (SCV Water) infrastructure, connecting the Honby Tanks on the north side of the Santa Clara River to the pump stations and wells that supply the tanks on the south side of the river. The Honby Pipeline conveys water to and from the Honby Tanks and the Honby Booster Station. Well SC-8, Well SC-9, Santa Clarita Wells, Honby Well, and the North Oak Wells all feed into the Honby tanks via the Honby Pipeline. The Honby Pipeline has been identified as a hydraulic bottleneck and requires replacement to ensure water supply reliability and longevity for the SCV Water system.

Project Description

The Honby Tanks Pipeline Project (herein referred to as "proposed project" or "project") would involve construction and operation of a new pipeline to convey water to and from the Honby Tanks and the Honby Booster Station. The new pipeline would be constructed of either steel or ductile iron and would be upsized from 16 inches in diameter to between 24 to 30 inches in diameter. The pipeline would follow the alignment of the existing Honby Pipeline downhill from the Honby Tank site to the Santa Clara River and would be approximately 2,608 feet in length. The pipeline would cross the Santa Clara River then head west, parallel to the river to the intersection with Honby Avenue. Once the pipeline intersects with Honby Avenue, it would turn south, and connect with the existing pipeline at the intersection of Honby Avenue and Santa Clara Street. Figure 2 shows the pipeline alignment. A minimum 20-foot permanent easement and additional 20-foot temporary easement would be required for the project. The proposed pipeline would be buried underground for the entirety of the alignment and would not have any above ground components upon completion. The project would require the removal of the fencing bordering the Honby Tanks due to the limited work area at the top of the slope. At the end of the existing pipeline's usable life, the existing Honby pipeline would be abandoned in place.

Construction

Before it is abandoned in place, the existing pipeline would be drained of any water and then filled with grout or cellular concrete. Concrete plugs would be installed at each end of the existing pipeline.

The new pipeline would be installed via open cut installation across the river and on the hillside. This is expected to require dewatering, which may include treatment of groundwater prior to discharge into a storm drain or into the Santa Clara River. Tight sheet shoring to protect the trench would be required due to the potential of groundwater and potential sloughing of alluvial soils.

Construction of the proposed project would occur between October 2024 and January 2026 Construction activities would typically occur between 7:00 A.M. and 4:00 PM Monday through Friday. No nighttime construction is proposed. Occasional weekend work may be required.

Construction personnel vehicles would be parked along Furnivall Avenue as well as on the SCV Water-owned pump station located on the northeast corner of Santa Clara Street and Furnivall Avenue, as needed. Staging is anticipated at several locations including the SCV Water-owned tank site at the top of the hill, the SCV Water easement behind Rio Vista Elementary school, and the SCV Water-owned pump station located on the northeast corner of Santa Clara Street and Furnivall Avenue.

Construction of the project would have a ground disturbance of approximately 2.4 acres. Given the project would disturb over one acre, the project would be subject to the requirements of the National Pollutant Discharge Elimination System (NPDES) Construction General Permit. The Construction General Permit requires the development of a Storm Water Pollution Prevention Plan (SWPPP). The work area on the hillside would require approximately 40 total feet of width. The majority of the excavation would be approximately 10 feet deep.

Construction within the Santa Clara River bed would occur over the course of one month. The segment of pipeline underlying the Santa Clara River would be installed at a depth below the known river scour level, which is estimated to be 20 feet. The pipe would be installed with a minimum of 24.5 feet of cover. Construction methods include the use of lighttight sheet shoring to allow groundwater to be pumped from the trench.

Approximately 300 cubic yards of soil would be exported via haul trucks. Twenty (20) haul truck trips would occur for soil export. Approximately 400 cubic yards of soil would be imported from offsite sources for pipe bedding. Twenty-five (25) haul truck trips would occur for soil import.

Operation and Maintenance

As previously discussed, the proposed project would upsize the existing pipeline from 14 to 16 inches in diameter to 24 or 30 inches in diameter. The velocity in the proposed pipeline would be approximately 5.0 feet per second (fps) with approximate flow of 9,450 gallons per minute (gpm).

The project would not involve any new operation and maintenance activities. No new employees would be required.

7. Surrounding Land Uses and Setting

The project site is surrounded residential development to the east and south, the Santa Clara River to the east and west, open space to the north, Rio Vista Elementary School to the south, and industrial uses to the west.

8. Other Public Agencies Whose Approval is Required

SCV Water is the lead agency for this project. The project would also require the following approvals:

- US Army Corps of Engineers (USACE): Nationwide Permit 58
- California Department of Fish and Wildlife (CDFW): Lake and Streambed Alteration Agreement
- Los Angeles Regional Water Quality Control Board (LACRWQB): NPDES Construction General Permit, Clean Water Act Section 401 Certification
- United States Fish and Wildlife Service (USFWS): permits related to the presence of federally-listed species may be required

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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.

Signature	Date
Printed Name	Title

Environmental Checklist

1 Aesthetics

	Potentially Significant Impact	Less than Significant with Mitigation Incorporated	Less than Significant Impact	No Impact
Except as provided in Public Resources Code Section 21099, would the project:				
a. Have a substantial adverse effect on a scenic vista?	☐	☐	☐	■
b. Substantially damage scenic resources, including but not limited to, trees, rock outcroppings, and historic buildings within a state scenic highway?	☐	☐	☐	■
c. In non-urbanized areas, substantially degrade the existing visual character or quality of public views of the site and its surroundings? (Public views are those that are experienced from a publicly accessible vantage point). If the project is in an urbanized area, would the project conflict with applicable zoning and other regulations governing scenic quality?	☐	☐	☐	■
d. Create a new source of substantial light or glare that would adversely affect daytime or nighttime views in the area?	☐	☐	☐	■

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

According to the City of Santa Clarita's General Plan Conservation and Open Space Element (2011a), "scenic resources" can include "natural open spaces, topographic formations, and landscapes that contribute to a high level of visual quality." The General Plan describes scenic resources in the Santa Clarita Valley as mountains and canyons, woodlands, water bodies, and Vasquez Rocks County Park. The City's General Plan does not specifically define scenic vistas; therefore, there are no designated scenic vistas in the vicinity of the project site.

The Conservation and Open Space Element of the City's General Plan specifically identifies several large mountain and canyon regions that are of aesthetic importance to the community, including Placerita Canyon, Whitney Canyon, Elsmere Canyon, Bouquet Canyon, San Francisquito Canyon, Sand Canyon, Pico Canyon, and Towsley Canyon (City of Santa Clarita 2011a). The project site is not located in any of these identified regions of aesthetic importance nor is it visible from them.

Although the project site itself contains undeveloped natural land, it is located in a suburban setting and is surrounded by residential, institutional, and industrial development. Photographs representative of the project site and surrounding area are shown below in Figure 3, Figure 4, and Figure 5. The project site is not located in a region identified by the City's General Plan as a scenic vista or scenic resource area. As such, the proposed project would not have a substantial adverse effect on a scenic vista. No impact would occur.

NO IMPACT

Figure 3 View of Project Site from the South, Facing Northwest

Figure 4 View of Project Site from the North, Facing South

Figure 5 View of Project Site from the North, Facing Southwest

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

The project site is not located near a designated state scenic highway, as identified by the California Department of Transportation (Caltrans) (Caltrans 2018). The closest designated state scenic highway is State Route 2, located approximately 20 miles to the southeast of the project site. Due to distance and intervening topography, the project site is not visible from State Route 2. Therefore, the project would not substantially damage scenic resources within a state scenic highway. No impact 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?

Pursuant to Public Resources Code (PRC) Section 21071, an incorporated city with a population of at least 100,000 people meets the criteria for an urbanized area. Santa Clarita has a population of approximately 221,345 people and is therefore considered an urbanized area under the California Environmental Quality Act (CEQA; California Department of Finance 2021). The project would include installation of an underground pipeline. Pursuant to California Government Code 53091, the building and zoning ordinances of a county or city do not apply to the location or construction of facilities for the production, storage, or transmission of water, wastewater, or electrical energy by a local agency. During operation, the project would be entirely belowground, and the project site would return to its existing visual character. Therefore, the project, as proposed, would not substantially degrade visual character, and does not conflict with any applicable local land use and zoning policies or other regulations governing scenic quality. No impact would occur.

NO 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 would occur during daytime hours and would not require the use of lighting. Therefore, construction-related impacts to light and glare would not occur.

No permanent lighting or sources of glare be installed as part of the project Therefore, operational-related impacts to light and glare would not occur.

NO IMPACT

2 Agriculture and Forestry Resources

	Potentially Significant Impact	Less than Significant with Mitigation Incorporated	Less than Significant Impact	No Impact
Would the project:				
a. Convert Prime Farmland, Unique Farmland, or Farmland of Statewide Importance (Farmland), as shown on maps prepared pursuant to the Farmland Mapping and Monitoring Program of the California Resources Agency, to non-agricultural use?	☐	☐	☐	■
b. Conflict with existing zoning for agricultural use or a Williamson Act contract?	☐	☐	☐	■
c. Conflict with existing zoning for, or cause rezoning of, forest land (as defined in Public Resources Code Section 12220(g)); timberland (as defined by Public Resources Code Section 4526); or timberland zoned Timberland Production (as defined by Government Code Section 51104(g))?	☐	☐	☐	■
d. Result in the loss of forest land or conversion of forest land to non-forest use?	☐	☐	☐	■
e. Involve other changes in the existing environment which, due to their location or nature, could result in conversion of Farmland to non-agricultural use or conversion of forest land to non-forest use?	☐	☐	☐	■

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

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

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

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

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

According to the California Department of Conservation (DOC) Farmland Mapping and Monitoring Program (2022a), the project site and surrounding areas are not designated as Prime Farmland, Farmland of Statewide Importance, Unique Farmland, or Farmland of Local Importance. The project site is not located on land enrolled under the Williamson Act or zoned for agricultural use (DOC 2022b). Therefore, the project would not convert Prime Farmland, Unique Farmland, or Farmland of Statewide Importance (Farmland) to non-agricultural use and would not conflict with zoning for agricultural use or a Williamson Act contract. There is no adjacent land to the project site that is zoned or designated for agriculture. Due to the absence of agricultural land on or near the project site, the project would not involve changes to the existing environment that could result in conversion of Farmland to non-agricultural use. No impact to agricultural resources would occur.

The project site and its surroundings do not contain forest land. Neither the project site nor surrounding properties are zoned for forest land, timberland, or timberland production. Therefore, the project would not involve changes to the existing environment that could result in the loss of forest land or the conversion of forest land to non-forest use. No impact to 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),[1] 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. Secondary pollutants include oxidants, ozone, and sulfate and nitrate particulates (smog). Air pollutants can be generated by the natural environment, such as when high winds suspend fine dust particles.

[1] 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 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 include aircraft, ships, trains, and self-propelled construction equipment.

Air Quality Standards and Attainment

The project site is located is located in the South Coast Air Basin (SCAB), which is under the jurisdiction of the South Coast Air Quality Management District (SCAQMD). As the local air quality management agency, SCAQMD is required to monitor air pollutant levels to ensure that the NAAQS and CAAQS are met and, if they are not met, to develop strategies to meet the standards. Depending on whether the standards are met or exceeded, the SCAB is classified as being in "attainment" or "nonattainment." In areas designated as non-attainment for one or more air pollutants, a cumulative air quality impact exists for those air pollutants. As the local air quality management agency, SCAQMD must monitor air pollutant levels to ensure that the NAAQS and CAAQS are met. If they are not met, the SCAQMD must develop strategies for their region to meet the standards. The strategies to achieve attainment status are included as part of the Air Quality Management Plan (AQMP). The SCAB is currently designated nonattainment for the ozone NAAQS and CAAQS, the PM_{10} CAAQS, and the $PM_{2.5}$ NAAQS and CAAQS. The Los Angeles County portion of the SCAB is also designated nonattainment for lead (CARB 2022). The proposed project is in Los Angeles County which is within the SCAB and under the jurisdiction of the SCAQMD. This nonattainment status results from several factors, the primary ones being the naturally diverse meteorological conditions that limits the dispersion and diffusion of pollutants, the limited capacity of the local airshed to eliminate air pollutants, and the number, type, and density of emission sources within the SCAB. The attainment status for Los Angeles County portion of SCAB is included in Table 1.

Table 1 Attainment Status of Criteria Pollutants in Los Angeles County of SCAB

Pollutant	State Designation	Federal Designation
Ozone	Nonattainment	Nonattainment
PM_{10}	Nonattainment	Attainment
$PM_{2.5}$	Nonattainment	Nonattainment
CO	Attainment	Attainment
NO_2	Attainment	Attainment
SO_2	Attainment	Attainment
Lead	Attainment	Nonattainment

Sources: CARB 2022a

Air Quality Management Plan

To meet the NAAQS and CAAQS, the SCAQMD has adopted a series of 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 Air Basin is to reduce NO_X emissions to meet the 2037 ozone standard deadline for the non-Coachella Valley portion of the SCAB, as 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 the district's 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 Clean Air Act measures to meet the 8-hour ozone standard.

The SCAQMD's strategy to meet the NAAQS and CAAQS distributes the responsibility for emission reductions across federal, State, and local levels and industries. The majority of these emissions are from heavy-duty trucks, ships, and other State and federally regulated mobile source emissions that the majority of which are beyond SCAQMD's control. The SCAQMD has limited control over truck emissions with rules such as Rule 1196. In addition to federal action, the 2022 AQMP relies on substantial future development of advanced technologies to meet the standards, including the transition to zero- and low-emission technologies. The AQMP also incorporates the transportation strategy and transportation control measures from Southern California Association of Governments (SCAG)'s 2020-2045 Regional Transportation Plan/Sustainable Communities Strategy (Connect SoCal) (SCAG 2020).

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 the project are used to evaluate a project's potential regional and localized air quality impacts (SCAQMD 2023). Table 2 presents the significance thresholds for regional construction and operational-related criteria air pollutant and precursor emissions being used for the purposes of this analysis.

Table 2 SCAQMD Regional Significance Thresholds

Construction Thresholds	Operational Thresholds
75 pounds per day of VOC	55 pounds per day of VOC
100 pounds per day of NO_X	55 pounds per day of NO_X
550 pounds per day of CO	550 pounds per day of CO
150 pounds per day of SO_X	150 pounds per day of SO_X
150 pounds per day of PM_{10}	150 pounds per day of PM_{10}
55 pounds per day of $PM_{2.5}$	55 pounds per day of $PM_{2.5}$

VOC: volatile organic compound; NO_X: nitrogen oxides; CO: carbon monoxide; SO_X: sulfur oxides; PM_{10}: particulate matter measuring 10 microns in diameter or less; $PM_{2.5}$: particulate matter measuring 2.5 microns in diameter or less

Source: SCAQMD 2023

In addition to the above regional thresholds, the SCAQMD has developed Localized Significance Thresholds (LSTs) in response to concern regarding exposure of individuals to criteria pollutants in local communities. LSTs have been developed for NO_X, CO, PM_{10}, and $PM_{2.5}$ and represent the maximum emissions from a project that will not cause or contribute to an air quality exceedance of the most stringent applicable federal or State ambient air quality standard at the nearest sensitive receptor. LSTs take into consideration ambient concentrations in each source receptor area (SRA), distance to the sensitive receptor, and project size. LSTs have been developed for emissions generated in construction areas up to five acres in size. LSTs only apply to emissions in a fixed stationary location and are not applicable to mobile sources, such as cars on a roadway (SCAQMD 2009).

The project site is 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 0.29 acre; therefore, this analysis utilizes the one-acre LSTs. LSTs are provided for receptors at distances of 82, 164, 328, 656, and 1,640 feet from the project disturbance boundary to the sensitive receptors. The project analysis assumes construction activity would occur adjacent to sensitive receptors at the Rio Vista Elementary School. The allowable emissions for the project analysis uses the 82 foot threshold. The LST threshold for construction for the proposed project is shown in Table 3.

Table 3 SCAQMD LSTs for Construction and Operation

	Allowable Emissions for a one-Acre Site in SRA-13 for a Receptor 82 Feet Away (pounds per day)	
Pollutant	**Construction**	**Operation**
Gradual conversion of NO_X to NO_2	63.3[1]	63.3[1]
CO	590.0	590.0
PM_{10}	4.0	1.0
$PM_{2.5}$	2.4[2]	0.8[2]

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. CAAQS = California Ambient Air Quality Standards; SCAQMD = South Coast Air Quality Management District; USEPA = Untied States Environmental Protection Agency, NAAQS = National Ambient Air Quality Standards; LST = Localized Significance Threshold

[1] The screening criteria for NOx were developed based on the 1-hour NO_2 CAAQS of 0.18 ppm. Subsequently to publication of the SCAQMD's guidance the USEPA has promulgated a 1-hour NO_2 NAAQS of 0.100 ppm. This is based on a 98th percentile value, which is more stringent than the CAAQS. Because SCAQMD's LSTs have not been updated to address this new standard, to determine if project emissions would result in an exceedance of the 1-hour NO_2 NAAQS, an approximated LST was estimated to evaluate the federal 1-hour NO_2 standard. The revised LST threshold is calculated by scaling the NO_2 LST for by the ratio of 1-hour NO_2 standards (federal/state) (i.e., 114 pounds/day * (0.10/0.18) =63.3 pounds/day).

[2] The screening criteria for $PM_{2.5}$ were developed based on an Annual CAAQS of 15 mg/m^3. Subsequently to publication of the SCAQMD's guidance the annual standard was reduced to 12 mg/m^3. Because SCAQMD's LSTs have not been updated to address this new standard, to determine if project emissions would result in an exceedance of the annual $PM_{2.5}$ CAAQS, an approximated LST was estimated. The revised LST threshold is calculated by scaling the $PM_{2.5}$ LST for by the ratio of 24-hour $PM_{2.5}$ standards (federal/state) (i.e., 3 and 1 pound/day * (12/15) =2.4 and 0.8 pound/day).

Source: SCAQMD 2008

Toxic Air Containments Thresholds

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

Methodology

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

Project construction would primarily generate temporary criteria pollutants from on-site construction equipment operation, construction worker vehicle trips to and from the site, and off-site export of materials. Construction of the proposed project was analyzed based on the SCV Water's provided pipeline details, which includes constructing 2,608 linear feet (LF) of new pipeline. It is assumed a four-foot-wide trench would be excavated to install the new pipeline segments. Project construction would begin in October 2024 and end in January 2026. SCV Water provided the construction equipment list for each construction phase, and approximately 400 cubic yards of soil would be imported on site and 300 cubic yards of soil exported off site. The soil material would be hauled to Sunshine Canyon Landfill, approximately 9.3 miles from the project site. The analysis assumes the construction equipment would be diesel-powered, and the project would comply with applicable regulatory standards. In particular, the project would comply with SCAQMD Rule 403 for dust control measures and Rule 1113 for architectural coating VOC limits.

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 general plans and SCAG's Connect SoCal socioeconomic forecast projections of regional population, housing, and employment growth.

The proposed project involves construction of a pipeline that would not directly generate population growth through the construction of housing. 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 Santa Clarita. In addition, no new SCV Water employees would be required to operate and maintain the project. Furthermore, the purpose of the project is to convey water to and from the Honby Tanks and the Honby Booster Station. The Well SC-8, Well SC-9 , Santa Clarita Wells, Honby Well, and the North Oak Wells are fed into the Honby Tanks via the Honby Pipeline. The Honby Pipeline has been identified as a hydraulic bottleneck and requires replacement to ensure water supply reliability and longevity for the SCV Water system. The project would address the hydraulic bottleneck and would not expand capacity beyond what is currently available. Therefore, the project would not result in population growth and would not have the potential to conflict with or obstruct implementation of the AQMP. No impact would occur.

NO IMPACT

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

Construction

Project construction would generate temporary air pollutant emissions associated with fugitive dust (PM_{10} and $PM_{2.5}$) and exhaust emissions from heavy construction equipment and construction vehicles. In addition, construction equipment would release VOC emissions during the drying of the paving phase during road repair along Honby Avenue. Table 4 summarizes the estimated maximum daily emissions of 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 non-attainment under an applicable federal or State ambient air quality standard. Impacts would be less than significant.

Table 4 Estimated Maximum Daily Construction Emissions

	Pollutant (pounds/day)					
Construction	**VOC**	**NO_x**	**CO**	**SO_2**	**PM_{10}**	**$PM_{2.5}$**
2024	3.8	32.0	36.9	<1	4.5	2.7
2025	4.4	37.3	46.3	<1	4.9	2.9
2026	0.3	1.8	2.3	<1	0.2	0.1
Maximum Daily Emissions	**4.4**	**37.3**	**46.3**	**<1**	**4.9**	**2.9**
SCAQMD Regional Threshold	75	100	550	150	150	55
Threshold Exceeded?	No	No	No	No	No	No

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

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

Source: CalEEMod worksheets in Appendix A, see Table 2.3 "Construction Emissions by Year, Mitigated" emissions. Highest of Summer and Winter emissions results are shown for all emissions. The mitigated emissions account for project sustainability features and/or compliance with specific regulatory standards.

Operation

The project would not require new operations and maintenance activities within the SCV Water service area upon completion of construction activities. Therefore, no new operational emissions would be generated, and 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. No impact would occur.

LESS THAN SIGNIFICANT IMPACT

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

Sensitive Receptors

According to the SCAQMD, sensitive receptors include residences, schools, playgrounds, childcare centers, long-term healthcare facilities, rehabilitation centers, convalescent centers, and retirement homes (SCAQMD 2005). Sensitive receptors nearest to the project site consist of students adjacent to the project site at Rio Vista Elementary School. Because the project would not result in an increase of operational vehicle trips, this project would not emit the levels of CO necessary to result in a localized hot spot. Therefore, CO hotspots are not discussed further in this document. The project does not include any stationary sources of air pollutant emissions, and once construction is complete, the proposed project would not require additional operation and maintenance activities beyond those already occurring to operate and maintain the SCV Water system. Therefore, project operation would not expose sensitive receptors to substantial pollutant concentrations and is not discussed further. Localized air quality impacts to sensitive receptors typically result from localized criteria air pollutant emissions and TACs, which are discussed in the following subsections.

Localized Significance Thresholds

The *Final LST Methodology* was developed to be used as a tool to analyze localized impacts associated with specific proposed projects. If the calculated emissions for the proposed construction or operational activities are below the LST emission levels found on the LST mass rate look-up tables (Appendix C of *Final LST Methodology;* SCAQMD 2009) and no potentially significant impacts are found to be associated with other environmental issues, then the proposed construction or operation activity is not considered to be a significant impact on air quality. The project analysis assumes construction activity would occur adjacent to Rio Vista Elementary School. The staging area is located immediately north of the school property boundary and pipeline installation would occur approximately 20 feet west of the eastern school boundary. According to the *Final LST Methodology,* projects with boundaries located closer than 82 feet to the nearest receptor would utilize LST thresholds for receptors located at 82 feet. Therefore, the allowable emission for the project utilizes the 82-foot receptor distance, and the project is in SRA 13 (Santa Clarita Valley). Table 5 summarizes the project's maximum localized daily construction emissions from the proposed project. As shown therein, localized construction emissions would exceed the SCAQMD LST thresholds for PM_{10} and $PM_{2.5}$ and mitigation would be required to reduce impacts to a less than significant level.

Table 5 Project LST Construction Emissions

Year	Pollutant (pounds/day)			
	NO_X	CO	PM_{10}	$PM_{2.5}$
Maximum Construction On-site Emissions	37.0	42.5	4.0[1]	2.7
SCAQMD LST	63.3[2]	590.0	4.0	2.4[3]
Threshold Exceeded?	**No**	**No**	**Yes**	**Yes**

pounds/day = pounds per day; NO_x = nitrogen oxide; CO = carbon monoxide; PM_{10} = particulate matter with a diameter no more than 10 microns; $PM_{2.5}$ = particulate matter with a diameter no more than 2.5 microns; SCAQMD = South Coast Air Quality Management District; LST = Localized Significance Threshold; CAAQS = California Ambient Air Quality Standards; USEPA = United States Environmental Protection Agency; NAAQS = National Ambient Air Quality Standards

Notes: 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 architectural coatings, and excludes off-site emissions from sources such as construction worker vehicle trips and haul truck trips.

[1]Maximum on-site construction emissions for PM_{10} is approximately 4.04 pounds/day. [2] The screening criteria for NOx were developed based on the 1-hour NO_2 CAAQS of 0.18 ppm. Subsequently to publication of the SCAQMD's guidance the USEPA has promulgated a 1-hour NO_2 NAAQS of 0.100 ppm. This is based on a 98th percentile value, which is more stringent than the CAAQS. Because SCAQMD's LSTs have not been updated to address this new standard, to determine if project emissions would result in an exceedance of the 1-hour NO_2 NAAQS, an approximated LST was estimated to evaluate the federal 1-hour NO_2 standard. The revised LST threshold is calculated by scaling the NO_2 LST for by the ratio of 1-hour NO_2 standards (federal/state) (i.e., 114 pounds/day * (0.10/0.18) =63.3 pounds/day).

[3] The screening criteria for $PM_{2.5}$ were developed based on an Annual CAAQS of 15 mg/m^3. Subsequently to publication of the SCAQMD's guidance the annual standard was reduced to 12 mg/m^3. Because SCAQMD's LSTs have not been updated to address this new standard, to determine if project emissions would result in an exceedance of the annual $PM_{2.5}$ CAAQS, an approximated LST was estimated. The revised LST threshold is calculated by scaling the $PM_{2.5}$ LST for by the ratio of 24-hour $PM_{2.5}$ standards (federal/state) (i.e., 3 pounds/day * (12/15) =2.4 pounds/day).

Source: CalEEMod worksheets in Appendix A, see Tables 3.1 through 3.8 "Construction Emissions Details" emissions. The highest of Summer and Winter emissions results are shown for all emissions. The mitigated emissions account for project sustainability features and/or compliance with specific regulatory standards.

Toxic Air Contaminants

Toxic air contaminants (TACs) are a diverse group of air pollutants that may cause or contribute to an increase in deaths or serious illness, or that may pose a present or potential hazard to human health. TACs generally consist of four types: organic chemicals, such as benzene, dioxins, toluene, and perchloroethylene; inorganic chemicals such as chlorine and arsenic; fibers such as asbestos; and metals such as mercury, cadmium, chromium, and nickel. The primary TAC emitted by project implementation would be diesel particulate matter (DPM) generated by heavy-duty equipment and diesel-fueled delivery and haul trucks during construction activities. DPM was identified as a TAC by the CARB in 1998 and is primarily composed of PM_{10} and $PM_{2.5}$ exhaust emissions (CARB 2023).

Generation of DPM from construction projects typically occurs in a single area for a short period of time. Construction of the proposed project would occur in phases over approximately 16 months. The dose to which the receptors are exposed is the primary factor used to determine health risk. Dose is a function of the concentration of a substance or substances in the environment and the extent of exposure that person has with the substance. Dose is positively correlated with time, meaning a longer exposure period would result in a higher exposure level for the maximally exposed individual. The risks estimated for a Maximally Exposed Individual are higher if a fixed exposure occurs over a longer period of time. 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; however, such assessments should be limited to the period/duration of activities associated with the project. Thus, the duration of proposed construction activities (i.e., 16 months) is approximately 4.4 percent of the total

exposure period used for 30-year health risk calculations. Current models and methodologies for conducting health-risk assessments are associated with longer-term exposure periods of nine, 30, and 70 years, which do not correlate well with the temporary and highly variable nature of construction activities, resulting in difficulties in producing accurate estimates of health risk (BAAQMD [Bay Area Air Quality Management District]2023).

Maximum DPM emissions would occur during infrastructure installation construction activities. DPM emissions would be lower during other construction phases such as paving and site restoration because these phases would require less construction equipment. While the maximum DPM emissions associated with infrastructure installation would only occur for approximately 13 months, or 81 percent of the overall construction period, these activities represent the worst-case condition for the total construction period. This would represent less than 3.6 percent of the total exposure period for health risk calculation. The project would install approximately nine linear feet of pipeline per day,[2] which equates to construction along the boundary of sensitive receptors of approximately 136 construction days;[3] in addition, the sensitive receptors at the nearby elementary school would not typically occupy the site during the weekends or during school breaks. Therefore, project construction activities would not represent the type of long-term TAC emission source exposure that typically subjects sensitive receptors to significant health risk. Furthermore, construction activities would also be subject to and would comply with California regulations limiting the idling of heavy-duty construction equipment to no more than five minutes, which would further reduce nearby sensitive receptors' exposure to temporary and variable DPM emissions. Compliance with the standard construction measures required by the SCAQMD would also further reduce nearby sensitive receptors' exposure to temporary and variable DPM emissions. As such, project construction would not expose sensitive receptors to substantial TAC concentrations, and impacts would be less than significant.

Mitigation Measures

AQ-1 Construction Particulate Matter Emissions Reduction

The proposed project's unpaved demolition and construction areas, including unpaved staging areas, shall be wetted at least three times per day during the overlap of Infrastructure Installation and Paving phases.

Significance After Mitigation

With incorporation of Mitigation Measure AQ-1, the project would reduce fugitive PM_{10} and $PM_{2,5}$ emissions by approximately 74 percent, as compared to SCAQMD Rule 403 to water site twice per day to reduce fugitive PM_{10} and $PM_{2,5}$ by 61 percent. As shown in Table 6, criteria pollutant emissions would not exceed LST thresholds. Therefore, construction activities would not expose sensitive receptors to criteria pollutants and construction-related health impacts would be less than significant with mitigation incorporated.

[2] Total pipeline (2,608 linear feet) divide by construction days (284 days) = 9.18 linear feet per day
[3] Estimated pipeline length along Rio Vista Elementary School boundary (1,1250 linear feet) divide by nine linear feet installation per construction day = 136 construction days.

Table 6 Construction Air Pollutant Emissions – Mitigated

	Maximum Daily Emissions (pounds/day)			
Year	**NO_X**	**CO**	**PM_{10}**	**$PM_{2.5}$**
Maximum On-site Emissions	37.0	42.5	3.2	2.3
SCAQMD LST	63.3[1]	590.0	4.0	2.4[2]
Threshold Exceeded?	**No**	**No**	**No**	**No**

pounds/day = pounds per day; NO_x = nitrogen oxide; CO = carbon monoxide; PM_{10} = particulate matter with a diameter no more than 10 microns; $PM_{2.5}$ = particulate matter with a diameter no more than 2.5 microns; SCAQMD = South Coast Air Quality Management District; LST = Localized Significance Threshold

Notes: 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 architectural coatings, and excludes off-site emissions from sources such as construction worker vehicle trips and haul truck trips.

[1] The screening criteria for NOx were developed based on the 1-hour NO_2 CAAQS of 0.18 ppm. Subsequently to publication of the SCAQMD's guidance the USEPA has promulgated a 1-hour NO_2 NAAQS of 0.100 ppm. This is based on a 98th percentile value, which is more stringent than the CAAQS. Because SCAQMD's LSTs have not been updated to address this new standard, to determine if project emissions would result in an exceedance of the 1-hour NO_2 NAAQS, an approximated LST was estimated to evaluate the federal 1-hour NO_2 standard. The revised LST threshold is calculated by scaling the NO_2 LST for by the ratio of 1-hour NO_2 standards (federal/state) (i.e., 114 pounds/day * (0.10/0.18) =63.3 pounds/day).

[2] The screening criteria for $PM_{2.5}$ were developed based on an Annual CAAQS of 15 mg/m^3. Subsequently to publication of the SCAQMD's guidance the annual standard was reduced to 12 mg/m^3. Because SCAQMD's LSTs have not been updated to address this new standard, to determine if project emissions would result in an exceedance of the annual $PM_{2.5}$ CAAQS, an approximated LST was estimated. The revised LST threshold is calculated by scaling the $PM_{2.5}$ LST for by the ratio of 24-hour $PM_{2.5}$ standards (federal/state) (i.e., 3 pound/day * (12/15) =2.4 pound/day).Source: CalEEMod worksheets in Appendix A, see Tables 3.1 through 3.8 "Construction Emissions Details" emissions. The highest of Summer and Winter emissions results are shown for all emissions. The mitigated emissions account for project sustainability features, watering site 3 times per day and/or compliance with specific regulatory standards.

LESS THAN SIGNIFICANT WITH MITIGATION INCORPORATED

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

Project construction could generate odors associated with heavy-duty equipment operation and earth-moving activities. Such odors would be temporary in nature and limited to the duration of construction in the vicinity of the project site. The project contractor(s) would also be required to adhere to SCAQMD Rule 402 (Nuisance), which prohibits discharge of air contaminants or any other material from a source that would cause nuisance to any considerable number of persons or the public, including odor. Project operation would involve conveyance of water via an underground pipeline and would not result in the generation of odors. Therefore, the project 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.

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?	☐	☐	☐	■

In June 2023, Rincon Consultants, Inc. prepared a final Biological Resources Assessment, including a literature review and field reconnaissance survey, to document existing site conditions and the potential presence of special-status biological resources, including plant and wildlife species, plant communities, jurisdictional waters and wetlands, and habitat for nesting birds. The biological reconnaissance survey encompassed the proposed project footprint (i.e., areas that are expected to be affected by the proposed project, referred to in this section as the "project area." The following summarizes the findings of the assessment. The complete Biological Resources Assessment is contained in Appendix B of this document.

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 Plant Species

Fourteen special status plant species are known to occur or have the potential to occur within the project site. Of the 14 plant species evaluated, two have moderate potential to occur (Catalina mariposa lily and Plummer's mariposa lily), and one has high potential to occur (slender mariposa lily). Ground disturbance from project construction could directly result in the damage or removal of special status plants if present on the site. Should special status species be encountered within the project site, direct impacts could occur through injury or mortality to individuals by heavy equipment during construction. Indirect impacts could result from habitat modifications, such as by the introduction of invasive plants disseminated from construction equipment, contamination of soils, and habitat degradation due to accidental fuel spills during construction.

Catalina mariposa lily, Plummer's mariposa lily, and slender mariposa lily were not observed within the project site during reconnaissance surveys, but they have a moderate to high potential to occur. Given the proposed open cut trenching construction method, individuals of these species if present could be removed, damaged, or disturbed by the project. Impacts to these species would be potentially significant, but mitigable through implementation of Best Management Practices (BMPs), a worker education program, pre-project botanical surveys, avoidance measures, and compensatory mitigation requirements (if applicable) as prescribed under Mitigation Measures BIO-1 through BIO-5.

Special Status Wildlife Species

Based on the database and literature review, 23 special status wildlife species are known or have the potential to occur in the project site. Of the 23 wildlife species evaluated, 7 special status wildlife species have low potential to occur, 9 have moderate potential, 4 have high potential, and 3 were present in the project site during the field survey. Coastal whiptail, turkey vulture, and California towhee were present on the project site during the survey. California legless lizard, coast horned lizard, Cooper's hawk, and the southern California rufous-crowned sparrow have a high potential to occur on the project site. Santa Ana sucker, unarmored threespine stickleback, arroyo chub, Bell's sage sparrow, coastal California gnatcatcher, least Bell's vireo, western spadefoot, arroyo toad, and San Diego black-tailed jackrabbit have a moderate potential to occur on the project site. While Los Angeles County lists turkey vulture and California towhee as sensitive bird species, they are common in the project area. With implementation of mitigation measures described further below, potential direct and indirect impacts to special status wildlife species would be reduced to less than significant.

Special Status Amphibians and Reptiles

Most of the special status wildlife species that may potentially occur within the project footprint are capable of escaping harm during project construction, while others are potentially vulnerable to direct impacts, including injury and mortality. Special status species that could be directly impacted include potentially occurring land dwelling animals, including the coastal whiptail, silvery legless lizard, coast (San Diego) horned lizard, as well as aquatic and semi-aquatic species such as arroyo toad and western spadefoot.

The project's use of open cut trenching to replace the existing line across the Santa Clara River has the potential to directly impact these special status species. Open trench excavation consists of digging down to and exposing the existing pipe, removing the existing pipe or a section of it, installing a new pipe or a section of new pipe, and then backfilling the trench. Implementation of Mitigation Measures BIO-6 and BIO-7 would require implementation of pre-construction surveys for special status wildlife species and construction monitoring. Potential impacts to federally- and state-listed wildlife species, if present, would require incidental take authorizations from the USFWS and CDFW.

Coastal California Gnatcatcher and Least Bell's Vireo

Protocol-level surveys conducted in 2023 determined that coastal California gnatcatcher was absent, and least Bell's vireo was not observed during any surveys. Similarly, protocol-level surveys for least Bell's vireo conducted downstream of the study area by Rincon in May 2020 determined this species was absent from that area. Given the survey findings and the temporary duration and limited size of project impacts, direct and indirect impacts to these species are not expected.

Special Status Fish Species

There are documented occurrences of unarmored threespine stickleback, Santa Ana Sucker, and arroyo chub within 5 miles of the project area. The project's use of open cut trenching to replace the existing line across the Santa Clara River has the potential to directly impact these special status species should flowing or standing water be present during construction. Implementation of Mitigation Measure BIO-8 would restrict the construction window to avoid impacts to these species, as well as arroyo toad and western spadefoot.

Special Status and Nesting Birds

The nests of most native birds and raptors are state and federally protected. It is likely birds use the Survey Area for nesting (generally from early February through late August) given the mix of native and non-native vegetation, as well as the number of bird species and individuals observed during the survey. Implementation of the proposed project could result in direct or indirect impacts to nesting birds, through the direct removal or trimming of vegetation. Project-related noise, vibration, and increased lights can lead to the disturbance of nesting birds which may have a negative impact on the animals. Although temporary, such disturbance can lead to the abandonment of a bird nest.

The project has potential to result in direct and indirect impacts to nesting birds, including species of special concern, such as southern California rufous-crowned sparrow, Bell's sage sparrow, and Cooper's hawk, and species protected under the MBTA and CFGC 3503, if they are nesting within the project site and/or immediate vicinity during construction activities. Construction would occur where ruderal vegetation, coastal sage scrub, and ornamental trees are present. Direct impacts from construction activities include ground disturbance, which could potentially contain birds' nests.

Indirect impacts include construction noise, lighting, and fugitive dust. These impacts could lead to individual mortality or harassment that might reduce nesting success. Therefore, Mitigation Measure BIO-9 would require a pre-construction nesting bird survey and protective buffers if nesting birds are located.

Mitigation Measures

BIO-1 General Best Management Practices

General requirements which shall be followed by construction personnel are listed below.

- The contractor shall clearly delineate the construction limits and prohibit any construction-related traffic outside those boundaries.
- 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 proposed project construction shall be disposed of in closed containers only and removed daily from the project site.
- No deliberate feeding of wildlife shall be allowed.
- No pets shall be allowed on the project site.
- No firearms shall be allowed on the project site.
- If vehicle or equipment maintenance is necessary, it shall be performed in the designated staging areas.
- If construction must occur at night (between dusk and dawn), all lighting shall be shielded and directed downward to minimize the potential for glare or spillover onto adjacent properties and to reduce impacts on local wildlife.
- During construction, heavy equipment shall be operated in accordance with standard BMPs. All equipment used on-site shall be properly maintained to avoid leaks of oil, fuel, or residues. Provisions shall be in place to remediate any 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. The construction foreman or biological monitor should immediately notify SCV Water. SCV Water should follow up with written notification to USFWS and/or CDFW within five working days of the incident. All observations of federally listed species should be recorded on CNDDB field sheets and sent to CDFW by SCV Water or the biological monitor.

BIO-2 Worker Environmental Awareness Program

A lead biological monitor shall conduct a pre-project environmental education program for all personnel working at the site, which should be focused on conditions and protocols necessary to avoid and minimize potential impacts to biological resources. Prior to initiation of construction activities (including staging and mobilization), all personnel associated with project construction shall attend a Worker Environmental Awareness Program (WEAP) training, conducted by a qualified biologist, to aid workers in recognizing special status biological resources potentially occurring in the

project area. This training shall include information about the special status species with potential to occur in the project area. The specifics of this program shall include identification of special status species and habitats, a description of the regulatory status and general ecological characteristics of special status resources, and 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 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 crew foreman shall be responsible for ensuring crew members adhere to the guidelines and restrictions designed to avoid impacts to special status species.

BIO-3 Special Status Plant Surveys

To avoid impacts to special status plants, surveys for special status plants shall be completed prior to any vegetation removal, grubbing, or other construction activity within this area. The surveys shall be floristic in nature, seasonally timed to coincide with the blooming period of the target species (Catalina mariposa lily, Plummer's mariposa lily, and slender mariposa lily), and be conducted by a qualified biologist.

Special status plant species identified on-site shall be mapped onto a site-specific aerial photograph and topographic map. Surveys should be conducted in accordance with the most current protocols established by the CDFW and USFWS. A report of the survey results shall be submitted to SCV Water for review and approval.

BIO-4 Special Status Plant Avoidance Measures

If special status plants are detected during special status plant surveys, avoidance of the special status plants shall occur where feasible and vegetation clearing within 50 feet of any identified rare plant will be conducted by hand, if practicable. Any rare plant ~~occurrences~~ occurrence shall have bright orange protective fencing installed at least 50 feet beyond ~~their~~ its extent, or other distance as approved by a qualified biologist, to protect ~~them~~ it from harm.

If avoidance is not feasible, SCV Water shall offset the proposed loss of individual plants at a minimum ~~1:1~~ 2:1 ratio by on-site restoration (salvage, replanting, and propagation). The open scrub and grassland habitats in the Survey Area would be a suitable location for on-site restoration. Compensation for impacts to these species may also be accomplished by preservation of an on-site populations or off-site populations in the vicinity of the site at a minimum of a ~~1:1~~ 3:1 ratio if present.

BIO-5 Special Status Plant Mitigation and Monitoring Plan

If special status plants are detected and would be impacted by project construction, a Special Status Plant Mitigation and Monitoring Plan that provides for the replacement of the species impacted by the project shall be developed by a qualified restoration specialist.

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 area;
- 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 in the event that 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 should equal the number lost to project construction, and
- Restoration will be considered successful after the success criteria have been met for a period of at least 2 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 development of the project and should be implemented over a five-year period. It can also be combined with the Habitat Revegetation, Restoration, and Monitoring Program described under Mitigation Measure BIO-10, below.

Annual reports discussing the implementation, monitoring, and management of the Special Status Plant Mitigation and Monitoring Plan shall be submitted to SCV Water. Five years after the start of the mitigation project, a final report shall be submitted, which should at a minimum discuss the implementation, monitoring, 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 established performance standards. Should the success criteria be met before Year Five, the mitigation effort can be deemed complete.

BIO-6 Pre-activity Survey

Prior to commencement of ground or vegetation disturbing activities at the project site, a qualified biologist shall conduct two surveys for special status wildlife species. The first survey shall be conducted no more than fourteen (14) days prior to commencement of project activities and the second survey shall be conducted no more than three (3) days prior to the commencement of project activities. The survey shall incorporate methods to detect the special status wildlife species that could potentially occur at the site. In addition, prior to commencement of project activities, a qualified biologist shall be retained to conduct focused surveys according to the USFWS Survey Protocol for the Arroyo Toad (USFWS 1999).

If special status species are observed within the project site during pre-activity surveys, a qualified biologist shall draft a “Species Protection Plan” prior to the initiation of construction. At a minimum, the plan shall include avoidance and minimization measures for each observed species. These measures may include, but are not limited to:

- Species-specific Worker Environmental Awareness Program materials;

- Relocation methods including planned relocation areas for the protection of special status species; and,
- Reporting requirements.

~~To the extent feasible, special status species shall be avoided. If avoidance is not feasible, the species shall be captured and transferred to an appropriate habitat and location on-site where it would not be harmed by project activities. The biologist shall hold the requisite permits for the capture and handling of the species, if applicable. Prior to commencement of the proposed activity, the methods and results of the surveys and, if a special status species is found, the measures to be employed to avoid impacts to the species should be presented in a letter report to SCV Water.~~

BIO-7 Qualified Biological Monitor

A qualified biological monitor familiar with special status species with potential to occur in the project site shall be present during initial ground disturbance or vegetation removal activities. The biological monitor shall have the authority to temporarily stop work if one or more special status amphibian, reptile, or mammals are observed; the monitor shall then relocate these individuals to suitable undisturbed habitat, outside the areas directly and indirectly affected by ground disturbance activities. The biologist shall hold the requisite incidental take permits or authorizations for the capture and handling of the species, if applicable. ~~Relocation of a federally or state-listed species may require incidental take authorization from CDFW and/or USFWS.~~

The monitor shall recommend measures to ensure compliance with all avoidance and minimization measures, applicable permit conditions, and any conditions required by SCV Water. When the biological monitor is present on site, they shall be responsible for:

- Ensuring procedures for verifying compliance with environmental mitigation are followed;
- Lines of communication and reporting methods;
- Daily and weekly reporting of compliance;
- Construction crew WEAP training;
- Authority to stop work; and
- Action to be taken in the event of non-compliance.

BIO-8 Dry Season Construction

To eliminate the potential for impacts to the unarmored threespine stickleback, arroyo toad, western spadefoot and other sensitive aquatic species and to minimize impacts to wildlife movement corridors, construction within the Santa Clara River will 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 is present. In addition, surface elevations within washes will be returned to preconstruction conditions prior to the end of the dry season.

BIO-9 Nesting Birds

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

construction nesting bird survey shall be required prior to each phase of construction during the nesting season.

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

If nests are found, their locations shall be flagged. An appropriate avoidance buffer ranging in size from 25 to 50 feet for passerines and up to 300 feet for raptors, depending upon the species and the proposed work activity, shall be determined and demarcated by a qualified biologist with bright orange construction fencing or other suitable flagging. Active nests shall be monitored at a minimum of once per week until it has been determined the nest is no longer being used by either the young or adults. No ground or vegetation disturbance shall occur within this buffer until the qualified biologist confirms the breeding/nesting is completed and all the young have fledged. 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.

Significance after Mitigation

Mitigation Measure BIO-1 would establish best management practices for project construction that would prevent entrapment of wildlife, protect wildlife from construction-associated safety hazards, and protect wildlife from affects associated with nighttime lighting and noise. Mitigation Measure BIO-2 would provide construction personnel with the necessary knowledge to identify special-status species, including identification and procedures to follow.

Mitigation Measure BIO-3 would identify special status plant species present prior to construction. If identified, Mitigation Measure BIO-4 would enforce avoidance measures to prevent disturbance or harm to special status plant species. Mitigation BIO-5 would implement a Special Status Plant Mitigation and Monitoring Plan. These three measures in conjunction would avoid direct impacts to special status plants where feasible, and provide replacement plantings.

Mitigation Measures BIO-6 and BIO-7 would identify special status wildlife species present prior to and during construction, and require avoidance or transfer of individuals of a protected species. Mitigation Measure BIO-8 would avoid impacts to aquatic species by limiting construction within the river bed to times when there is no flowing or ponded water. Mitigation Measure BIO-9 would identify nesting birds present prior to construction, and require protective buffers around identified nests.

These measures would focus on the necessary conditions and protocols to prevent and minimize potential impacts on special status species with avoidance when feasible, and relocation or restoration when avoidance is not feasible. Implementation of Mitigation Measures BIO-1 through BIO-9 would reduce construction-related impacts to special status species to a less than significant level.

LESS THAN SIGNIFICANT WITH MITIGATION INCORPORATED

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

As shown in Figure 6, none of the three CDFW-designated sensitive natural vegetation communities (red willow riparian woodland and forest, scalebroom - California buckwheat scrub, and Fremont cottonwood forest and woodland) would be impacted by project activities. The project would temporarily impact approximately 0.42 acre of vegetation communities and land cover types classified as riparian habitat, and 0.81 acre of native scrub habitat comprised of big sagebrush scrub, California sagebrush – California buckwheat scrub, and thick-leaved yerba santa scrub (Table 7).

Construction activities would directly affect 0.42 acre of riparian habitat and 0.81 acre of native scrub habitat. In addition, potential indirect impacts from construction, such as erosion, runoff, dust from excavation and construction equipment may have the potential to result in indirect impacts to riparian habitat. Potential impacts associated with runoff would be minimized through implementation of appropriate BMPs, including, but not limited to, straw wattles, silt fencing, and plastic covers for soil spoils. Implementation of Mitigation Measures BIO-1, BIO-2, BIO-7, BIO-8, and BIO-10 would further reduce potential impacts to sensitive habitats to less than significant.

Figure 6 Vegetation Communities, Land Cover Types, and Special Status Species

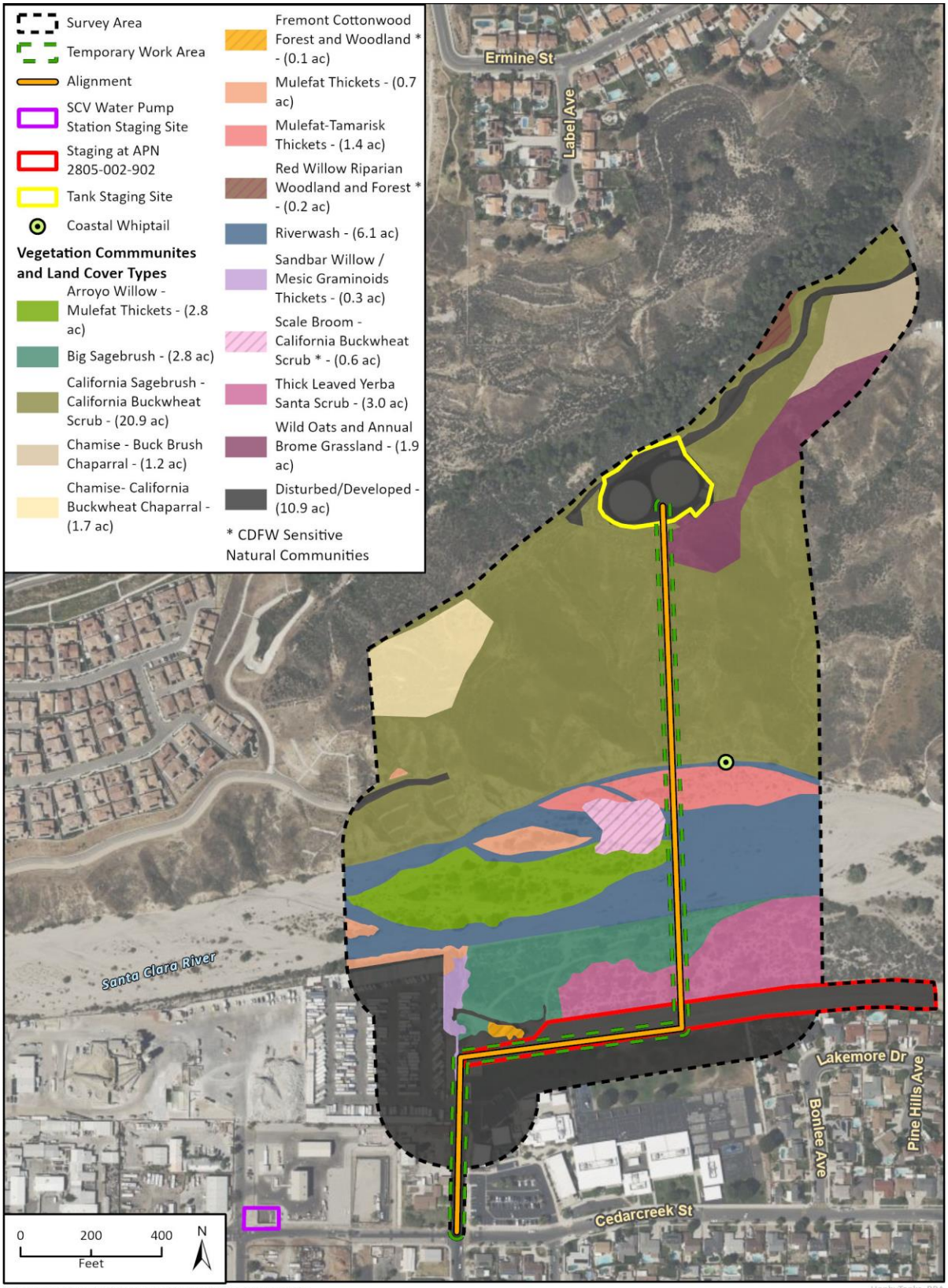

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Fig 6 Vegetation Communities, Land Cover Types, and Special Status Species

Table 7 Summary of Vegetation and Land Cover Types in the Survey Area1

Vegetation Community or Land Cover Type	Approximate Acreage	Temporary Project Impact (Acres)	Habitat Type	CDFW Sensitive Natural Community (Yes/No)
Arroyo Willow Thickets Shrubland Alliance	-	-	Riparian	G4S4; No
Arroyo Willow – Mulefat Thickets Association	2.8	0.02	Riparian	G4S4; No
Big Sagebrush Shrubland Alliance	-	-	Upland	G5S5; No
Big Sagebrush Association	2.8	0.13	Upland	Unranked; No
California Sagebrush – (Purple Sage) Scrub Shrubland Alliance	-	-	Upland	G5S5; No
California Sagebrush – California Buckwheat Scrub Association	20.9	0.58	Upland	G4S4; No
Chamise Chaparral Shrubland Alliance	-	-	Upland	G5S5; No
Chamise – Buck Brush Chaparral Association	1.2	-	Upland	G4?; No
Chamise – California Buckwheat Chaparral Association	1.7	-	Upland	G4S4; No
Fremont Cottonwood Forest and Woodland Alliance	-	-	Riparian	G4S3; Yes
Fremont Cottonwood Forest and Woodland Association	0.1	-	Riparian	G2Q; Yes
Mulefat Thickets Shrubland Alliance	-	-	Riparian	G4S4; No
Mulefat Thickets Association	0.7	-	Riparian	G5S5; No
Mulefat – Tamarisk Thickets Association	1.4	0.10	Riparian	Unranked; No
Goodding's Willow – Red Willow Riparian Woodland and Forest Alliance	-	-	Riparian	G4S3; Yes
Red Willow Riparian Woodland and Forest Association	0.2	-	Riparian	GNR; Yes
Sandbar Willow Thickets Shrubland Alliance	-	-	Riparian	G5S4; No
Sandbar Willow / Mesic Graminoids Thickets Association	0.3	0.03	Riparian	Unranked; No

Vegetation Community or Land Cover Type	Approximate Acreage	Temporary Project Impact (Acres)	Habitat Type	CDFW Sensitive Natural Community (Yes/No)
Scalebroom Scrub Shrubland Alliance	-	-	Riparian	G3S3; Yes
Scalebroom – California Buckwheat Scrub Association	0.6	-	Riparian	Unranked; Yes
Deerweed - Silver Lupine - Yerba Santa Scrub Shrubland Alliance	-	-	Upland	G5S5; No
Thick Leaved Yerba Santa Scrub Association	3.0	0.10	Upland	Unranked; No
Wild Oats and Annual Brome Grasslands Herbaceous Semi-Natural Alliance	-	-	Upland	GNASNA; No
Wild Oats and Annual Brome Grasslands Association	1.9	0.04	Upland	GNASNA; No
Riverwash	6.1	0.27	Riparian	N/A
Disturbed/Developed	10.1	1.15	N/A	N/A
Total	**53.8**	**2.42**	**N/A**	**N/A**

[1] Vegetation community ranks are from CDFW (2022). Associations are indicated in *italics*. CDFW sensitive natural communities are indicated in **bold**.

Mitigation Measures

BIO-10 Habitat Revegetation, Restoration, and Monitoring Program

SCV Water shall develop a Habitat Revegetation, Restoration, and Monitoring Program for implementation in all native habitat areas directly affected by construction activities. The program shall include the following measures:

- **Invasive Species Control**
  - Where appropriate and feasible, the area to be disturbed shall be treated to kill invasive exotic species and limit their seed production prior to initiating any earthmoving activity with the objectives of (1) preventing invasive species from spreading from the disturbance area, and (2) removing weed sources from the salvaged topsoil. Herbicides shall be used only by a licensed herbicide applicator and may require notification to property owners or resource agencies. The treatment shall be completed in advance of the earthmoving in order for this mitigation to have its intended effect (e.g., the treatment would need to occur prior to target species setting seed).
- **Topsoil Salvage and Replacement**
  - In areas where vegetation and soil are to be removed, the topsoil shall be salvaged and replaced. This may be accomplished using two lifts, the first to salvage the seed bank, and the second to salvage soil along with soil biota in the root zone. Soil shall be stockpiled in two areas near the project site, with the seed bank labeled to identify it. Topsoil shall be replaced in the proper layers after final reconfiguration of disturbed areas. Stockpiles shall

be covered if the soil is to be left for an extended period of time to prevent losses due to erosion and invasion of weeds.

- **Habitat Rehabilitation and Revegetation**
  - Plans and specifications for replanting areas disturbed by the project shall be developed with native species propagated from locally collected seed or cuttings, and, if applicable, shall include seed of sensitive species that would be impacted during construction activities.
  - Monitoring procedures and performance criteria shall be developed to address revegetation and erosion control. The performance criteria shall consider the level of disturbance and the condition of adjacent habitats. Monitoring shall continue for 3-5 years, or until performance criteria have been met, specifically the restoration/revegetation of disturbed native habitat at a 1:1 ratio. Appropriate remedial measures, such as replanting, erosion control, or weed control, shall be identified and implemented if it is determined that performance criteria are not being met.

Significance After Mitigation

Mitigation Measure BIO-1 would establish best management practices for project construction that would prevent entrapment of wildlife, protect wildlife from construction-associated safety hazards, and protect wildlife from affects associated with nighttime lighting and noise. Mitigation Measure BIO-2 would provide construction personnel with the necessary knowledge to identify special-status species, including identification and procedures to follow. Mitigation Measure BIO-7 would identify special status wildlife species present during construction, and require avoidance or transfer of individuals of a protected species. Mitigation Measure BIO-8 would avoid impacts to aquatic species by limiting construction within the river bed to times when there is no flowing or ponded water. Mitigation BIO-10 would avoid direct impacts to sensitive habitats where feasible and provide replacement plantings. Implementation of Mitigation Measures BIO-1, BIO-2, BIO-7, BIO-8, and BIO-10 would reduce construction-related impacts to special status species to a less than significant level.

LESS THAN SIGNIFICANT WITH MITIGATION INCORPORATED

c. Would the project have a substantial adverse effect on state or federally protected wetlands (including, but not limited to, marsh, vernal pool, coastal, etc.) through direct removal, filling, hydrological interruption, or other means?

No state or federally protected wetlands occur within the project site, but does cross seven potentially jurisdictional features consisting of 5.93 acres of jurisdictional non-wetland waters of the United Status (WOTUS) that may be regulated by the USACE, 5.93 acres of non-wetland waters of the State that may be regulated by the RWQCB, and 13.04 acres of potentially jurisdictional CDFW streambed.

Project construction would involve open cut trenching across the Santa Clara River and portions of Unnamed Drainage 6 (Table 8).

Table 8 Impacts to USACE, RWQCB, and CDFW Jurisdiction

	USACE Jurisdiction		RWQCB Jurisdiction		CDFW Jurisdiction
Feature	Non-Wetland Waters of the U.S. (acres/linear feet)	Wetland Waters of the U.S. (acres/linear feet)	Non-Wetland Waters of the State (acres/linear feet)	Wetland Waters of the State (acres/linear feet)	Streambed and Associated Riparian Habitat (acres/linear feet)
Santa Clara River	0.26/40	0/0	0.26/40	0/0	0.39/40
Unnamed Drainage 6	0.01/132	0/0	0.01/132	0/0	0.03/132
Total	**0.27/172**	**0/0**	**0.27/172**	**0/0**	**0.42/172**

The proposed project would temporarily impact 0.26 acre of jurisdictional waters of the U.S. and waters of the State and 0.42 acre of CDFW jurisdictional habitat.

Prior to ground disturbance activities that could impact these features, SCV Water would consult with the appropriate regulatory agencies (Los Angeles RWQCB, CDFW, and/or USACE) anticipated to assert jurisdiction over the features. The project is anticipated to require a Lake and Streambed Alteration Agreement from the CDFW, a Water Quality Certification under Clean Water Act Section 401 from the Los Angeles RWQCB, and verification from the USACE under Nationwide Permit 58. Based on such consultation, any required permits must be obtained prior to disturbance of jurisdictional resources. With implementation of Mitigation Measures BIO-10 and BIO-11, and adherence to agency permit requirements and existing regulations, potential direct and indirect impacts to jurisdictional habitat would be reduced to a less than significant level.

Mitigation Measures

BIO-11 Jurisdictional Habitat Best Management Practices

To avoid and/or minimize potential indirect impacts to jurisdictional waters and water quality, the following Best Management Practices shall be implemented within 50 feet of a jurisdictional feature:

- Materials shall be stored on impervious surfaces or plastic ground covers to prevent any spills or leakage and should be at least 50 feet from drainage features. Construction materials and spoils shall be protected from stormwater runoff using temporary perimeter sediment barriers such as berms, silt fences, fiber rolls, covers, sand/gravel bags, and straw bale barriers, as appropriate.
- All vehicles and equipment shall be in good working condition and free of leaks. The contractor shall prevent oil, petroleum products, or any other pollutants from contaminating the soil or entering a watercourse (dry or otherwise). When vehicles or equipment are stationary, mats or drip pans shall be placed below vehicles to contain fluid leaks.
- All re-fueling, cleaning, and maintenance of equipment shall occur at least 50 feet from potentially jurisdictional waters.
- Adequate spill prevention and response equipment shall be maintained on-site and readily available to implement to ensure minimal impacts to the aquatic and marine environments.

Significance After Mitigation

Mitigation BIO-10 would avoid direct impacts to sensitive habitats where feasible and provide replacement plantings. Mitigation Measure BIO-11 would establish best management practices for project construction that would protect jurisdictional features' water quality. Implementation of Mitigation Measures BIO-10 and BIO-11 would reduce construction-related impacts to special status species to a less than significant level.

LESS THAN SIGNIFICANT WITH MITIGATION INCORPORATED

d. Would the project interfere substantially with the movement of any native resident or migratory fish or wildlife species or with established native resident or migratory wildlife corridors, or impede the use of native wildlife nursery sites?

Wildlife movement corridors can be both large- and small-scale. At the regional/landscape-level scale, the project site is not included within any mapped landscape models, such as an Essential Connectivity Area or Natural Landscape block in the California Essential Habitat Connectivity Project: A Strategy for Conserving a Connected California (Spencer et al. 2010). Habitat corridors are present within the project site, notably including the Santa Clara River. The Santa Clara River has headwaters in the San Gabriel Mountains and flows westward approximately 84 miles to the Oxnard Plain, where it discharges into the Pacific Ocean. This is the largest river system in southern California that remains in a relatively natural state, and it connects highly diverse habitat types.

The Santa Clara River provides a valuable movement and migration corridor for many types of wildlife, including terrestrial, semi-aquatic, and aquatic species. The ridgeline along the northern boundary of the project site may also provide a local corridor for wildlife traveling between the Santa Clara River and residential developments to the north, east, and west.

Construction activities would be temporary, short-term, and would only occur during the daytime. Project construction would result in a temporary decrease in the function of the corridor for wildlife movement. Although the optimal path for wildlife movement (i.e., Santa Clara River) would be temporarily affected by the project, the wildlife can, and would likely, traverse around the work area (e.g., north of the tanks or south along the levee access road) during construction. In addition, implementation of BMPs, including measures to prevent wildlife entrapment (e.g., wildlife escape ramps) would reduce potentially significant impacts to wildlife movement to a less than significant level.

With implementation of Mitigation Measure BIO-8, construction within the riverbed would occur when the river is dry (i.e., no flowing water). Therefore, impacts to resident or migratory fish would be less than significant.

Project operation would not increase activities that could impact wildlife movement beyond existing conditions. The pipeline would be installed below ground and would not interfere substantially with the movement of any native resident or migratory fish or wildlife species or with established native resident or migratory wildlife corridors or impede the use of native wildlife nursery sites. Impacts would be less than significant.

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?

City of Santa Clarita General Plan

The City of Santa Clarita's General Plan land use designation and zoning designation for the project site is: Non-Urban 5 (NU5), Urban Residential 2 (UR2), and Business Park (BP). The City's General Plan Conservation and Open Space Element (2011) contains objectives and policies for biological resources relevant to the proposed project given its location and/or proposed activities. These objectives and policies focus on conservation of existing natural areas; restoration of damaged natural vegetation; protection of wetlands, oak trees and other indigenous woodlands, and endangered or threatened species and habitat; and protection of biological resources in significant ecological areas and significant wildlife corridors.

Per the General Plan Policies CO 3.1.3, 3.1.6, and 3.1.9, on previously undeveloped sites, natural site elements are to be preserved and biological resources are to be identified and habitat preservation measures and construction best management practices (i.e., ensure preservation of habitat and trees designated to be protected through use of fencing and other means as appropriate, so as to prevent damage by grading, soil compaction, pollution, erosion or other adverse construction impacts) are to be incorporated into the site plan, where appropriate. In addition, several special status species, as described above in criterion (a) are expected to occur within the project site.

As identified above, these objectives and policies focus on conservation of existing natural areas; restoration of damaged natural vegetation; protection of wetlands, oak trees and other indigenous woodlands and endangered or threatened species and habitat; and protection of biological resources in Significant Ecological Areas (SEA) and significant wildlife corridors. With implementation of Mitigation Measures BIO-1 through BIO-11, impacts to biological resources would be less than significant and the project would not conflict with policies protecting biological resources in the City of Santa Clarita General Plan. Impacts would therefore be less than significant with mitigation.

Santa Clara River Significant Ecological Area

The project site is located partially within the Santa Clara River SEA. The Santa Clara River SEA covers the length of the river and with the watershed extensions, encompasses a wide variety of topographic features and habitat types. The orientation and extent of the SEA extends from the river's headwater tributaries and watershed basin to the point at which it exits Los Angeles County. Project construction would potentially affect the SEA and its biological resources due to construction activity in the project area. With implementation of Mitigation Measures BIO-1 through BIO-11, impacts to biological resources within the SEA would be less than significant. During operation, the project would be entirely below ground, and the site would return to its existing condition. No operational impacts to SEAs would occur.

Protected Trees

Within the city, there is currently an Oak Tree Preservation Ordinance (Section 17.51.040) under the City's Unified Development Code. This Ordinance focuses on the preservation of oak trees within the City's limits, requiring an oak tree permit for removal, cutting, pruning, relocation damage or encroachment of healthy oak trees measuring six inches in circumference or larger at 4.5-feet above grade. No oak trees were observed during the field surveys, and no tree removal is proposed as part of the project. Therefore, no impacts to protected oak trees would occur.

LESS THAN SIGNIFICANT WITH MITIGATION INCORPORATED

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

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

NO IMPACT

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5 Cultural Resources

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

This section provides an analysis of the project's impacts on cultural resources, including historical and archaeological resources, as well as human remains. CEQA requires a lead agency to determine whether a project may have a significant effect on historical resources (PRC Section 21084.1) and tribal cultural resources (PRC Section 21074 [a][1][A-B]). 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. 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.

To the extent that resources cannot be left undisturbed, mitigation measures are required (PRC Section 21083.2[a-b]).

In August 2022, Rincon Consultants, Inc. prepared a Cultural Resources Assessment for the project, which included a cultural resources records search at the California Historical Resources Information System South Central Coastal Information Center (SCCIC) located at California State University, Fullerton; a Native American Heritage Commission (NAHC) Sacred Lands File (SLF) search; a pedestrian field survey; and historical topographic map and aerial imagery review. The complete Cultural Resources Assessment is contained in Appendix C of this document.

The SCCIC records search was performed to identify previously recorded cultural resources as well as previously conducted cultural resources studies within the project site and a 0.5-mile radius surrounding it. Rincon received the SCCIC cultural resources records search results on January 14, 2022. The National Register of Historic Places, the CRHR, the Office of Historic Preservation Historic Properties Directory, the California Inventory of Historic Resources, the Archaeological Determinations of Eligibility list, and historical maps were also reviewed. The SCCIC records search identified 22 cultural resources studies conducted within a 0.5-mile radius of the project site, 10 of which evaluated portions of the project site. The SCCIC search identified one previously recorded cultural resource within the 0.5-mile radius surrounding the project site. Resource P-19-004452/CA-LAN-4452H is a historic period archaeological resource that consists of foundations, septic tanks, and domestic refuse. This resource is not recorded within or adjacent to the project site. Additionally, the SLF search returned positive results.

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

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

The project site has been disturbed by the previous development of the existing water tanks and pipeline. The SCCIC cultural resources records search results identified one cultural resource recorded within the surrounding 0.5-mile radius (Appendix C). This resource is not recorded within or adjacent to the project site. Rincon also reviewed historical aerials and topographic maps from HistoricAerials.com to identify potential cultural resource concerns on the project site. Historical topographic maps from 1900 to 1930 depict the project site as undeveloped land. Topographic maps from 1930 to 1975 depict residential development to the south, with residential development expanding to the north, west, and east. Aerial imagery from 1947 to 1999 confirms the uptick in residential development in all directions around the project site, as depicted in the topographic maps, with no development occurring within the project site itself (NETR Online 2021). Topographic maps from 1975 depict the easternmost existing tank with an adjacent unpaved road, while the westernmost existing tank is not depicted until the 1988 topographic map (United States Geologic Survey [USGS] 2022; NETR Online 2022). Imagery from 2000 depicts the project site similar to its current condition. A pedestrian field survey of the project site, completed on July 19, 2022, identified no archaeological resources on site (Appendix C).

The two water tanks on the project site are approximately 45 years of age and therefore have potential to be historical resources. However, project components will not alter the tanks, as all proposed modifications will be limited to underground pipeline connections and are expected to

occur in previously disturbed areas. The project will not physically alter or impact the tanks. The field survey and background research did not identify any other built environment resources that may be considered historical resources within or adjacent to the project site. The project therefore does not have the potential to impact built environment historical resources. No impact would occur.

No archaeological resources or archaeological deposits were identified within the project site. The absence of substantial precontact or historic-period archaeological remains within the immediate vicinity and the previous ground disturbance associated with construction and installation of the existing water tanks and associated pipelines indicates there is low potential for encountering intact subsurface archaeological deposits. However, the lack of surface evidence of archaeological materials does not preclude the existence of buried archaeological deposits. Considering the alluvial nature of the soils and the positive results of the SLF search, the overall potential for buried archaeological resources at the project site is moderate. In the unlikely event of an unanticipated discovery, impacts to unknown historical or archaeological resources would be potentially significant. Therefore, implementation of Mitigation Measures CR-1 and CR-2 are required.

Mitigation Measures

CR-1 Worker Environmental Awareness Program

A Worker Environmental Awareness Program (WEAP) training should be conducted by an archaeologist who meets the Secretary of the Interior's *Professional Qualifications Standard*s for Archaeology and a local Native American representative prior to the commencement of any project-related ground disturbances. The WEAP training should include a description of the types of cultural materials that may be encountered, cultural sensitivity issues, the regulatory environment, and protocols for treatment of the materials in the event of a find.

CR-2 Unanticipated Discovery of Cultural Resources

In the unlikely event archaeological resources are unexpectedly encountered during ground-disturbing activities, work in the immediate area should be halted and an archaeologist meeting the Secretary of the Interior's *Professional Qualifications Standards* for archeology (National Park Service 1983) should be contacted immediately to evaluate the find. If the find is prehistoric, then a Native American representative should also be contacted to participate in the evaluation of the find. Impacts to the find shall be avoided to the extent feasible; methods of avoidance may include, but shall not be limited to, capping, fencing, or project redesign. If necessary, the evaluation may require preparation of a treatment plan and archaeological testing for CRHR eligibility. If the discovery proves to be eligible for the CRHR and cannot be avoided by the modified project, additional work, such as data recovery excavation, may be warranted to mitigate significant impacts to historical resources.

Significance After Mitigation

With implementation of Mitigation Measures CR-1 and CR-2, potential impacts related to historical and archaeological resources would be reduced 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 cemeteries are known to exist within the project site. Although unlikely, the discovery of human remains is always a possibility during ground-disturbing activities. If human remains are unexpectedly found, California Health and Safety Code Section 7050.5 states no further disturbance shall occur until the County Coroner has made a determination of origin and disposition pursuant to PRC Section 5097.98. In the event of an unanticipated discovery of human remains, the County Coroner would be notified immediately. If the human remains are determined to be prehistoric, the County Coroner would notify the NAHC, which would determine and notify a most likely descendant. The most likely descendant would complete the inspection of the site within 48 hours of being granted access to the site. With adherence to existing regulations, impacts to human remains would be less than significant.

LESS THAN SIGNIFICANT IMPACT

6 Energy

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

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 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 construction-related energy impacts. There would be no impact.

Operation

As discussed under Initial Study Section 6, *Project Description,* the project involves operation of a pipeline which does not involve electricity consumption. The project would not involve any new operation and maintenance activities, as the project replaces an existing pipeline that already undergoes routine maintenance activities. No new employees would be required. Electricity and fuel consumption would not be wasteful, inefficient, or unnecessary because ongoing maintenance activities would only occur as necessary for water conveyance system operation. In addition, the

purpose of the project is to address the hydraulic bottleneck in the system to ensure water supply reliability and longevity for the SCV Water system. Consequently, there would be no operational energy impacts.

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 a specific renewable energy or energy efficiency plan with which the project could comply. The proposed project would not result in operational energy use beyond existing conditions; therefore, the project would not conflict with or obstruct a state or local plan for renewable energy or energy efficiency. Consequently, 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 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?

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?

The project site is not located in an Alquist-Priolo Fault Zone. In addition, there are no faults present on the project site, and the closest fault to the project site is the San Gabriel fault zone, located approximately 1.6 miles to the south (USGS 2023b). Liquefaction occurs when the strength and stiffness of a soil is reduced by intense ground shaking typically associated with an earthquake in areas with a high groundwater table. According to the DOC (2022c), a majority of the project site is in a potential liquefaction zone. However, design and construction of the proposed project would conform to the current design provisions of the American Water Works Association (AWWA) and applicable seismic provisions of the California Building Code (CBC). The CBC incorporates the latest seismic design standards for structural loads and materials, as well as provisions from the National Earthquake Hazards Reduction Program, to mitigate losses from an earthquake and provide for the latest in earthquake safety. While the project site would be susceptible to seismic activity given its location within a seismically-active area, the proposed project would be required to minimize this risk, to the extent feasible, through the incorporation of applicable AWWA standards. A large seismic event, such as a fault rupture, seismic shaking, or ground failure, could result in breakage of the proposed equipment, failure of joints, and/or leakage from the facility. In the event an earthquake compromised any project component during operation, SCV Water would temporarily shut off the facility and conduct emergency repairs as soon as feasible. Furthermore, the project does not include habitable structures and is located entirely underground and would therefore not expose people to loss, injury, or death involving seismic events. Additionally, implementation of the project would not exacerbate the existing risk of seismic-related ground failure, including liquefaction, in the immediate vicinity. Consequently, the project would not expose people or structures to potential substantial adverse effects involving fault rupture, strong seismic ground shaking, and seismic-related ground failure. 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?

According to the City of Santa Clarita General Plan Environmental Impact Report, the hillside portion of the project site is located within an earthquake-induced landslide zone (City of Santa Clarita 2011b). The project does not include habitable structures and would therefore not expose people to loss, injury, or death involving landslides. Additionally, implementation of the project would not exacerbate the existing risk of earthquake-induced landslides in the immediate vicinity. In the event an earthquake compromised any project component due to landslides during operation, SCV Water would temporarily shut off the facility and conduct emergency repairs as soon as possible.

The steep slope of the hillside pipeline alignment presents constructability challenges. During construction, the project may exacerbate landslide risk along the hillside due to machinery maneuvering along the project alignment and open cut construction methods along the hillside. The

pipe would be installed in a trench with a minimum cover of three feet and erosion control measures to protect the soil over the pipe to prevent the pipe from being exposed over time. Erosion control includes geotechnical matting of the soil, revegetation of the soil, and installation of cutoff walls in the pipe trench at approximately ten-foot intervals to prevent water from running into the pipe trench and eroding the bedding and backfill. With construction measures such as minimizing soil excavation, load on the pipe, erosion control, and minimizing fittings, landslide risk would be reduced.

In the event of a seismic event, such as a landslide, implementing specific pipeline engineering methods would substantially reduce structural damage risks. Design features in the project include incorporating restrained joints for pipeline installation along the slope and minimizing the use of fittings wherever feasible. By incorporating these design features, the probability of pipeline rupture during a landslide is greatly reduced, thereby minimizing the potential for water escape from the pipeline and reducing the possibility of exacerbating the landslide's severity along the hillside.

The project would not introduce new infrastructure to the site that would exacerbate landslide hazards, the proposed project would not directly or indirectly cause potential adverse effects involving landslides. Impacts would be less than significant.

LESS THAN SIGNIFICANT IMPACT

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

Soil erosion or the loss of topsoil may occur when soils are disturbed but not secured or restored, such that wind or rain events may mobilize disturbed soils, resulting in their transport off the project site. Construction activities would include grading, excavation, and trenching activities, which could potentially result in erosion.

Construction-related stormwater pollutant discharges are regulated pursuant to the NPDES Construction General Permit. Coverage under the Construction General Permit is required for projects resulting in greater than one acre of disturbance area. The proposed ground disturbance is approximately 2.4 acres. Therefore, the disturbance area on the project site would be over one acre, and construction activities would be subject to the Construction General Permit requirements. The Construction General Permit requires implementation of a SWPPP that outlines project-specific BMPs to control erosion. Such BMPs include the use of temporary de-silting basins and installation of silt fences and erosion control blankets. With adherence to the Construction General Permit requirements, potential impacts to substantial soil erosion and the loss of topsoil 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?

Ground subsidence and associated fissuring have occurred in Los Angeles County due to falling and rising groundwater tables. Subsidence is caused by a variety of activities, which include, but are not limited to, withdrawal of groundwater, pumping of oil and gas from underground, the collapse of underground mines, liquefaction, and hydro-compaction.

As discussed in criterion (a), although the project site is located in a seismically active and steeply sloped area, the project is not anticipated to adversely affect soil stability or increase the potential

for local or regional landslides, liquefaction, lateral spreading, or collapse. The proposed pipeline would be constructed adjacent to the existing pipeline and would occur in previously disturbed soils. The design and construction of the proposed project would conform to the current design provisions of from AWWA. Impacts would be less than significant.

LESS THAN SIGNIFICANT IMPACT

d. Would the project be located on expansive soil, as defined in Table 1-B of the Uniform Building Code (1994), creating substantial direct or indirect risks to life or property?

Expansive soil are soils with high shrink-swell potential. The shrink-swell potential is low if the soil has a linear extensibility of less than three percent (United States Department of Agriculture [USDA] 2017). The hillside portion of the pipeline alignment is composed of Saugus loam which has a linear extensibility rating of 1.5 percent. Other soil on site includes Riverwash, Sandy alluvial land, Metz loamy sand, and Cortina sandy loam, all of which have a linear extensibility rating of 1.5 percent. All soils on site would be considered soils with a low shrink-swell potential. In addition, the project does not include construction of habitable structures and would be unmanned during operation. Therefore, the proposed project would not expose people to risks related to expansive soils. The proposed project would not be located on expansive soils and would not introduce risk to life or property as a result of expansive soils. No impact would occur.

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. No impact would occur.

NO IMPACT

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

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

Rincon evaluated the paleontological sensitivity of the geologic units that underlie the project site to assess the project’s potential for significant impacts to scientifically important paleontological resources. The analysis was based on the results of a review of existing information in the scientific

literature regarding known fossils within geologic units mapped at the project site. According to the SVP (2010) classification system, geologic units can be assigned a high, low, undetermined, or no potential for containing scientifically significant nonrenewable paleontological resources. Following the literature review, a paleontological sensitivity classification was assigned to each geologic unit mapped within the project site. This criterion is based on rock units within which vertebrate or significant invertebrate fossils have been determined by previous studies to be present or likely to be present. The potential for impacts to significant paleontological resources is based on the potential for ground disturbance to directly impact paleontologically sensitive geologic units.

The project site is located in the *Mint Canyon* USGS 7.5-minute topographic quadrangle. The geology of the region surrounding the project was mapped by Dibblee and Ehrenspeck (1996), who identified four geologic units underlying the project: Quaternary stream channel deposits, Quaternary alluvium, Quaternary old alluvium, and Saugus Formation.

- Quaternary stream channel deposits represent modern stream channel deposits within the Santa Clara River channel (Dibblee and Ehrenspeck 1996) and have low paleontological sensitivity due to its young age (i.e., less than 5,000 years old) (SVP 2010).
- Quaternary alluvium consists of Holocene-aged valley deposits (Dibblee and Ehrenspeck 1996) and has low paleontological sensitivity due to its young age (i.e., less than 5,000 years old) (SVP 2010).
- Quaternary old alluvium consists of Pleistocene-aged alluvial and stream terrace deposits consisting of gravel and sand (Dibblee and Ehrenspeck 1996). Due to the significant number of significant paleontological resources produced by similar sediments in Los Angeles County, Quaternary old alluvium has high paleontological sensitivity (Jefferson 2010; Paleobiology Database 2023; University of California Museum of Paleontology 2023).
- The Saugus Formation is a Pliocene- to Pleistocene-aged sedimentary geologic unit (Dibblee and Ehrenspeck 1996). Multiple fossil localities are known from the Saugus Formation, so therefore, it has high paleontological sensitivity (Paleobiology Database 2023; University of California Museum of Paleontology 2023).

Ground disturbing activities within previously undisturbed sediments with high paleontological sensitivity (i.e., Quaternary old alluvium, Saugus Formation) 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. However, the project is planned to follow the existing pipeline alignment, meaning that all or nearly all impacted sediments would be previously disturbed. Therefore, this project is anticipated to have a less than significant impact on paleontological resources.

LESS THAN SIGNIFICANT IMPACT

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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?	☐	☐	■	☐

Overview of 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 Gases (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, that a total of 2,390 gigatons of anthropogenic CO_2 was emitted. It is likely that anthropogenic activities have increased the global surface temperature by approximately 1.07

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

Significance Thresholds

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

According to the *CEQA Guidelines*, projects can tier from a qualified GHG reduction plan, which allows for project-level evaluation of GHG emissions through the comparison of the proposed project's consistency with the GHG reduction policies included in a qualified GHG reduction plan. This approach is considered by the Association of Environmental Professionals (2016) in its white paper, *Beyond Newhall and 2020*, to be the most defensible approach presently available under CEQA to determine the significance of a project's GHG emissions. SCV Water and the City of Santa Clarita have not adopted a numerical significance threshold for assessing impacts related to GHG emissions, but the City of Santa Clarita has adopted a CAP for reduction of GHG emissions. The SCAQMD, California Office of Planning and Research, CARB, CAPCOA, or any other state or applicable regional agency have not adopted a numerical significance threshold for assessing GHG emissions that is applicable to the proposed Project.

In the absence of any adopted numeric threshold, the significance of the proposed project's GHG emissions is evaluated consistent with *CEQA Guidelines* Section 15064.4(b) by considering whether the proposed 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 proposed project's potential impacts regarding GHG emissions and climate change is evaluated based on consistency with plans and polices adopted for the purposes of reducing GHG emissions and mitigating the effects of climate change. The most directly applicable adopted regulatory plans to reduce GHG emissions are CARB's 2022 Scoping Plan and the City of Santa Clarita General Plan. GHG emissions from the construction and operation of the proposed project are provided for informational purposes.

Methodology

GHG emissions associated with project construction and operation were estimated using CalEEMod, version 2022.1, with the assumptions described under Environmental Checklist Section 3, *Air Quality*. Construction emissions occur for a limited period of a project's lifetime; as a standard practice, GHG emissions from construction are amortized over a presumed project lifetime. A project lifetime of 30 years is recommended by SCAQMD (2008).

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?

Plans and policies have been adopted to reduce GHG emissions in the Southern California region, including the City of Santa Clarita General Plan, and CARB's 2022 Scoping Plan. The following policies apply to the proposed project:

- **Conservation and Open Space Element Goal CO 4:** An adequate supply of clean water to meet the needs of present and future residents and businesses, balanced with the needs of natural ecosystem.
  - **Objective CO 4.1:** Promote water conservation as a critical component of ensuring adequate water supply for SCV residents and businesses.
  - **Objective CO 4.2:** Work with water providers and other agencies to identify and implement programs to increase water supplies to meet the needs of future growth.
- **2022 Scoping Plan Goal**: Support climate adaptation and biodiversity that includes protection of the state's water supply, water quality, and infrastructure to achieve carbon neutrality as soon as possible (CARB 2022b).

While the proposed project would not specifically involve water efficiency, it would improve the reliability and resiliency of the local water supply system by upgrading the existing out-of-date pipeline system. Therefore, the proposed project would improve the reliability and resiliency of the local water distribution network. Thus, although the project would generate temporary construction emissions, the project would ultimately be consistent with the goals of the City of Santa Clarita General Plan and CARB's 2022 Scoping Plan. The proposed project would not conflict with any applicable plans, policies, or regulations to reduce GHG emissions. Therefore, impacts related to GHG emissions would be less than significant.

Quantified GHG Emissions for Information Purposes

Construction of the project would generate GHG emissions. Since the project would not include new operational activity, this analysis considers the GHG emissions from construction for informational purposes. Calculations of CO_2, CH_4, and N_2O emissions are provided to identify the magnitude of potential project effects.

Construction Emissions

Construction facilitated by the project would generate temporary GHG emissions primarily from the operation of construction equipment on site, as well as from vehicles transporting construction workers to and from the project site and heavy trucks to transport materials. As shown in Table 9, construction associated with the project would generate 893 MT of CO_2e. Amortized over a 30-year period pursuant to SCAQMD guidance, construction associated with the project would generate 30 MT of CO_2e per year.

Table 9 Construction GHG Emissions

Year	Emissions (MT of CO_2e)
2024	189
2025	697
2026	7
Total	**893**
Amortized over 30 years	**30**

MT = metric tons; CO_2e = carbon dioxide equivalents

Source: Table 2.3 "Construction Emissions by Year, Mitigated" emissions. Annual emissions results are shown for all emissions. The mitigated emissions account for project sustainability features and/or compliance with specific regulatory standards. No mitigation measures are required for this project. See CalEEMod worksheets in Appendix A.

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?

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 temporarily increase the transport and use of hazardous materials in the project area through the operation of vehicles and equipment. Such substances include diesel fuel, oil, solvents, and other similar materials brought onto the construction site for use and storage during the construction period. These materials would be contained within vessels specifically engineered for safe storage and would not be transported, stored, or used in quantities that would pose a significant hazard to the public or construction workers themselves. In addition, project construction activities would comply with all relevant regulations, including the enforcement of hazardous materials transportation regulations.

Ground-disturbing activities associated with project construction could cause an accidental upset or release of hazardous materials, such as vehicle and equipment fuels, if they are not properly stored and secured. The project would involve construction activities within the Santa Clara River which is at greater risk if contamination is to occur as it is connected to the larger watershed of the region. As outlined in Mitigation Measure BIO-1, the project would implement best management practices for all equipment used on-site to avoid leaks of oil, fuel, or residues within the project site. If such conditions cause a release of hazardous materials into the environment, potential impacts to the public or the environment could occur. To further reduce potential construction-related impacts to a less-than-significant level, Mitigation Measure HAZ-1 would be required.

The operation and maintenance of the proposed project would not involve the storage of hazardous chemicals on site. Therefore, there would be no impact related to hazardous materials during project operation.

Mitigation Measures

With implementation of the following mitigation measure, potential impacts related to hazardous materials would be less than significant.

HAZ-1 Hazardous Materials Management and Spill Control Plan

Before construction begins, the construction contractor shall develop and implement a Hazardous Materials Management and Spill Control Plan (HMMSCP) that includes a project-specific contingency plan for hazardous materials and waste operations. 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 United States Department of Labor Occupational Safety and Health Administration and California Division of Occupational Safety and Health regulations. The HMMSCP shall articulate hazardous materials handling practices to prevent the accidental spill or release of hazardous materials.

Significance after Mitigation

Mitigation Measure HAZ-1 would require the development of a HMMSCP which would include a project-specific contingency plan for hazardous materials and waste operation such that the project would not create a significant hazard to the public or the environment through the routine transport, use, or disposal of hazardous materials or the reasonably foreseeable upset and accident

conditions involving the release of hazardous materials into the environment. Therefore, implementation of Mitigation Measure HAZ-1 would reduce impacts 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 Rio Vista Elementary School, located at 20417 Cedarcreek Street, in Canyon Country. The pipeline alignment is adjacent to the school's northern and western boundaries. Construction of the proposed project would comply with existing federal and state requirements for the transport, use, or disposal of hazardous materials. No facilities or infrastructure expected to contain lead-based paint or asbestos-containing materials would be demolished as part of project construction. In addition, no hazardous waste disposal sites, solid waste disposal sites, or hazardous substance release sites were identified within the project site that could result in a release of hazardous emissions or materials (California State Water Resources Control Board [SWRCB] 2023b; DTSC 2023a). Furthermore, the project would implement a HMMSCP, as required by Mitigation Measure HAZ-1. The HMMSCP would establish policies and procedures consistent with applicable codes and regulations for hazardous materials and waste operations. Therefore, project construction would not emit hazardous emissions or handle hazardous materials, substances, or waste within 0.25 mile of an existing or proposed school. Impacts would be less than significant with mitigation.

The proposed project would not emit hazardous emissions during operation. With adherence to these regulations and standards, project operation would not adversely affect schools within 0.25 mile of the project site due to the handling of hazardous materials, substances, or waste. No impact would occur during project operation.

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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?

Government Code Section 65962.5 requires the California Environmental Protection Agency (CalEPA) to maintain a Cortese List. The California Department of Toxic Substance Control (DTSC) is responsible for a portion of the information contained in the Cortese List. Other state and local government agencies are required to provide additional hazardous material release information for the Cortese List. The analysis for this section included a review of the following resources on March 22, 2023, to provide hazardous material release information:

- SWRCB GeoTracker database (SWRCB 2023b)
- DTSC EnviroStor database (DTSC 2023a)
- List of "active" Cease and Desist Orders (CDO) and Cleanup and Abatement Orders (CAO) from RWQCBs (CalEPA 2023a)
- Solid Waste Disposal Sites (CalEPA 2023b)

Based on review of these databases, the project site is not included on existing lists of hazardous materials sites compiled pursuant to Government Code Section 65962.5. The nearest SWRCB sites include three leaking underground storage tank (LUST) sites, located at 27050 Ruether Avenue, approximate 0.17 mile to the west, 20727 Santa Clara Street, approximately 0.32 mile to the west,

and 26971 Furnivall Avenue, approximately 0.20 mile southwest of the site. However, these cases were completed and closed in 1997, 2011, and 1996, respectively (SWRCB 2023d, 2023e, 2023f). The nearest active site is the former Glass Seal Corporation located at 21516 West Golden Triangle Road, approximately 1.16 miles northwest of the project site (SWRCB 2023c). The Glass Seal Corporation site is classified as a Clean Up Program Site for volatile organic compounds. The nearest DTSC site cleanup program is 20988 Golden Triangle Road, approximately 0.55 mile southwest of the project site (DTSC 2023b).

Although the several LUST sites have been classified as closed by the SWRCB, there is still a risk that hazardous materials from these sites may have infiltrated the underlying Santa Clara River Valley Groundwater Basin, East Subbasin (Basin), as well as the soil on site. During open cut trenching across the Santa Clara Riverbed, groundwater from the Basin is likely to be encountered, necessitating dewatering procedures. In the event that the groundwater or on-site soil is contaminated with hazardous materials, which could potentially originate from past LUST sites or the active Clean Up Program site, the impacts of the dewatering process and construction could be potentially significant. To address this, the project would require the implementation of Mitigation Measures HAZ-2 through HAZ-5. These measures aim to identify contaminated groundwater or soil on site and minimize the construction-related impacts of potential hazardous materials to less than significant. It should be noted that although the project site is not currently listed as a hazardous materials site according to Government Code Section 65962.5, there is still a possibility of encountering hazardous materials impacts from Government Code Section 65962.5 sites during construction from potentially contaminated groundwater or soil. Nevertheless, with the implementation of Mitigation Measure HAZ-2 through HAZ-5, impacts would be reduced a less than significant level.

Mitigation Measures

HAZ-2 Soil and Groundwater Management Plan

Prior to commencement of construction activities at the project site, SCV Water shall retain a qualified consultant (i.e., Professional Geologist [PG] or Professional Engineer [PE]) to prepare a Soil and Groundwater Management Plan (SGMP). The SGMP, or equivalent document, shall be prepared to address on-site handling and management of impacted soils, groundwater, or other impacted wastes, and reduce hazards to construction workers and off-site receptors during construction. The SGMP shall establish remedial measures and/or soil and groundwater management practices to ensure construction worker safety, the health of future workers and visitors, and prevent the off-site migration of contaminants from the site. These measures and practices may include, but are not limited to:

- Stockpile management, including stormwater pollution prevention and the installation of Best Management Practices;
- Collection of groundwater samples during dewatering;
- Proper transportation and disposal procedures of impacted materials in accordance with applicable regulations, including California Code of Regulations (CCR) Title 22;
- Monitoring and reporting; and/or
- A health and safety plan for contractors working at the site that addresses the safety and health hazards of each phase of site construction activities with the requirements and procedures for employee protection, and outlines proper soil and groundwater handling procedures and health

and safety requirements to minimize worker and public exposure to hazardous materials during construction.

SCV Water shall review and approve the SGMP, and shall ensure that the construction contractor implements the SGMP prior to and during construction.

HAZ-3 Subsurface Investigation

If odorous or visually stained soils or groundwater, other indications of unanticipated piping or equipment (including hydrocarbon piping or equipment), or debris are encountered during ground-disturbing activities, work in the immediate area shall be halted and SCV Water shall retain a qualified consultant (i.e., PG or PE) to conduct a subsurface investigation in the potentially impacted area. Work may continue on other parts of the project while impacted soil or groundwater investigation and/or remediation takes place. The subsurface investigation may include, but is not limited to, completion of soil and/or groundwater sampling and analysis for total petroleum hydrocarbons, volatile organic compounds, semi-volatile organic compounds, organochloride pesticides, and/or metals.

The PG or PE shall prepare a subsurface investigation report, which will be submitted to SCV Water for review and approval. As part of the subsurface investigation, analytical results shall be screened against the most recent San Francisco Bay Regional Water Quality Control Board (SFB RWQCB) Environmental Screening Levels (ESL) (SFB RWQCB 2023).4 The ESLs are risk-based screening levels for direct exposure of construction workers, residential land use, and commercial/industrial land use. The subsurface investigation report shall include recommendations to address identified hazards and indicate when to apply those recommended actions in relation to project activities.

If contaminants are detected at the project site, SCV Water shall implement the recommendations specified in the subsurface investigation report, and appropriate steps shall be undertaken by SCV Water to protect site workers during project construction. This could include preparation of an updated SGMP (see Mitigation Measure HAZ-2) and/or remediation, if required (see Mitigation Measure HAZ-4).

HAZ-4 Remediation

If the subsurface investigation (see Mitigation Measure HAZ-3) identifies that contaminants are present within the construction limits at chemical concentrations exceeding ESLs and/or hazardous waste screening thresholds for contaminants in soil (CCR Title 22, Section 66261.24), SCV Water shall retain a qualified consultant (i.e., PG or PE) to conduct additional analytical testing and recommend soil disposal recommendations, or consider other remedial engineering controls, as necessary.

The qualified consultant (i.e., PG or PE) shall utilize the project site analytical results for waste characterization purposes prior to off-site transportation or disposal of potentially impacted soils or other impacted wastes. The qualified consultant (I.e., PG or PE) shall provide disposal recommendations and arrange for proper disposal of the waste soils or other impacted wastes (as necessary), and/or provide recommendations for remedial engineering controls, if appropriate.

Remediation of impacted soils and/or implementation of remedial engineering controls may require additional delineation of impacts; additional analytical testing per landfill or recycling facility

[4] Although established by the SFB RWQCB, the SFB RWQCB ESLs are accepted and used throughout the state by other RWQCBs and state agencies.

requirements; soil excavation; and off-site disposal or recycling. Remediation should be conducted within the construction footprint/areas of soil disturbance to screening levels as determined by the qualified consultant (i.e., PG or PE), SCV Water, and/or an oversight agency (e.g., Los Angeles RWQCB [LA RWQCB] or Department of Toxic Substances Control).

SCV Water shall review and approve the project site disposal recommendations for regulated waste prior to transportation of impacted soils off-site, and review and approve remedial engineering controls, prior to construction. Subsequently, SCV Water shall review and implement the disposal recommendations for regulated waste prior to transportation of impacted soils off-site, and review and implement the remedial engineering controls, prior to construction.

HAZ-5 Disposal of Groundwater

If contaminated groundwater (decontamination water, purge water, dewatering, or underground structures [groundwater leakage into the final structure]) is generated during construction of the project, the LA RWQCB or the City of Santa Clarita and/or Los Angeles County Department of Public Works would be consulted to determine if the treated groundwater can be disposed through one of their waste discharge permits, or through an existing SCV Water permit. LA RWQCB may require that an individual National Pollution Discharge Elimination System (NPDES) permit and/or waste discharge requirements be obtained for dewatering activities.

The groundwater discharge and disposal requirements vary by agency, location, concentration, and contaminants of concern, and would therefore be developed in consultation with SCV Water and the applicable agency, which could include LA RWQCB, the City of Santa Clarita, and/or the Los Angeles County Department of Public Works.

Significance After Mitigation

Implementation of Mitigation Measures HAZ-2 through HAZ-5 during project construction would reduce potential hazardous material impacts to a less-than-significant level by implementing additional investigation and remedial measures, transportation of impacted materials, and/or soil and groundwater management practices to ensure construction worker health and safety.

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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 or public use airport to the project site is the Whiteman Airport, located approximately 14 miles southwest of the project site. The project site is not located within an airport land use plan or within two miles of a public or public use airport. As a result, the project would have no impact related to safety hazards or excessive noise for people residing or working in the project area due to proximity to an airport.

NO IMPACT

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

The City of Santa Clarita maintains a Local Hazard Mitigation Plan (LHMP) that is updated and adopted every five years (City of Santa Clarita 2021). The LHMP sets forth hazard mitigation strategies along with action items to help mitigate and combat various threats such as wildfire,

drought, earthquakes, landslides, extreme heat, cyber-attacks, energy disruption, floods, and terrorism. Construction of the proposed project would require temporary lane closures along Honby Avenue for pipeline installation. The lane closure could slow traffic through the local area and thereby affect implementation of emergency response and emergency evacuation plans. Therefore, impacts would be potentially significant, and implementation of Mitigation Measure HAZ-6 would be required to reduce impacts to a less-than-significant level. Operational activities associated with the proposed project would occur solely on the project site and would not interfere with emergency response. With implementation of Mitigation Measure HAZ-6, impacts to an adopted emergency response plan or emergency evacuation plan would be less than significant with mitigation incorporated.

Mitigation Measure

HAZ-6 Traffic Control Plan

SCV Water shall require the project contractor(s) to prepare and implement a traffic control plan that specifies how traffic will be safely and efficiently redirected during lane closures. All work shall comply with the Work Area Traffic Control Handbook, which conforms to the standards and guidance of the California Manual on Uniform Traffic Control Devices. Traffic control measures for lane closures shall be included, and priority access shall be given to emergency vehicles. The traffic control plan shall also include requirements to notify local emergency response providers at least one week prior to the start of work when lane closures are required.

Significance after Mitigation

Mitigation Measure HAZ-6 would require the project contractor(s) to safely redirect traffic, utilize traffic control measures, and give emergency response providers advance notification and priority access such that the potential to impair implementation of or physically interfere with an adopted emergency response plan or emergency evacuation plan would be minimized. Therefore, implementation of Mitigation Measure HAZ-6 would reduce impacts to a less-than-significant level.

LESS THAN SIGNIFICANT WITH MITIGATION INCORPORATED

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

The hillside portion of the pipeline alignment north of the Santa Clara River is located in a designated Very High Fire Hazard Severity Zone (VHFHSZ) (CAL FIRE 2023). The proposed pipeline would be located within brush-covered open space vegetated with native plant communities, which are highly combustible. The location of the project site in the wildland-urban interface could create the potential for incidents of fire during project construction. 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. Construction equipment would be subject to standard operating procedures that would limit sources of ignition that could generate a wildland fire. All construction activities on the project site, require fire safety protocols, including, but not limited to, on-site fire extinguishing equipment. Compliance with applicable federal and State laws and regulations related to the proper use, storage, and transport of hazardous materials would reduce the risk of wildfire ignition from the use of hazardous materials during construction activities. As such, project construction would not

expose people or structures, either directly or indirectly, to a significant risk of loss, injury, or death involving wildland fires, and impacts would be less than significant.

Project operation would not involve potentially flammable activities and the pipeline would be located entirely underground. No impact would occur.

LESS THAN SIGNIFICANT IMPACT

10 Hydrology and Water Quality

	Potentially Significant Impact	Less than Significant with Mitigation Incorporated	Less than Significant Impact	No Impact
Would the project:				
a. Violate any water quality standards or waste discharge requirements or otherwise substantially degrade surface or ground water quality?	☐	■	☐	☐
b. Substantially decrease groundwater supplies or interfere substantially with groundwater recharge such that the project may impede sustainable groundwater management of the basin?	☐	☐	■	☐
c. Substantially alter the existing drainage pattern of the site or area, including through the alteration of the course of a stream or river or through the addition of impervious surfaces, in a manner which would:				
(i) Result in substantial erosion or siltation on- or off-site;	☐	■	☐	☐
(ii) Substantially increase the rate or amount of surface runoff in a manner which would result in flooding on- or off-site;	☐	■	☐	☐
(iii) Create or contribute runoff water which would exceed the capacity of existing or planned stormwater drainage systems or provide substantial additional sources of polluted runoff; or	☐	■	☐	☐
(iv) Impede or redirect flood flows?	☐	■	☐	☐
d. In flood hazard, tsunami, or seiche zones, risk release of pollutants due to project inundation?	☐	☐	■	☐
e. Conflict with or obstruct implementation of a water quality control plan or sustainable groundwater management plan?	☐	■	☐	☐

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

Construction

Grading, excavation, and other construction activities associated with the project could adversely affect water quality due to erosion resulting from exposed soils and the generation of water pollutants, including trash, construction materials, and equipment fluids. Soil disturbance associated with site preparation and grading activities would result in looser, exposed soils, which are more susceptible to erosion. Additionally, spills, leakage, or improper handling and storage of substances such as oils, fuels, chemicals, metals, and other substances from vehicles, equipment, and materials used during project construction could contribute to stormwater pollutants or leach to underlying groundwater.

The existing pipeline would be drained of any water before it is abandoned in place. It is anticipated that the water would be discharged into the Santa Clara River bed. The discharge from the existing pipeline would be covered under SCV Water's existing SWRCB General Permit for Drinking Water System Discharge which provides Clean Water Act regulatory coverage for discharges resulting from essential operations and maintenance activities of drinking water systems. The discharge from the existing pipeline would not violate any water quality standards or waste discharge requirements.

Coverage under the NPDES Construction General Permit is required for projects resulting in greater than one acre of disturbance area. As described under Initial Study Section 6, *Project Description*, the proposed facility footprint is approximately 2.3 acres. Therefore, construction activities would be subject to the Construction General Permit requirements. Construction-related stormwater pollutant discharges are regulated pursuant to the NPDES Construction General Permit, which requires visual monitoring of stormwater and non-stormwater discharges; sampling, analysis, and monitoring of non-visible pollutants; and compliance with all applicable water quality standards established for receiving waters potentially affected by construction discharges. Furthermore, the Construction General Permit requires implementation of a SWPPP that outlines project-specific BMPs to control erosion. Such BMPs include the use of temporary de-silting basins, construction vehicle maintenance in staging areas to avoid leaks, and installation of silt fences and erosion control blankets.

Construction in the Santa Clara River bed is likely to encounter groundwater during open cut trenching and pipeline installation. A portion of the pipeline would be installed at a depth below the known river scour level, which is estimated to be 20 feet. During the dry season, groundwater is expected to be encountered at 20 to 50 feet below ground surface (bgs) within the Santa Clara River bed. Dewatering activities would be temporary and short-term as pipeline construction activities move along the alignment within the river bed. Construction within the river bed is anticipated to last no more than one month. Water collected from the dewatering process will be discharged in accordance with Mitigation Measures HAZ-2 andMeasure HAZ-5. The project also would be required to implement a SGMP pursuant to Mitigation Measure HAZ-2, subsurface investigation pursuant to Mitigation Measure HAZ-3, and remediation pursuant to Mitigation Measure HAZ-4. If the water collected from the dewatering process is discharged back to the river bed, Mitigation Measures HAZ-2 through HAZ-5 would ensure that the water is evaluated and meets the necessary quality standards before being reintroduced into the Santa Clara River and the underlying groundwater basin, or discharged to the storm drain.

In addition, the project would be required to obtain Clean Water Act Section 401 Certification under the RWQCB. The Clean Water Act Section 401 Certification would require the project to comply with State water quality standards and would allow for discharges into the Santa Clara River. Construction would not violate any water quality standards, waste discharge requirements, or otherwise substantially degrade water quality. Impacts would be less than significant with mitigation

The project would not increase the impervious surface area on the project site. The project would also not involve the storage of chemicals on site. Project operation would not involve ground disturbance, which would limit the potential for off-site migration of sediment and adsorbed pollutants in runoff. The project would generally preserve on-site drainage patterns, with water continuing to flow from higher elevations to lower elevations. Operational conditions of the project would be the same as existing conditions. Given the impervious surface area would not increase and chemicals would not be stored, project operation would not violate any water quality standards, waste discharge requirements, or otherwise substantially degrade water quality. No impact would occur.

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 consists of a water pipeline that would be installed underground, and the project site would be restored to pre-project conditions after the completion of construction activities. The project does not include the addition of impervious surfaces, and the underground pipeline would not substantially alter the ability for groundwater to percolate through the subsurface. Therefore, the proposed project would not interfere substantially with groundwater recharge.

During the construction phase, the pipeline installation through the Santa Clara River bed is likely to encounter groundwater, necessitating the process of dewatering for up to one month. The Santa Clara River serves as the primary source of recharge for groundwater basins in Ventura County, including the Santa Clara River Valley Groundwater Basin underlying the project site (Ventura County Watershed Protection District 2005). The project would be required to implement a SGMP pursuant to Mitigation Measure HAZ-2, subsurface investigation pursuant to Mitigation Measure HAZ-3, remediation pursuant to Mitigation Measure HAZ-4, and proper groundwater disposal pursuant to Mitigation Measure HAZ-5. During the dry season, groundwater is expected to be encountered at 20 to 50 feet bgs within the Santa Clara River bed. Dewatering activities would be temporary and short-term as pipeline construction activities move along the alignment within the river bed. The dewatering activities will affect shallow groundwater levels over a maximum time period of one month and will not substantially decrease groundwater supplies or impede sustainable groundwater management.

In addition, dewatering activities may discharge back to the Santa Clara River, in accordance with Mitigation Measure HAZ-2 through HAZ-5. By discharging the water back into the Santa Clara River, there may be opportunity for the groundwater to percolate back into the underlying Basin.

In addition, as discussed in Environmental Checklist Section 19, *Utilities and Service Systems*, the project would be addressing the hydraulic bottleneck in the SCV Water system caused by the existing pipeline, but would not increase capacity of the system or demand for water supply which is sourced from groundwater. Accordingly, the proposed project would not substantially decrease

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

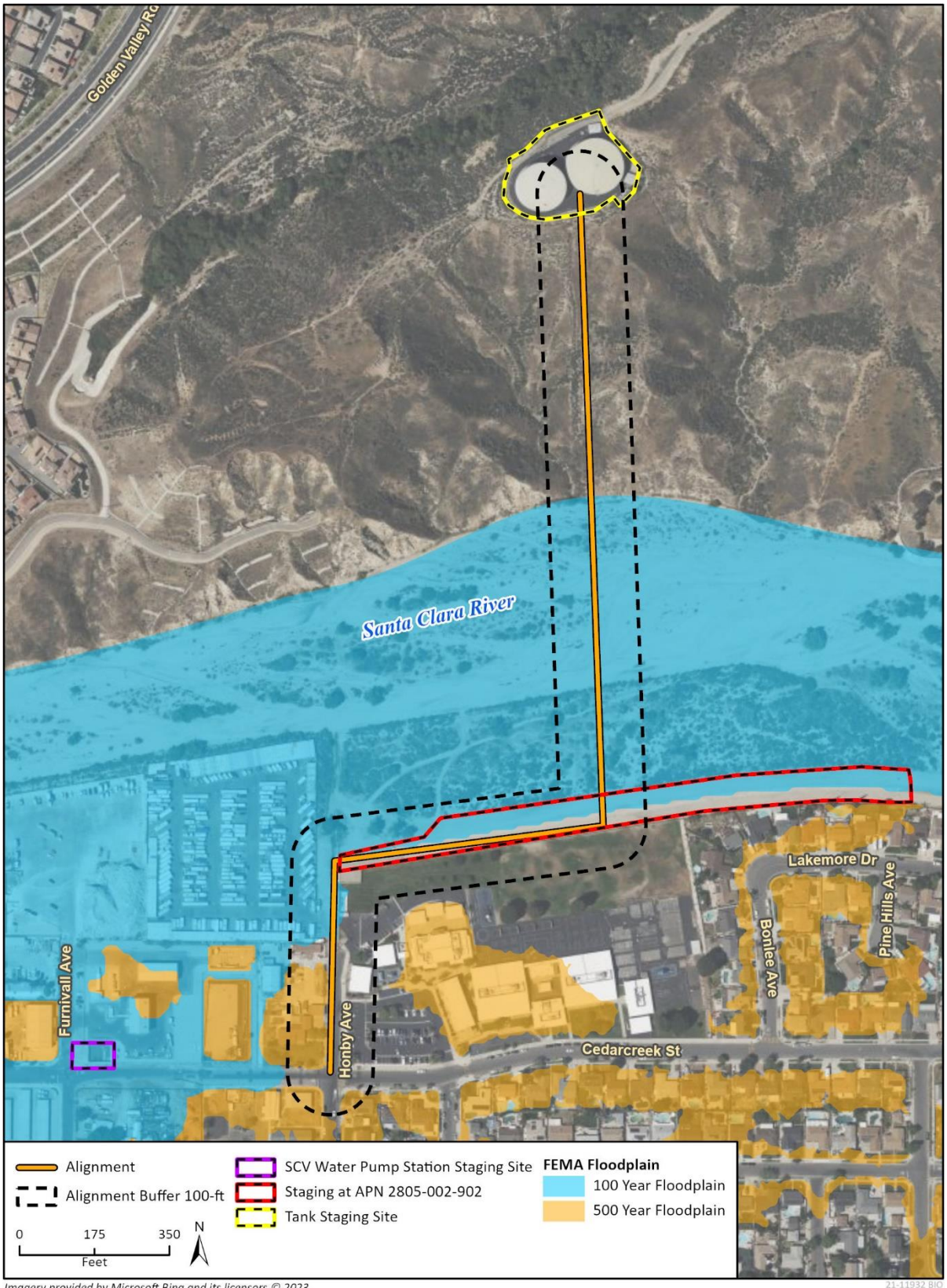
c.(iv) Would the project substantially alter the existing drainage pattern of the site or area, including through the alteration of the course of a stream or river or through the addition of impervious surfaces, in a manner which would impede or redirect flood flows?

During operation, the project would generally preserve drainage patterns on site, with water continuing to flow from higher elevations to lower elevations. The proposed pipeline would traverse the Santa Clara River but would be located belowground.

The pipeline would be installed via open-cut method for the entirety of its alignment including its crossing through the Santa Clara River. As described in Environmental Checklist Section 4, *Biological Resources*, the project would implement Mitigation Measure BIO-8, which requires that construction within the riverbed occur when the river is dry. This would ensure that no surface waters are diverted or altered during construction activities within the river bed. Construction of the Santa Clara River bed portion of the pipeline would require dewatering during trench construction. As described above under criterion (b), the water collected from dewatering would be sampled in accordance with the SGMP required by Mitigation Measure HAZ-2. As described above in criterion (a), the project would be required to obtain coverage under the Construction General Permit which would require the implementation of a SWPPP that outlines project-specific BMPs to control erosion. As a result, the project would not substantially alter the existing drainage pattern of the site or area in a manner that would result in substantial erosion or siltation on- or off-site; substantially increase the rate or amount of surface runoff in a manner which would result in flooding on- or off-site; create or contribute runoff water which would exceed the capacity of existing or planned stormwater drainage systems or provide substantial additional sources of polluted runoff; or impede or redirect flood flows. Impacts would be less than significant.

According to the Federal Emergency Management Agency (FEMA) Flood Insurance Rate Map, the project site is located in Zone AE, Zone X, and Zone D (FEMA 2008). FEMA flood zones in the project site are shown in Figure 7. Zone AE are areas with a 1 percent annual chance of flooding and Zone X indicates an area where the annual flood risk is between 1 percent and 0.2 percent. Zone D Areas are areas with possible but undetermined flood hazards.

Figure 7 FEMA Flood Zones



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Additional data provided by FEMA, 2023.

21-11932 BIO
Fig X FEMA

The project would implement Mitigation Measure BIO-8 which would require construction in the riverbed to occur when the river is dry. .Given the project would generally preserve existing drainage patterns on site and would be mostly located belowground once construction is complete, the project would not alter the course of a stream or river, and would not divert or redirect flood flows, potential impacts related to the alteration of the site's drainage pattern would be less than significant with mitigation.

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

The project site is approximately 26 miles from the Pacific Ocean, separated by the Santa Susana and Santa Monica mountain ranges, and not subject to tsunami risk. The nearest inland surface water body that may be subject to risk of a seiche is Castaic Reservoir, approximately 7.6 miles to the north. Given the distance to this water body, the occurrence of a seiche would not affect the project site. In addition, the project site is outside of the dam failure inundation zone for both Castaic Reservoir and Bouquet Reservoir (City of Santa Clarita 2011). As discussed above, the project site is located in FEMA Zone AE, Zone X, and Zone D (7) (FEMA 2008). During construction, pollutants such as oils, fuels, chemicals, metals, and other substances from vehicles, equipment, and materials could risk release due to inundation since portions of the project site and staging areas are located in a FEMA flood zone. As part of the compliance with the Construction General Permit, a SWPPP would be prepared for the proposed project. Among other things, the SWPPP requires that hazardous materials be properly stored, contained, and disposed of to prevent polluted stormwater discharged from construction sites, which would prevent substantial spills of hazardous materials during project inundation. With implementation of the SWPPP, impacts from the risk release of pollutants due to project inundation would be less than significant during construction.

During operation, project components would be located underground and would not risk the release of pollutants due to project inundation during flood events. 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?

Water Quality Control Plan

The Los Angeles RWQCB Basin Plan designates beneficial uses for surface waters in the Los Angeles region and associated water quality objectives to fulfill such uses. The project site is within the Santa Clara River watershed and drains to Reach 6 of the Santa Clara River. Reach 6 and all downstream reaches have designated beneficial uses of Municipal and Domestic Supply (potential), Industrial Service Supply, Industrial Process Supply, Agricultural Supply, Groundwater Recharge, Freshwater Replenishment, Warm Freshwater Habitat, Wildlife Habitat, Rare, Threatened and Endangered Species, Wetland Habitat, Water Contact Recreation, and Non-contact Water Recreation (Los Angeles RWQCB 2020). Multiple reaches of the Santa Clara River downstream of the project site are listed as impaired for numerous pollutants. Table 10 summarizes impairments for all downstream reaches of the Santa Clara River, including the Santa Clara River estuary.

Table 10 Water Quality Impairments for Downstream Reaches of the Santa Clara River

Santa Clara River Reach	Impairments
Reach 6 (West Pier Highway 99 Bridge to Bouquet Canyon Road)	Chloride, Chlorpyrifos, Temperature, Toxicity
Reach 5 (Blue Cut Gaging Station to West Pier Highway 99 Bridge)	Chloride, Indicator Bacteria, Iron, Trash
Reach 4B (Piru Creek to Blue Cut Gaging Station)	Not impaired
Reach 4A (A Street [Fillmore] to Piru Creek)	Trash
Reach 3 (Freeman Diversion to A Street [Fillmore])	Chloride, Indicator Bacteria, Selenium, Total Dissolved Solids, Toxicity, Trash
Reach 2 (Highway 101 Bridge to Freeman Diversion)	Not impaired
Reach 1 (Estuary to Highway 101 Bridge)	Dissolved Oxygen, pH, Toxicity, Trash
Santa Clara River Estuary	Ammonia, ChemA,[1] Indicator Bacteria, Toxaphene, Toxicity

[1] ChemA refers to the sum of the chemicals aldrin, dieldrin, chlordane, endrin, heptachlor, heptachlor epoxide, lindane, endosulfan, and toxaphene.

Source: SWRCB 2019

As described above in criterion (a), the project would implement stormwater BMPs to minimize potential temporary, construction-related water quality impacts pursuant to the Construction General Permit. The project would be required to implement a SGMP pursuant to Mitigation Measure HAZ-2, subsurface investigation pursuant to Mitigation Measure HAZ-3, remediation pursuant to Mitigation Measure HAZ-4, and proper groundwater disposal pursuant to Mitigation Measure HAZ-5. Mitigation Measures HAZ-2 through HAZ-5 would ensure that the dewatered groundwater is evaluated and meets the necessary quality standards if it is reintroduced into the riverbed and consequently back into the groundwater basin. Furthermore, project operation would not involve ground disturbance that would contribute to runoff of sediment or sediment-bound pollutants, and the project does not involve septic systems, pet parks, agricultural land, or other land uses commonly associated with high concentrations of nutrients, indicator bacteria, or chemical toxicity. No chemicals would be stored on site. Therefore, the project would not exacerbate existing impairments to the Santa Clara River and would not impair existing or potential beneficial uses of nearby water bodies with implementation of the Construction General Permit. As such, the project would not conflict with or obstruct implementation of the Basin Plan. Impacts would be less than significant with mitigation.

Sustainable Groundwater Management Plan

The project site overlies the Saugus Formation of the Basin. The Santa Clarita Valley Groundwater Sustainability Agency (GSA), consisting of representatives from SCV Water, County of Los Angeles, City of Santa Clarita, and Los Angeles County Waterworks District Number 36, oversees management of the subbasin. The Groundwater Sustainability Plan (GSP) governing the Santa Clara River Valley Groundwater Basin, East Subbasin was adopted in January 2022.

The project could involve dewatering activities during installation of the pipeline across the Santa Clara River. As described in criterion (b), the dewatered groundwater would be sampled for contaminants according to Mitigation Measure HAZ-2 through HAZ-5 before potential release into the Santa Clara Riverbed. Dewatering activities would not conflict with the implementation of the GSP and would not substantially decrease groundwater levels within the Basin. It is important to note that the Santa Clara River serves as the primary source of recharge for groundwater basins in Ventura County (Ventura County Watershed Protection District 2005). During the dry season,

groundwater is expected to be encountered at 20 to 50 feet below ground surface (bgs) within the Santa Clara River bed. Dewatering activities would be temporary and short-term as pipeline construction activities move along the alignment within the river bed. The dewatering activities will affect shallow groundwater levels over a maximum time period of one month and will not substantially decrease groundwater supplies or impede sustainable groundwater management. In addition, dewatering activities may discharge back to the Santa Clara River, in accordance with Mitigation Measures HAZ-2 through HAZ-5. By discharging the water back into the Santa Clara River, there may be opportunity for the groundwater to percolate back into the underlying Basin.

Furthermore, the project does not propose residential, commercial, industrial, or other land uses that would increase water demand and require additional water supply. The project would address the existing pipeline's hydraulic bottleneck in the SCV Water system but would not increase the overall capacity of the system. As such, the project would not increase groundwater extraction beyond previous operating conditions and, therefore, would not conflict with or obstruct implementation of the GSP. Impacts related to the GSP would be less than significant with mitigation.

LESS THAN SIGNIFICANT WITH MITIGATION INCORPORATED

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 replace an existing underground pipeline. Therefore, project components would not physically divide an established community. 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?

Pursuant to California Government Code 53091, the building and zoning ordinances of a county or city do not apply to the location or construction of facilities for the production, storage, or transmission of water, wastewater, or electrical energy by a local agency. The project would entail the construction and operation of a new pipeline and replacement of an existing pipeline. Therefore, the building and zoning ordinances of the City of Santa Clarita would not apply to the proposed project, and the project is only evaluated for consistency with the City of Santa Clarita General Plan.

The City of Santa Clarita General Plan identifies objectives and policies to maintain public infrastructure and provide clean water for Valley residents and businesses. The proposed project's consistency with applicable General Plan goals, objectives, and policies is described in Table 11. As shown therein, the proposed project would actively support the City's goals, policies, and objectives related to providing an adequate supply of clean water to meet local demands. Therefore, the project would not cause a significant environmental impact due to a conflict with any land use plan, policy, or regulation adopted for the purpose of avoiding or mitigating an environmental effect, and no impact would occur.

Table 11 General Plan Consistency

General Plan Goal or Policy	Proposed Project Consistency
Objective LU 7.2. Ensure an adequate water supply to meet the demands of growth.	**Potentially Consistent.** The proposed project would enable SCV Water to continue to provide a reliable source of local water supply, by resolving an existing bottleneck issue.
Policy LU 7.3.4. Implement best management practices for erosion control throughout the construction and development process.	**Potentially Consistent.** As discussed in Environmental Checklist Section 10, *Hydrology and Water Quality*, the proposed project would implement erosion control BMPs during construction activities as part of compliance with a SWPPP required by the NPDES Construction General Permit.
Goal CO 4. An adequate supply of clean water to meet the needs of present and future residents and businesses, balanced with the needs of natural ecosystems.	**Potentially Consistent.** The proposed project would enable SCV Water to continue to provide a local supply of clean water.

Source: City of Santa Clarita 2011a

NO IMPACT

12 Mineral Resources

	Potentially Significant Impact	Less than Significant with Mitigation Incorporated	Less than Significant Impact	No Impact
Would the project:				
a. Result in the loss of availability of a known mineral resource that would be of value to the region and the residents of the state?	☐	☐	☐	■
b. Result in the loss of availability of a locally important mineral resource recovery site delineated on a local general plan, specific plan, or other land use plan?	☐	☐	☐	■

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?

Mineral Resource Zone 2 (MRZ-2) areas are concentrated along waterways, such as the Santa Clara River within and outside the City boundaries, as well as State Route 126, Castaic Creek, and east of Sand Canyon Road (City of Santa Clarita 2011b). According to the Santa Clarita General Plan Environmental Impact Report (2011b), the project site is located in an MRZ-2 area. However, the project would not include mineral extraction and would not affect the availability of minerals in this MRZ-2 area. The site is not located in a zone of oil and natural gas extraction and production (City of Santa Clarita 2011b). No mines or quarries exist near the project site. Consequently, the proposed project would not result in the loss of availability of a known mineral resource or a locally important mineral resource recovery site. No impact would occur.

NO IMPACT

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13 Noise

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

Noise Overview

The unit of measurement used to describe a noise level is the decibel (dB). However, the human ear is not equally sensitive to all frequencies within the sound spectrum. Therefore, a method called "A weighting" is used to filter noise frequencies which are not audible to the human ear. A-weighting approximates the frequency response of the average young ear when listening to most ordinary everyday sounds. When people make relative judgments of the loudness or annoyance of a sound, their judgments correlate well with the "A-weighted" levels of those sounds. Therefore, the A-weighted noise scale is used for measurements and standards involving the human perception of noise. In this analysis, all noise levels are A-weighted, and "dBA" is understood to identify the A-weighted decibel.

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

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

Descriptors

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

Propagation

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

The propagation of noise is also affected by the intervening ground, known as ground absorption. A hard site (such as parking lots or smooth bodies of water) receives no additional ground attenuation and the changes in noise levels with distance (drop-off rate) are simply the geometric spreading of the source. A soft site (such as soft dirt, grass, or scattered bushes and trees) receives an additional ground attenuation value of 1.5 dBA per doubling of distance.

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

Vibration Overview

Vibration levels are usually expressed as single-number measure of vibration magnitude, in terms of velocity or acceleration, which describes the severity of the vibration without the frequency variable. The peak particle velocity (PPV) is defined as the maximum instantaneous positive or negative peak of the vibration signal, usually measured in inches per second. Since it is related to the stresses experienced by buildings, PPV is often used in monitoring and controlling construction vibration. Although PPV is appropriate for evaluating the potential of building damage, it is not suitable for evaluating human response. It takes some time for the human body to respond to vibrations. In a sense, the human body responds to an average vibration amplitude (Federal Transit Administration [FTA] 2018). Because vibration waves are oscillatory, the net average of a vibration signal is zero. Thus, the RMS amplitude is used to describe the "smoothed" vibration amplitude (FTA 2018). The RMS of a signal is the square root of the average of the squared amplitude of the signal, usually measured in inches per second. The average is typically calculated over a one-second period. The RMS amplitude is always less than the PPV and is always positive. Decibel notation is used to compress the range of numbers required to describe vibration. The

abbreviation VdB is used in this analysis for vibration decibels to reduce the potential for confusion with sound decibels.

Sensitive Receptors

Noise exposure goals for various types of land uses reflect the varying noise sensitivities associated with those uses. Typical noise sensitive uses include residential, residential care, child/elder care facilities, schools, places of worship, and hospitals. Vibration-sensitive receptors, which are similar to noise-sensitive receptors, include residences and institutional uses, such as schools, churches, and hospitals. However, vibration-sensitive receptors also include buildings where vibrations may interfere with vibration-sensitive equipment that is affected by vibration levels that may be well below those associated with human annoyance (e.g., recording studies or medical facilities with sensitive equipment). The closest sensitive receptors are single-family residences located 50 feet to the west of the alignment on Honby Avenue, Rio Vista Elementary School property located approximately 20 feet to the east of the alignment on Honby Avenue and immediately adjacent to the staging area.

Project Noise Setting

The primary noise sources in the vicinity of the project site are motor vehicles (e.g., automobiles, buses, and trucks), particularly along Honby Avenue, Lakemore Drive, Bonlee Avenue, and Cedarcreek Street. In addition, noise is generated by the elementary school (e.g., school bells and children playing) and the industrial uses west of Honby Avenue.

Significance Thresholds

The Santa Clarita Municipal Code (SCMC) addresses construction noise in the following section:

> **SCMC Section 11.44.080.** No person shall engage in any construction work which requires a building permit from the City on sites within 300 feet of a residentially zoned property except between the hours of 7:00 a.m. to 7:00 p.m., Monday through Friday, and 8:00 a.m. to 6:00 p.m. on Saturday. Further, no work shall be performed on the following public holidays: New Year's Day, Independence Day, Thanksgiving, Christmas, Memorial Day, and Labor Day. Emergency work as defined in SCMC Section 11.44.020(D) is permitted at all times. The Department of Community Development may issue a permit for work to be done "after hours"; provided, that containment of construction noises is provided.

The SCMC does not provide a quantitative construction noise threshold. Therefore, based on FTA Transit Noise and Vibration Impact Assessment (2018) criteria, construction noise would be significant if noise levels exceed 80 dBA L_{eq} for an 8-hour period at residential uses or construction is conducted outside the allowable hours for construction as stated in Section 11.44.080. The FTA Transit Noise and Vibration Impact Assessment (2018) criteria only includes thresholds for residential, commercial, and industrial land uses and does not include a separate school threshold. In lieu of a school-specific construction noise threshold, the residential land use threshold was used as that is the most conservative of the land use thresholds.

The SCMC also does not provide a quantitative vibration threshold. Therefore, vibration limits used in this analysis to determine a potential impact to local land uses are based on guidelines for vibration damage potential contained in Caltrans' (2020) *Transportation and Construction Vibration Guidance Manual*, shown in in Table 12.

Table 12 Caltrans Vibration Damage Potential Threshold Criteria

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

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

Source: Caltrans 2020

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

Temporary noise levels caused by construction activity would be a function of the noise generated by construction equipment, the location and sensitivity of nearby land uses, and the timing and duration of noise-generating activities. For a construction noise assessment, construction equipment can be considered to operate in two modes: stationary and mobile. As a rule, stationary equipment operates in a single location for one or more days at a time, with either fixed-power operation (e.g., pumps, generators, and compressors) or variable-power operation (e.g., pile drivers, rock drills, and pavement breakers). Mobile equipment moves around the construction site with power applied in cyclic fashion, such as bulldozers, graders, and loaders (FTA 2018). Noise impacts from stationary equipment are assessed from the center of the equipment, while noise impacts from mobile construction equipment are assessed from the center of the equipment activity area (e.g., construction site).

Construction noise was estimated using the Federal Highway Administration's (FHWA) Roadway Construction Noise Model (RCNM). Typical construction projects have long-term noise averages that are lower than louder short-term noise events due to equipment moving from one point to another on the site, work breaks, and idle time. Each phase of 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 may have discontinuous high-impact noise levels. The maximum hourly L_{eq} of each phase is determined by combining the L_{eq} contributions from each piece of equipment used in that phase (FTA 2018). Project construction phases would include infrastructure installation, paving, and site restoration. It is assumed diesel engines would power all construction equipment. For assessment purposes, the loudest phase (infrastructure installation) was modeled under the conservative assumption that a dozer, crane, generator, backhoe, and a tractor would be operating simultaneously.

Construction would occur from 7:00 a.m. to 7:00 p.m., Monday through Friday, and would therefore not conflict with the SCMC. Rio Vista Elementary School would be notified of the construction schedule once it is finalized. Pipeline construction activities would be mobile and would be constantly moving in a linear path along the pipeline alignment. Construction equipment would travel linearly along the pipeline alignment and therefore exposure to the nearest sensitive

receptors would be temporary, and the distance to the receptor would vary throughout a construction day. It was assumed that the nearest sensitive receptors (the residence and school located off Honby Avenue) would be exposed to construction noise at an average distance of 100 feet throughout a typical construction workday.

With a dozer, crane, generator, backhoe, and a tractor operating simultaneously, the hourly noise level at 100 feet from pipeline construction would be 78 dBA L_{eq} (see Appendix D for construction noise modeling output). Therefore, at the nearest noise-sensitive receptors to the project alignment, pipeline construction activities would not exceed the FTA's 80 dBA L_{eq} threshold for an 8-hour period. Impacts would be less than significant.

Operation

As an underground pipeline, project operation would be negligible. The project would not require new maintenance activities that would generate noise. Therefore, no operational noise impacts would occur.

LESS THAN SIGNIFICANT IMPACT

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

Construction activities known to generate excessive groundborne vibration, such as pile driving, would not be conducted as part of the project. The greatest anticipated source of vibration during general project construction activities would be general construction equipment, such as vibratory roller, which may be used within 50 feet of the nearest residential and school structures. A large bulldozer would create approximately 0.210 in/sec PPV at a distance of 25 feet (Caltrans 2020). This would equal a vibration level of approximately 0.098 in/sec PPV at a distance of 50 feet.[5] This would be lower than what is considered the structural damage impact to older residential structures of 0.3 in/sec PPV. Therefore, temporary impacts associated with the roller (and other potential equipment) would be less than significant.

Operation of the project would involve the operation of an underground pipeline. The project would not include any vibration sources during operation. Therefore, no operational vibration impacts 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 closest public or public use airport to the project site is the Whiteman Airport, located approximately 14 miles southwest of the project site. The project site is not located within the noise contours for the airport. Therefore, project construction workers would not be exposed to temporary and short-term airport noise. No impact would occur.

NO IMPACT

[5] PPVEquipment = PPVRef (25/D)^n (in/sec), PPVRef = reference PPV at 25 feet, D = distance ,and n = 1.1

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14 Population and Housing

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

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

Due to the relatively small nature of the proposed project, construction workers would likely be local to the Santa Clarita region; therefore, construction would not generate new population growth. As previously discussed, the project would not increase the production capacity of the SCV Water system nor would it increase demand for water. During project operation, the proposed project would not directly induce population growth because it would not produce additional water supplies for residential or commercial use. The project would not require any new employees for operation and maintenance activities as SCV Water staff already conduct operation and maintenance for the existing pipeline in the project's location. Furthermore, the proposed project would not result in the construction of new homes or new commercial or industrial uses. Therefore, the project would not induce substantial unplanned population growth in an area, either directly or indirectly, and 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?

There is no existing housing within the project alignment, and no demolition would occur as part of project construction. Therefore, the project would not displace substantial numbers of existing people or housing, and no impact would occur.

NO IMPACT

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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?

The closest fire station is the Los Angeles County Fire Department Station #104, located at 26901 Golden Valley Road, Santa Clarita, approximately 1.6 miles (driving distance) west of the project site. The proposed project would not result in increased demand for fire protection services because no population growth would occur as a result of construction or operation of the proposed project, as discussed in Environmental Checklist Section 14, *Population and Housing*. The project would not require additional or unusual fire protection resources beyond those required for the existing facilities on the project site. Therefore, no impact to fire protection services would occur.

NO IMPACT

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?

The nearest police station is the Santa Clarita Valley Sheriff's Station, located at 26201 Golden Valley Road in Santa Clarita, approximately 1.8 miles south (driving distance) of the project site. The proposed project would not result in increased demand for police protection services because no population growth would occur as a result of construction or operation of the proposed project, as discussed in Environmental Checklist Section 14, *Population and Housing*. Thus, the proposed project would not result in an impact associated with the provision of new or physically altered police protection facilities. Therefore, no impact to police protection services would occur.

NO IMPACT

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?

The proposed project would not result in increased demand for schools because no population growth would occur as a result of construction or operation of the proposed project, as discussed in Environmental Checklist Section 14, *Population and Housing*. Therefore, no impact to schools would occur.

NO IMPACT

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?

The proposed project would not result in increased demand for parks because no population growth would occur as a result of construction or operation of the proposed project, as discussed in Environmental Checklist Section 14, *Population and Housing*. Therefore, no impact to parks would occur.

NO IMPACT

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?

The proposed project would not change existing demand for public facilities because population growth would not result from construction or operation of the proposed project, as discussed in in Environmental Checklist Section 14, *Population and Housing*. Therefore, no impact to public facilities would occur.

NO IMPACT

16 Recreation

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

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

As discussed in in Environmental Checklist Section 14, *Population and Housing*, the proposed project would not directly or indirectly generate population growth and therefore would not increase the use of existing neighborhood and regional parks or other recreational facilities such that substantial physical deterioration of the facility would occur or be accelerated. No impact would occur.

NO IMPACT

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

The project would involve construction of a water pipeline. The project would not involve construction or expansion of recreational facilities. No impact would occur.

NO IMPACT

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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?

Construction-related vehicle trips would include construction workers traveling to and from the project site, haul trucks (including for soil import), and other trucks associated with equipment and material deliveries. Given the minimal number of trips generated and the limited impact to public transit and pedestrian facilities, the proposed project would not conflict with adopted policies, plans, or programs addressing the circulation system, including public transit, bicycle, or pedestrian facilities. Therefore, impacts would be less than significant.

Regional and local plans and policies addressing the circulation system include the City of Santa Clarita General Plan Circulation Element and the SCAG 2020-2045 Regional Transportation Plan/Sustainable Communities Strategy(RTP/SCS) (City of Santa Clarita 2011a; SCAG 2020). No transit stops, sidewalks, or bicycle lanes are located along the segment of Honby Avenue where the pipeline alignment would be located. Construction traffic would be temporary and limited to the duration of the construction schedule (October 2024 to January 2026). After construction is complete, no changes to existing transportation patterns would occur because the pipeline would be located underground, and no new operation and maintenance activities would be required for the project. The minimal level of traffic generated during project construction would not have the potential to conflict with a program, plan, ordinance or policy addressing the circulation system, including transit, roadway, bicycle and pedestrian facilities. Impacts 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 vehicle miles traveled (VMT) exceeding an applicable threshold of significance may indicate a significant impact. According to Section 15064.3(b)(3) of the CEQA Guidelines, 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, for long-range planning purposes. Increases in VMT from construction would be short-term, minimal, and temporary. Project operation would not involve any new maintenance activities compared to existing conditions. Therefore, operational VMT in the project area would not be increased. In addition, as stated in the City of Santa Clarita's Transportation Analysis Updates guidance, projects that generate less than 110 daily trips are presumed to result in less than significant VMT impacts absent substantial evidence to the contrary (City of Santa Clarita 2020). Project construction would result in a maximum of 48 daily trips (Appendix A), which is substantially below the 110 daily trip threshold. The project would involve no new operation and maintenance activities compared to existing conditions. Therefore, the project would not generate any operational VMT. 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)?

Project components consist of a water pipeline that would be located belowground, including a portion located along Honby Avenue. The project would result in no changes to the existing road geometry of Honby Avenue. The proposed project would therefore not create or substantially increase traffic hazards due to a geometric design feature or incompatible use. No impact would occur.

NO IMPACT

d. Would the project result in inadequate emergency access?

Construction activities associated with the proposed project would result in road lane closures or associated traffic impacts. As described in in Environmental Checklist Section 9, *Hazards and Hazardous Materials*, the project would implement a Traffic Control Plan with implementation of Mitigation Measure HAZ-6. In addition, although construction of the project would temporarily increase heavy vehicle trips to and from the project site, such effects would be localized and temporary and would not have potential to impede emergency access in the project area. Operational activities associated with the proposed project would occur solely on the project site and would not interfere with emergency response and would not be greater than existing maintenance. Consequently, the project would not result in inadequate emergency access, and impacts would be less than significant with mitigation incorporated.

LESS THAN SIGNIFICANT WITH MITIGATION INCORPORATED

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 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), or	☐	■	☐	☐
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.	☐	■	☐	☐

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

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. 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 that have requested notice of projects proposed within the jurisdiction of the lead agency. The consultation process must be completed before a CEQA document can be adopted/certified.

The NAHC was contacted to request a review of the SLF on November 10, 2021. On December 27, 2021, the NAHC stated that the results of the SLF search were positive.

As part of the AB 52 consultation, SCV Water sent AB 52 consultation letters to the Gabrieleño Band of Mission Indians-Kizh Nation, the Torres Martinez Desert Cahuilla Indians, the Fernandeño Tataviam Band of Mission Indians (FTBMI), and the San Gabriel Band of Mission Indians on February 7, 2022. SCV Water received one response via email from the FTBMI on March 7, 2022, requesting formal consultation and more information about the details of the project. Consultation between SCV Water and FTBMI is ongoing.

a. *Would the project cause a substantial adverse change in the significance of a tribal cultural resource as defined in Public Resources Code Section 21074 that is listed or eligible for listing in the California Register of Historical Resources, or in a local register of historical resources as defined in Public Resources Code Section 5020.1(k)?*

b. *Would the project cause a substantial adverse change in the significance of a tribal cultural resource as defined in Public Resources Code 21074 that is a resource determined by the lead agency, in its discretion and supported by substantial evidence, to be significant pursuant to criteria set forth in subdivision (c) of Public Resources Code Section 5024.1?*

No tribal cultural resources have been identified within the project site. The NAHC SLF search was returned with positive results, which means the NAHC identified a potentially sensitive tribal cultural resource within the USGS quadrangle in which the project site is located. USGS quadrangles cover approximately 49 to 70 square miles, and a positive SLF result does not necessarily indicate the presence of a known tribal cultural resource on the project site. However, it is possible unknown tribal cultural resources exist at the project site that could be substantially impacted by ground-disturbing activities. As outlined in Environmental Checklist Section 5, *Cultural Resources*, Mitigation Measures CR-1 and CR-2 require implementation of a Worker Environmental Awareness Program training by a qualified archaeologist and a representative from a locally-affiliated Native American Tribe, such as FTBMI, prior to construction and implementation of procedures for the unanticipated discovery of archaeological resources, including those of Native American origin. In addition, Mitigation Measures TCR-1, TCR-2, and TCR-3 have been included in response to the FTBMI's request for full-time Native American monitoring of all ground-disturbing activities, unanticipated discovery of tribal cultural resources, and compliance with existing regulations outlined in California Health and Safety Code Section 7050.5 should human remains be inadvertently discovered during construction, respectively.

With implementation of Mitigation Measures CR-1,CR-2, TCR-1, TCR-2, and TCR-3, the project would not cause a substantial adverse change in the significance of a tribal cultural resource, and impacts would be less than significant with mitigation incorporated.

Mitigation Measures

TCR-1 Tribal Cultural Resources Construction Monitoring

SCV Water shall retain a professional Tribal Monitor procured by the Fernandeño Tataviam Band of Mission Indians (FBTMI) to observe all ground-disturbing activities including, but not limited to, excavating, digging, trenching, plowing, drilling, tunneling, quarrying, grading, leveling, clearing, driving posts, auguring, blasting, stripping topsoil or similar activity. If cultural resources are encountered, the Tribal Monitor will have the authority to request that ground-disturbing activities cease within 60 feet of discovery to assess and document potential finds in real time.

TCR-2 Unanticipated Discovery of Tribal Cultural Resources

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.

TCR-3 Unanticipated Discovery of Human Remains

If human remains or funerary objects are encountered during any activities associated with the project, work in the immediate vicinity (within a 100-foot buffer of the find) shall cease and the County Coroner shall be contacted pursuant to State Health and Safety Code Section 7050.5 and that code shall be enforced for the duration of the project.

Inadvertent discoveries of human remains and/or funerary object(s) are subject to California State Health and Safety Code Section 7050.5, and the subsequent disposition of those discoveries shall be decided by the Most Likely Descendant (MLD), as determined by the Native American Heritage Commission (NAHC), should those findings be determined as Native American in origin.

Significance After Mitigation

Implementation of Mitigation Measures TCR-1 through TCR-3 during ground-disturbing activities would reduce potential tribal cultural resource impacts to a less than significant level by implementing a Tribal Monitor, consultation with FTBMI, and procedures for the unanticipated discovery of humans.

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19 Utilities and Service Systems

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

a. 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?

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?

Water

The proposed project would involve the construction and operation of a pipeline, the environmental effects of which are analyzed in this IS-MND. The project would address operational deficiencies of the current pipeline and would allow the pipeline to operate at the system's design capacity as intended. The project would not increase the system capacity such that additional customers could be served. No additional impact related to water facilities would occur.

Wastewater Treatment

The proposed project would not generate wastewater or otherwise contribute to an increase in demand for wastewater treatment services. Therefore, the project would not require relocation or construction of new wastewater facilities, and no impact would occur.

Stormwater Drainage

As discussed in Environmental Checklist Section 10, *Hydrology and Water Quality*, the project would generally preserve existing drainage patterns on site. The increase in impervious surface would also be nominal. While groundwater from dewatering during construction across the river bed may be discharged into the City's storm drain system, this temporary discharge would not occur unless approved by the City and covered under the appropriate discharge permit. This discharge would be temporary and would occur when the river is dry, typically when no rainfall is occurring in the area, and would not exceed the capacity of the stormwater system. The project would not require new or expanded stormwater drainage infrastructure. Therefore, no impact related to stormwater drainage would occur.

Electric Power

As discussed in Environmental Checklist Section 6, *Energy*, the project would not require electricity to operate the pipeline. No new or relocated energy facilities would be required as a result of the proposed project. No impact would occur.

Natural Gas

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

Telecommunications

The project would not require telecommunications to operate the supervisory control and data acquisition system. The project would not involve the relocation of existing telecommunications 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 project itself would not introduce a new operational water demand. Project construction water requirements would be met via existing SCV Water supplies and facilities. Moreover, the project would have a beneficial effect on existing water supplies by replacing and improving Honby Pipeline

to address the system bottleneck caused by the existing pipeline. Therefore, no adverse impact would occur related to sufficient water supplies.

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?

Construction activities may temporarily generate solid waste, including soil spoils, pavement debris, or other construction waste, which would be disposed of in accordance with all applicable federal, state, and local statutes and regulations. While most soil is expected to be reused as backfill material within the project area, exported soil and minimal remaining inert construction waste would be disposed of at existing construction waste landfills in the area. Due to the temporary nature of construction and minimal amount of construction waste anticipated to require disposal, the project would not generate quantities of solid waste that would account for a substantial percentage of the total daily regional permitted capacity available at landfills accepting such waste. Therefore, waste generated by construction activities would not exceed the available capacity at the landfills serving the project area that would accept debris generated by the project, such as the Chiquita Canyon Landfill and the Sunshine Canyon Landfill. The Chiquita Canyon Landfill has a remaining capacity of 60,408,000 cubic yards and an estimated closure date of 2047 (California Department of Resources Recycling and Recovery [CalRecycle] 2023a). The Sunshine Canyon Landfill has a remaining capacity of 77,900,000 cubic yards and an estimated closure date of 2037 (CalRecycle 2023b).

As standard practice, SCV Water complies with all applicable laws and regulations related to solid waste generation, collection, and disposal. The project would result in a short-term and temporary increase in solid waste generation during construction but would not substantially affect standard solid waste operations of any landfill accepting waste. Recycling and reuse activities during construction would comply with the California Integrated Waste Management Act of 1989 (AB 939). Once operational, the project would include unmanned facilities and would not generate solid waste. Therefore, solid waste impacts would be less than significant.

LESS THAN SIGNIFICANT IMPACT

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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 hillside portion of the pipeline alignment north of the Santa Clara River is located in a designated VHFHSZ (CAL FIRE 2023). The project site is not located within a State Responsibility Area (SRA). The nearest SRA is located 0.8 mile northeast of the project site. In addition, as discussed in Environmental Checklist Section 9, *Hazards and Hazardous Materials,* the proposed facility would be located within brush-covered open space vegetated with native plant communities, which are highly combustible.

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

The City of Santa Clarita's LHMP (2021) sets forth hazard mitigation strategies related to a variety of threats, including wildfire. Strategies towards mitigating wildfire include working with the Los Angeles Fire Department to enhance emergency service and increase the efficiency of response times, enhancing outreach and education programs on wildfires, encouraging and increasing communication among wildland/urban interface property owners, and enhancing the City's Urban

Forestry ability to manage wildfire events. As discussed in Environmental Checklist Section 9, *Hazards and Hazardous Materials*, the proposed project would not interfere with implementation of the City's LHMP.

As discussed in Environmental Checklist Section 17, *Transportation*, the project would not impede access to emergency services. Construction of the proposed project would require temporary lane closures. As discussed in Environmental Checklist Section 9, *Hazards and Hazardous Materials,* the project would implement a Traffic Control Plan with implementation of Mitigation Measure HAZ-2. Although construction of the project would increase heavy vehicle trips to and from the project site, such effects would be localized and temporary, and would not impede emergency access in the project area. Consequently, the proposed project would not substantially impair an adopted emergency response plan or emergency evacuation plan in wildfire risk zones. Impacts would be less than significant with mitigation incorporated.

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b. If located in or near state responsibility areas or lands classified as very high fire hazard severity zones, would the project, due to slope, prevailing winds, and other factors, exacerbate wildfire risks and thereby expose project occupants to pollutant concentrations from a wildfire or the uncontrolled spread of a wildfire?

As discussed in Environmental Checklist Section 9, *Hazards and Hazardous Materials,* project operation would not involve potentially flammable activities. However, the wildland-urban interface could pose the potential for incidents of fire during project construction. 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. Compliance with applicable federal and State laws and regulations related to the proper use, storage, and transport of hazardous materials would reduce the risk of wildfire ignition from the use of hazardous materials during construction activities. Therefore, impacts related to wildland fires during project construction would be less-than-significant.

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c. If located in or near state responsibility areas or lands classified as very high fire hazard severity zones, would the project require the installation or maintenance of associated infrastructure (such as roads, fuel breaks, emergency water sources, power lines or other utilities) that may exacerbate fire risk or that may result in temporary or ongoing impacts to the environment?

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

The proposed project consists of the construction and operation of a pipeline. As discussed in Environmental Checklist Section 19, *Utilities and Service Systems,* the project would not result in the relocation or construction of new or expanded water, wastewater treatment or stormwater drainage, electric power, natural gas, or telecommunications facilities beyond the pipeline alignment evaluated in this analysis. The proposed project would not include fuel breaks, emergency water sources, power lines, or other aboveground utilities 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, as described under Environmental Checklist

Section 7, *Geology and Soils*, the project would be constructed in compliance with standard pipeline engineering techniques intended to minimize structural damage risks that could lead to landslide onto off-site properties. The project would therefore not expose people to significant risks as a result of runoff, post-fire slop instability, or drainage changes. Therefore, no impacts would occur.

NO IMPACT

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21 Mandatory Findings of Significance

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

a. Does the project have the potential to substantially degrade the quality of the environment, substantially reduce the habitat of a fish or wildlife species, cause a fish or wildlife population to drop below self-sustaining levels, threaten to eliminate a plant or animal community, substantially reduce the number or restrict the range of a rare or endangered plant or animal or eliminate important examples of the major periods of California history or prehistory?

Potential impacts to biological resources are addressed in Environmental Checklist Section 4, *Biological Resources*. As described therein, there is low to moderate potential for certain special-status wildlife species to occur on the project site, including the federally-threatened coastal CAGN and least Bell's vireo. However, the project site is limited in size, as compared to the total size of habitats supporting fish and wildlife species, and the project would only result in temporary impacts to special-status species during construction, as the proposed pipeline would be located underground and would not affect any species during operation. Therefore, the 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 reduce the number or restrict the range of a rare or endangered plant or animal. In addition, as discussed in Environmental Checklist Section 5, *Cultural Resources*, the project would not eliminate important examples of the major periods of California history or prehistory because none are known to be present in the project area. Impacts would be less than significant.

LESS THAN SIGNIFICANT IMPACT

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

As described in the discussion of Environmental Checklist Sections 1 through 20, with respect to all environmental issues, the proposed project would not result in significant and unmitigable impacts to the environment. All anticipated impacts associated with project construction and operation would be either less than significant or less than significant with mitigation incorporated. This is largely due to the fact project construction activities would be temporary and project operation would result in minimal changes to the environmental baseline condition. Additionally, where it was determined the project would have no impact (aesthetics, agriculture and forestry resources, energy, land use and planning, mineral resources, population and housing, public services, and recreation), no cumulative impact would be exacerbated as a result of the project.

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 to residents in the project area may be more substantial. There are no other planned or pending projects within the immediate vicinity of the project site that could combine with the project to result in cumulative construction-related impacts (City of Santa Clarita 2023).

The project would result in no change to existing operations and maintenance activities in the SCV Water service area and would not increase water supply availability. Therefore, the project would not contribute to cumulative impacts related to direct or indirect population growth, such as impacts to public services, recreation, and population and housing. Impacts related to cultural resources, geology and soils, hazards and hazardous materials, land use and planning, mineral resources, and tribal cultural resources are inherently restricted to the project site and would not contribute to cumulative impacts associated with existing and future development in Santa Clarita. In addition, air quality and GHG impacts are cumulative by nature, and as discussed in Environmental Checklist Section 3, *Air Quality*, and Environmental Checklist Section 8, *Greenhouse Gas Emissions*, the project would not generate air pollutant emissions in excess of SCAQMD thresholds or GHG emissions that would conflict with any applicable plans, policies, or regulations to reduce GHG emissions. Therefore, the project would not contribute to the existing significant cumulative air quality impacts related to the SCAB's nonattainment status for ozone, PM_{10}, $PM_{2.5}$, and lead, or the existing significant cumulative climate change impact. Furthermore, project impacts to resources such as aesthetics, agriculture and forestry resources, biological resources, hydrology and water quality, noise, transportation, and utilities and service systems would be minimal with mitigation, where proposed, and would not have the potential to constitute a considerable

contribution to cumulative impacts that may occur due to existing and future development in the region. Therefore, the proposed project would not result in a cumulatively considerable contribution to a significant impact.

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

In general, impacts to human beings are associated with air quality, hazards and hazardous materials, and noise impacts. As detailed in the preceding sections, the project would not result, either directly or indirectly, in substantial adverse effects related to air quality, hazards and hazardous materials, or noise with implementation of Mitigation Measures HAZ-1, HAZ-2 and HAZ-3. Therefore, impacts to human beings would be less than significant with mitigation incorporated.

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List of Preparers

Rincon Consultants, Inc. prepared this IS-MND under contract to the Santa Clarita Valley Water Agency. Persons involved in data gathering analysis, project management, and quality control are listed below.

SANTA CLARITA VALLEY WATER AGENCY

Wai Lan Lee, Engineer

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Appendix A

Air Quality and Greenhouse Gas Modeling Results

Honby Tanks Pipeline Project - Unmitigated Detailed Report

Table of Contents

1. Basic Project Information

1.1. Basic Project Information

Data Field	Value
Project Name	Honby Tanks Pipeline Project - Unmitigated
Construction Start Date	10/1/2024
Lead Agency	—
Land Use Scale	Project/site
Analysis Level for Defaults	County
Windspeed (m/s)	2.50
Precipitation (days)	19.6
Location	34.431047743459885, -118.49228951559685
County	Los Angeles-South Coast
City	Santa Clarita
Air District	South Coast AQMD
Air Basin	South Coast
TAZ	3620
EDFZ	7
Electric Utility	Southern California Edison
Gas Utility	Southern California Gas
App Version	2022.1.1.13

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
Road Construction	0.49	Mile	0.24	0.00	0.00	—	—	—

1.3. User-Selected Emission Reduction Measures by Emissions Sector

Sector	#	Measure Title
Construction	C-2*	Limit Heavy-Duty Diesel Vehicle Idling
Construction	C-10-A	Water Exposed Surfaces
Construction	C-10-C	Water Unpaved Construction Roads
Construction	C-11	Limit Vehicle Speeds on Unpaved Roads
Construction	C-12	Sweep Paved Roads

* Qualitative or supporting measure. Emission reductions not included in the mitigated emissions results.

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.	ROG	NOx	CO	SO2	PM10E	PM10D	PM10T	PM2.5E	PM2.5D	PM2.5T	BCO2	NBCO2	CO2T	CH4	N2O	R	CO2e
Daily, Summer (Max)	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Unmit.	3.54	29.5	36.0	0.06	1.16	7.18	8.33	1.07	3.51	4.58	—	6,307	6,307	0.26	0.07	2.43	6,337
Mit.	3.54	29.5	36.0	0.06	1.16	3.18	4.34	1.07	1.46	2.52	—	6,307	6,307	0.26	0.07	2.43	6,337
% Reduced	—	—	—	—	—	56%	48%	—	58%	45%	—	—	—	—	—	—	—
Daily, Winter (Max)	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Unmit.	4.44	37.3	46.3	0.08	1.48	7.40	8.89	1.36	3.57	4.93	—	8,767	8,767	0.36	0.10	0.09	8,805
Mit.	4.44	37.3	46.3	0.08	1.48	3.41	4.89	1.36	1.51	2.88	—	8,767	8,767	0.36	0.10	0.09	8,805
% Reduced	—	—	—	—	—	54%	45%	—	58%	42%	—	—	—	—	—	—	—

Average Daily (Max)	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Unmit.	2.27	19.0	23.2	0.04	0.75	4.31	5.05	0.69	2.10	2.79	—	4,189	4,189	0.17	0.05	0.69	4,208
Mit.	2.27	19.0	23.2	0.04	0.75	1.93	2.67	0.69	0.88	1.56	—	4,189	4,189	0.17	0.05	0.69	4,208
% Reduced	—	—	—	—	—	55%	47%	—	58%	44%	—	—	—	—	—	—	—
Annual (Max)	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Unmit.	0.41	3.47	4.23	0.01	0.14	0.79	0.92	0.13	0.38	0.51	—	694	694	0.03	0.01	0.11	697
Mit.	0.41	3.47	4.23	0.01	0.14	0.35	0.49	0.13	0.16	0.29	—	694	694	0.03	0.01	0.11	697
% Reduced	—	—	—	—	—	55%	47%	—	58%	44%	—	—	—	—	—	—	—

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	ROG	NOx	CO	SO2	PM10E	PM10D	PM10T	PM2.5E	PM2.5D	PM2.5T	BCO2	NBCO2	CO2T	CH4	N2O	R	CO2e
Daily - Summer (Max)	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
2025	3.54	29.5	36.0	0.06	1.16	7.18	8.33	1.07	3.51	4.58	—	6,307	6,307	0.26	0.07	2.43	6,337
Daily - Winter (Max)	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
2024	3.82	32.0	36.9	0.06	1.34	7.18	8.52	1.23	3.51	4.75	—	6,286	6,286	0.26	0.07	0.07	6,314
2025	4.44	37.3	46.3	0.08	1.48	7.40	8.89	1.36	3.57	4.93	—	8,767	8,767	0.36	0.10	0.09	8,805
2026	0.28	1.81	2.34	< 0.005	0.08	0.10	0.18	0.07	0.02	0.09	—	360	360	0.02	0.01	0.01	362
Average Daily	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
2024	0.69	5.77	6.67	0.01	0.24	1.29	1.53	0.22	0.63	0.85	—	1,133	1,133	0.05	0.01	0.21	1,139
2025	2.27	19.0	23.2	0.04	0.75	4.31	5.05	0.69	2.10	2.79	—	4,189	4,189	0.17	0.05	0.69	4,208

2026	0.04	0.22	0.29	< 0.005	0.01	0.01	0.02	0.01	< 0.005	0.01	—	44.5	44.5	< 0.005	< 0.005	0.02	44.8
Annual	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
2024	0.13	1.05	1.22	< 0.005	0.04	0.24	0.28	0.04	0.12	0.16	—	188	188	0.01	< 0.005	0.03	189
2025	0.41	3.47	4.23	0.01	0.14	0.79	0.92	0.13	0.38	0.51	—	694	694	0.03	0.01	0.11	697
2026	0.01	0.04	0.05	< 0.005	< 0.005	< 0.005	< 0.005	< 0.005	< 0.005	< 0.005	—	7.37	7.37	< 0.005	< 0.005	< 0.005	7.42

2.3. Construction Emissions by Year, Mitigated

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

Year	ROG	NOx	CO	SO2	PM10E	PM10D	PM10T	PM2.5E	PM2.5D	PM2.5T	BCO2	NBCO2	CO2T	CH4	N2O	R	CO2e
Daily - Summer (Max)	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
2025	3.54	29.5	36.0	0.06	1.16	3.18	4.34	1.07	1.46	2.52	—	6,307	6,307	0.26	0.07	2.43	6,337
Daily - Winter (Max)	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
2024	3.82	32.0	36.9	0.06	1.34	3.18	4.52	1.23	1.46	2.69	—	6,286	6,286	0.26	0.07	0.07	6,314
2025	4.44	37.3	46.3	0.08	1.48	3.41	4.89	1.36	1.51	2.88	—	8,767	8,767	0.36	0.10	0.09	8,805
2026	0.28	1.81	2.34	< 0.005	0.08	0.10	0.18	0.07	0.02	0.09	—	360	360	0.02	0.01	0.01	362
Average Daily	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
2024	0.69	5.77	6.67	0.01	0.24	0.57	0.81	0.22	0.26	0.48	—	1,133	1,133	0.05	0.01	0.21	1,139
2025	2.27	19.0	23.2	0.04	0.75	1.93	2.67	0.69	0.88	1.56	—	4,189	4,189	0.17	0.05	0.69	4,208
2026	0.04	0.22	0.29	< 0.005	0.01	0.01	0.02	0.01	< 0.005	0.01	—	44.5	44.5	< 0.005	< 0.005	0.02	44.8
Annual	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
2024	0.13	1.05	1.22	< 0.005	0.04	0.10	0.15	0.04	0.05	0.09	—	188	188	0.01	< 0.005	0.03	189
2025	0.41	3.47	4.23	0.01	0.14	0.35	0.49	0.13	0.16	0.29	—	694	694	0.03	0.01	0.11	697
2026	0.01	0.04	0.05	< 0.005	< 0.005	< 0.005	< 0.005	< 0.005	< 0.005	< 0.005	—	7.37	7.37	< 0.005	< 0.005	< 0.005	7.42

3. Construction Emissions Details

3.1. Linear, Drainage, Utilities, & Sub-Grade (2024) - Unmitigated

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

Location	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	3.61	31.7	33.8	0.06	1.34	—	1.34	1.23	—	1.23	—	5,640	5,640	0.23	0.05	—	5,659
Dust From Material Movement	—	—	—	—	—	6.55	6.55	—	3.37	3.37	—	—	—	—	—	—	—
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
Average Daily	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Off-Road Equipment	0.65	5.72	6.09	0.01	0.24	—	0.24	0.22	—	0.22	—	1,015	1,015	0.04	0.01	—	1,019
Dust From Material Movement	—	—	—	—	—	1.18	1.18	—	0.61	0.61	—	—	—	—	—	—	—
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
Annual	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Off-Road Equipment	0.12	1.04	1.11	< 0.005	0.04	—	0.04	0.04	—	0.04	—	168	168	0.01	< 0.005	—	169

Dust From Material Movement	—	—	—	—	—	0.22	0.22	—	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
Offsite	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Daily, Summer (Max)	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Daily, Winter (Max)	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Worker	0.21	0.27	3.03	0.00	0.00	0.62	0.62	0.00	0.15	0.15	—	636	636	0.03	0.02	0.07	643
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
Hauling	< 0.005	0.02	0.01	< 0.005	< 0.005	< 0.005	< 0.005	< 0.005	< 0.005	< 0.005	—	10.5	10.5	< 0.005	< 0.005	< 0.005	11.0
Average Daily	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Worker	0.04	0.05	0.57	0.00	0.00	0.11	0.11	0.00	0.03	0.03	—	116	116	0.01	< 0.005	0.21	118
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
Hauling	< 0.005	< 0.005	< 0.005	< 0.005	< 0.005	< 0.005	< 0.005	< 0.005	< 0.005	< 0.005	—	1.88	1.88	< 0.005	< 0.005	< 0.005	1.98
Annual	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Worker	0.01	0.01	0.10	0.00	0.00	0.02	0.02	0.00	< 0.005	< 0.005	—	19.2	19.2	< 0.005	< 0.005	0.03	19.5
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
Hauling	< 0.005	< 0.005	< 0.005	< 0.005	< 0.005	< 0.005	< 0.005	< 0.005	< 0.005	< 0.005	—	0.31	0.31	< 0.005	< 0.005	< 0.005	0.33

3.2. Linear, Drainage, Utilities, & Sub-Grade (2024) - Mitigated

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

Location	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	3.61	31.7	33.8	0.06	1.34	—	1.34	1.23	—	1.23	—	5,640	5,640	0.23	0.05	—	5,659
Dust From Material Movement	—	—	—	—	—	2.56	2.56	—	1.31	1.31	—	—	—	—	—	—	—
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
Average Daily	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Off-Road Equipment	0.65	5.72	6.09	0.01	0.24	—	0.24	0.22	—	0.22	—	1,015	1,015	0.04	0.01	—	1,019
Dust From Material Movement	—	—	—	—	—	0.46	0.46	—	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
Annual	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Off-Road Equipment	0.12	1.04	1.11	< 0.005	0.04	—	0.04	0.04	—	0.04	—	168	168	0.01	< 0.005	—	169
Dust From Material Movement	—	—	—	—	—	0.08	0.08	—	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
Offsite	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—

Daily, Summer (Max)	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Daily, Winter (Max)	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Worker	0.21	0.27	3.03	0.00	0.00	0.62	0.62	0.00	0.15	0.15	—	636	636	0.03	0.02	0.07	643
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
Hauling	< 0.005	0.02	0.01	< 0.005	< 0.005	< 0.005	< 0.005	< 0.005	< 0.005	< 0.005	—	10.5	10.5	< 0.005	< 0.005	< 0.005	11.0
Average Daily	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Worker	0.04	0.05	0.57	0.00	0.00	0.11	0.11	0.00	0.03	0.03	—	116	116	0.01	< 0.005	0.21	118
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
Hauling	< 0.005	< 0.005	< 0.005	< 0.005	< 0.005	< 0.005	< 0.005	< 0.005	< 0.005	< 0.005	—	1.88	1.88	< 0.005	< 0.005	< 0.005	1.98
Annual	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Worker	0.01	0.01	0.10	0.00	0.00	0.02	0.02	0.00	< 0.005	< 0.005	—	19.2	19.2	< 0.005	< 0.005	0.03	19.5
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
Hauling	< 0.005	< 0.005	< 0.005	< 0.005	< 0.005	< 0.005	< 0.005	< 0.005	< 0.005	< 0.005	—	0.31	0.31	< 0.005	< 0.005	< 0.005	0.33

3.3. Linear, Drainage, Utilities, & Sub-Grade (2025) - Unmitigated

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

Location	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	3.34	29.3	32.7	0.06	1.16	—	1.16	1.07	—	1.07	—	5,640	5,640	0.23	0.05	—	5,660

Dust From Material Movement	—	—	—	—	—	6.55	6.55	—	3.37	3.37	—	—	—	—	—	—	—
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
Daily, Winter (Max)	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Off-Road Equipment	3.34	29.3	32.7	0.06	1.16	—	1.16	1.07	—	1.07	—	5,640	5,640	0.23	0.05	—	5,660
Dust From Material Movement	—	—	—	—	—	6.55	6.55	—	3.37	3.37	—	—	—	—	—	—	—
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
Average Daily	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Off-Road Equipment	1.98	17.4	19.4	0.03	0.69	—	0.69	0.63	—	0.63	—	3,355	3,355	0.14	0.03	—	3,367
Dust From Material Movement	—	—	—	—	—	3.90	3.90	—	2.00	2.00	—	—	—	—	—	—	—
Onsite truck	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	—	0.00	0.00	0.00	0.00	0.00	0.00
Annual	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Off-Road Equipment	0.36	3.18	3.55	0.01	0.13	—	0.13	0.12	—	0.12	—	556	556	0.02	< 0.005	—	557
Dust From Material Movement	—	—	—	—	—	0.71	0.71	—	0.37	0.37	—	—	—	—	—	—	—
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

Offsite	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Daily, Summer (Max)	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Worker	0.20	0.21	3.30	0.00	0.00	0.62	0.62	0.00	0.15	0.15	—	657	657	0.03	0.02	2.40	667
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
Hauling	< 0.005	0.01	0.01	< 0.005	< 0.005	< 0.005	< 0.005	< 0.005	< 0.005	< 0.005	—	10.3	10.3	< 0.005	< 0.005	0.02	10.8
Daily, Winter (Max)	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Worker	0.20	0.23	2.80	0.00	0.00	0.62	0.62	0.00	0.15	0.15	—	623	623	0.03	0.02	0.06	630
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
Hauling	< 0.005	0.02	0.01	< 0.005	< 0.005	< 0.005	< 0.005	< 0.005	< 0.005	< 0.005	—	10.3	10.3	< 0.005	< 0.005	< 0.005	10.8
Average Daily	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Worker	0.12	0.15	1.75	0.00	0.00	0.36	0.36	0.00	0.09	0.09	—	376	376	0.02	0.01	0.62	381
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
Hauling	< 0.005	0.01	< 0.005	< 0.005	< 0.005	< 0.005	< 0.005	< 0.005	< 0.005	< 0.005	—	6.11	6.11	< 0.005	< 0.005	0.01	6.41
Annual	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Worker	0.02	0.03	0.32	0.00	0.00	0.07	0.07	0.00	0.02	0.02	—	62.2	62.2	< 0.005	< 0.005	0.10	63.1
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
Hauling	< 0.005	< 0.005	< 0.005	< 0.005	< 0.005	< 0.005	< 0.005	< 0.005	< 0.005	< 0.005	—	1.01	1.01	< 0.005	< 0.005	< 0.005	1.06

3.4. Linear, Drainage, Utilities, & Sub-Grade (2025) - Mitigated

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

Location	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	3.34	29.3	32.7	0.06	1.16	—	1.16	1.07	—	1.07	—	5,640	5,640	0.23	0.05	—	5,660
Dust From Material Movement	—	—	—	—	—	2.56	2.56	—	1.31	1.31	—	—	—	—	—	—	—
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
Daily, Winter (Max)	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Off-Road Equipment	3.34	29.3	32.7	0.06	1.16	—	1.16	1.07	—	1.07	—	5,640	5,640	0.23	0.05	—	5,660
Dust From Material Movement	—	—	—	—	—	2.56	2.56	—	1.31	1.31	—	—	—	—	—	—	—
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
Average Daily	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Off-Road Equipment	1.98	17.4	19.4	0.03	0.69	—	0.69	0.63	—	0.63	—	3,355	3,355	0.14	0.03	—	3,367
Dust From Material Movement	—	—	—	—	—	1.52	1.52	—	0.78	0.78	—	—	—	—	—	—	—
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
Annual	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Off-Road Equipment	0.36	3.18	3.55	0.01	0.13	—	0.13	0.12	—	0.12	—	556	556	0.02	< 0.005	—	557
Dust From Material Movement	—	—	—	—	—	0.28	0.28	—	0.14	0.14	—	—	—	—	—	—	—

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
Offsite	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Daily, Summer (Max)	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Worker	0.20	0.21	3.30	0.00	0.00	0.62	0.62	0.00	0.15	0.15	—	657	657	0.03	0.02	2.40	667
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
Hauling	< 0.005	0.01	0.01	< 0.005	< 0.005	< 0.005	< 0.005	< 0.005	< 0.005	< 0.005	—	10.3	10.3	< 0.005	< 0.005	0.02	10.8
Daily, Winter (Max)	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Worker	0.20	0.23	2.80	0.00	0.00	0.62	0.62	0.00	0.15	0.15	—	623	623	0.03	0.02	0.06	630
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
Hauling	< 0.005	0.02	0.01	< 0.005	< 0.005	< 0.005	< 0.005	< 0.005	< 0.005	< 0.005	—	10.3	10.3	< 0.005	< 0.005	< 0.005	10.8
Average Daily	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Worker	0.12	0.15	1.75	0.00	0.00	0.36	0.36	0.00	0.09	0.09	—	376	376	0.02	0.01	0.62	381
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
Hauling	< 0.005	0.01	< 0.005	< 0.005	< 0.005	< 0.005	< 0.005	< 0.005	< 0.005	< 0.005	—	6.11	6.11	< 0.005	< 0.005	0.01	6.41
Annual	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Worker	0.02	0.03	0.32	0.00	0.00	0.07	0.07	0.00	0.02	0.02	—	62.2	62.2	< 0.005	< 0.005	0.10	63.1
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
Hauling	< 0.005	< 0.005	< 0.005	< 0.005	< 0.005	< 0.005	< 0.005	< 0.005	< 0.005	< 0.005	—	1.01	1.01	< 0.005	< 0.005	< 0.005	1.06

3.5. Linear, Paving (2025) - Unmitigated

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

Location	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	0.83	7.70	9.78	0.02	0.32	—	0.32	0.30	—	0.30	—	2,265	2,265	0.09	0.02	—	2,272
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
Average Daily	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Off-Road Equipment	0.15	1.39	1.77	< 0.005	0.06	—	0.06	0.05	—	0.05	—	409	409	0.02	< 0.005	—	411
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
Annual	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Off-Road Equipment	0.03	0.25	0.32	< 0.005	0.01	—	0.01	0.01	—	0.01	—	67.8	67.8	< 0.005	< 0.005	—	68.0
Onsite truck	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	—	0.00	0.00	0.00	0.00	0.00	0.00
Offsite	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Daily, Summer (Max)	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Daily, Winter (Max)	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Worker	0.07	0.08	1.03	0.00	0.00	0.23	0.23	0.00	0.05	0.05	—	229	229	0.01	0.01	0.02	232
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
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
Average Daily	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—

Worker	0.01	0.02	0.20	0.00	0.00	0.04	0.04	0.00	0.01	0.01	—	42.1	42.1	< 0.005	< 0.005	0.07	42.7
Vendor	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	—	0.00	0.00	0.00	0.00	0.00	0.00
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
Annual	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Worker	< 0.005	< 0.005	0.04	0.00	0.00	0.01	0.01	0.00	< 0.005	< 0.005	—	6.97	6.97	< 0.005	< 0.005	0.01	7.06
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
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

3.6. Linear, Paving (2025) - Mitigated

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

Location	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	0.83	7.70	9.78	0.02	0.32	—	0.32	0.30	—	0.30	—	2,265	2,265	0.09	0.02	—	2,272
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
Average Daily	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Off-Road Equipment	0.15	1.39	1.77	< 0.005	0.06	—	0.06	0.05	—	0.05	—	409	409	0.02	< 0.005	—	411
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
Annual	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Off-Road Equipment	0.03	0.25	0.32	< 0.005	0.01	—	0.01	0.01	—	0.01	—	67.8	67.8	< 0.005	< 0.005	—	68.0

Onsite truck	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	—	0.00	0.00	0.00	0.00	0.00	0.00
Offsite	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Daily, Summer (Max)	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Daily, Winter (Max)	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Worker	0.07	0.08	1.03	0.00	0.00	0.23	0.23	0.00	0.05	0.05	—	229	229	0.01	0.01	0.02	232
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
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
Average Daily	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Worker	0.01	0.02	0.20	0.00	0.00	0.04	0.04	0.00	0.01	0.01	—	42.1	42.1	< 0.005	< 0.005	0.07	42.7
Vendor	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	—	0.00	0.00	0.00	0.00	0.00	0.00
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
Annual	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Worker	< 0.005	< 0.005	0.04	0.00	0.00	0.01	0.01	0.00	< 0.005	< 0.005	—	6.97	6.97	< 0.005	< 0.005	0.01	7.06
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
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

3.7. Linear, Grubbing & Land Clearing (2026) - Unmitigated

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

Location	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	0.26	1.78	1.92	< 0.005	0.08	—	0.08	0.07	—	0.07	—	263	263	0.01	< 0.005	—	264
Dust From Material Movement	—	—	—	—	—	0.00	0.00	—	0.00	0.00	—	—	—	—	—	—	—
Onsite truck	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	—	0.00	0.00	0.00	0.00	0.00	0.00
Average Daily	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Off-Road Equipment	0.03	0.22	0.24	< 0.005	0.01	—	0.01	0.01	—	0.01	—	32.5	32.5	< 0.005	< 0.005	—	32.6
Dust From Material Movement	—	—	—	—	—	0.00	0.00	—	0.00	0.00	—	—	—	—	—	—	—
Onsite truck	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	—	0.00	0.00	0.00	0.00	0.00	0.00
Annual	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Off-Road Equipment	0.01	0.04	0.04	< 0.005	< 0.005	—	< 0.005	< 0.005	—	< 0.005	—	5.38	5.38	< 0.005	< 0.005	—	5.40
Dust From Material Movement	—	—	—	—	—	0.00	0.00	—	0.00	0.00	—	—	—	—	—	—	—
Onsite truck	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	—	0.00	0.00	0.00	0.00	0.00	0.00
Offsite	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Daily, Summer (Max)	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—

Daily, Winter (Max)	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Worker	0.03	0.03	0.41	0.00	0.00	0.10	0.10	0.00	0.02	0.02	—	96.3	96.3	< 0.005	< 0.005	0.01	97.5
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
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
Average Daily	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Worker	< 0.005	< 0.005	0.05	0.00	0.00	0.01	0.01	0.00	< 0.005	< 0.005	—	12.1	12.1	< 0.005	< 0.005	0.02	12.2
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
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
Annual	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Worker	< 0.005	< 0.005	0.01	0.00	0.00	< 0.005	< 0.005	0.00	< 0.005	< 0.005	—	2.00	2.00	< 0.005	< 0.005	< 0.005	2.02
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
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

3.8. Linear, Grubbing & Land Clearing (2026) - Mitigated

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

Location	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	0.26	1.78	1.92	< 0.005	0.08	—	0.08	0.07	—	0.07	—	263	263	0.01	< 0.005	—	264

Dust From Material Movement	—	—	—	—	—	0.00	0.00	—	0.00	0.00	—	—	—	—	—	—	—
Onsite truck	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	—	0.00	0.00	0.00	0.00	0.00	0.00
Average Daily	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Off-Road Equipment	0.03	0.22	0.24	< 0.005	0.01	—	0.01	0.01	—	0.01	—	32.5	32.5	< 0.005	< 0.005	—	32.6
Dust From Material Movement	—	—	—	—	—	0.00	0.00	—	0.00	0.00	—	—	—	—	—	—	—
Onsite truck	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	—	0.00	0.00	0.00	0.00	0.00	0.00
Annual	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Off-Road Equipment	0.01	0.04	0.04	< 0.005	< 0.005	—	< 0.005	< 0.005	—	< 0.005	—	5.38	5.38	< 0.005	< 0.005	—	5.40
Dust From Material Movement	—	—	—	—	—	0.00	0.00	—	0.00	0.00	—	—	—	—	—	—	—
Onsite truck	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	—	0.00	0.00	0.00	0.00	0.00	0.00
Offsite	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Daily, Summer (Max)	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Daily, Winter (Max)	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Worker	0.03	0.03	0.41	0.00	0.00	0.10	0.10	0.00	0.02	0.02	—	96.3	96.3	< 0.005	< 0.005	0.01	97.5
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
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

Average Daily	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Worker	< 0.005	< 0.005	0.05	0.00	0.00	0.01	0.01	0.00	< 0.005	< 0.005	—	12.1	12.1	< 0.005	< 0.005	0.02	12.2
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
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
Annual	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Worker	< 0.005	< 0.005	0.01	0.00	0.00	< 0.005	< 0.005	0.00	< 0.005	< 0.005	—	2.00	2.00	< 0.005	< 0.005	< 0.005	2.02
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
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

4. Operations Emissions Details

4.10. Soil Carbon Accumulation By Vegetation Type

4.10.1. Soil Carbon Accumulation By Vegetation Type - Unmitigated

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

Vegetation	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	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	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	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—

4.10.4. Soil Carbon Accumulation By Vegetation Type - Mitigated

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

Vegetation	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	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—

4.10.5. Above and Belowground Carbon Accumulation by Land Use Type - Mitigated

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

Land Use	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	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—

4.10.6. Avoided and Sequestered Emissions by Species - Mitigated

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

Species	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
Infrastructure Installation	Linear, Drainage, Utilities, & Sub-Grade	10/1/2024	10/31/2025	5.00	284	—
Linear, Paving	Linear, Paving	10/1/2025	12/31/2025	5.00	66.0	—
Site Restoration	Linear, Grubbing & Land Clearing	1/1/2026	1/30/2026	5.00	45.0	—

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
Infrastructure Installation	Tractors/Loaders/Backhoes	Diesel	Average	3.00	8.00	84.0	0.37
Infrastructure Installation	Air Compressors	Diesel	Average	1.00	8.00	37.0	0.48
Infrastructure Installation	Plate Compactors	Diesel	Average	1.00	8.00	8.00	0.43
Infrastructure Installation	Cranes	Diesel	Average	1.00	8.00	367	0.29
Infrastructure Installation	Rubber Tired Dozers	Diesel	Average	1.00	8.00	367	0.40
Infrastructure Installation	Dumpers/Tenders	Diesel	Average	1.00	8.00	16.0	0.38
Infrastructure Installation	Forklifts	Diesel	Average	1.00	8.00	82.0	0.20
Infrastructure Installation	Generator Sets	Diesel	Average	2.00	8.00	14.0	0.74
Infrastructure Installation	Rough Terrain Forklifts	Diesel	Average	2.00	8.00	96.0	0.40

Infrastructure Installation	Signal Boards	Diesel	Average	1.00	8.00	6.00	0.82
Infrastructure Installation	Sweepers/Scrubbers	Diesel	Average	1.00	8.00	36.0	0.46
Infrastructure Installation	Trenchers	Diesel	Average	2.00	8.00	40.0	0.50
Infrastructure Installation	Welders	Diesel	Average	2.00	8.00	46.0	0.45
Linear, Paving	Cement and Mortar Mixers	Diesel	Average	1.00	8.00	10.0	0.56
Linear, Paving	Paving Equipment	Diesel	Average	1.00	8.00	89.0	0.36
Linear, Paving	Pavers	Diesel	Average	1.00	8.00	81.0	0.42
Linear, Paving	Rollers	Diesel	Average	1.00	8.00	36.0	0.38
Linear, Paving	Signal Boards	Diesel	Average	1.00	8.00	6.00	0.82
Linear, Paving	Surfacing Equipment	Diesel	Average	1.00	8.00	399	0.30
Linear, Paving	Tractors/Loaders/Backhoes	Diesel	Average	1.00	8.00	84.0	0.37
Site Restoration	Signal Boards	Diesel	Average	1.00	8.00	6.00	0.82
Site Restoration	Pressure Washers	Diesel	Average	1.00	8.00	14.0	0.30
Site Restoration	Sweepers/Scrubbers	Diesel	Average	1.00	8.00	36.0	0.46

5.2.2. Mitigated

Phase Name	Equipment Type	Fuel Type	Engine Tier	Number per Day	Hours Per Day	Horsepower	Load Factor
Infrastructure Installation	Tractors/Loaders/Backhoes	Diesel	Average	3.00	8.00	84.0	0.37
Infrastructure Installation	Air Compressors	Diesel	Average	1.00	8.00	37.0	0.48
Infrastructure Installation	Plate Compactors	Diesel	Average	1.00	8.00	8.00	0.43
Infrastructure Installation	Cranes	Diesel	Average	1.00	8.00	367	0.29

Infrastructure Installation	Rubber Tired Dozers	Diesel	Average	1.00	8.00	367	0.40
Infrastructure Installation	Dumpers/Tenders	Diesel	Average	1.00	8.00	16.0	0.38
Infrastructure Installation	Forklifts	Diesel	Average	1.00	8.00	82.0	0.20
Infrastructure Installation	Generator Sets	Diesel	Average	2.00	8.00	14.0	0.74
Infrastructure Installation	Rough Terrain Forklifts	Diesel	Average	2.00	8.00	96.0	0.40
Infrastructure Installation	Signal Boards	Diesel	Average	1.00	8.00	6.00	0.82
Infrastructure Installation	Sweepers/Scrubbers	Diesel	Average	1.00	8.00	36.0	0.46
Infrastructure Installation	Trenchers	Diesel	Average	2.00	8.00	40.0	0.50
Infrastructure Installation	Welders	Diesel	Average	2.00	8.00	46.0	0.45
Linear, Paving	Cement and Mortar Mixers	Diesel	Average	1.00	8.00	10.0	0.56
Linear, Paving	Paving Equipment	Diesel	Average	1.00	8.00	89.0	0.36
Linear, Paving	Pavers	Diesel	Average	1.00	8.00	81.0	0.42
Linear, Paving	Rollers	Diesel	Average	1.00	8.00	36.0	0.38
Linear, Paving	Signal Boards	Diesel	Average	1.00	8.00	6.00	0.82
Linear, Paving	Surfacing Equipment	Diesel	Average	1.00	8.00	399	0.30
Linear, Paving	Tractors/Loaders/Backhoes	Diesel	Average	1.00	8.00	84.0	0.37
Site Restoration	Signal Boards	Diesel	Average	1.00	8.00	6.00	0.82
Site Restoration	Pressure Washers	Diesel	Average	1.00	8.00	14.0	0.30
Site Restoration	Sweepers/Scrubbers	Diesel	Average	1.00	8.00	36.0	0.46

5.3. Construction Vehicles

5.3.1. Unmitigated

Phase Name	Trip Type	One-Way Trips per Day	Miles per Trip	Vehicle Mix
Infrastructure Installation	—	—	—	—
Infrastructure Installation	Worker	47.5	18.5	LDA,LDT1,LDT2
Infrastructure Installation	Vendor	0.00	10.2	HHDT,MHDT
Infrastructure Installation	Hauling	0.31	9.30	HHDT
Infrastructure Installation	Onsite truck	—	—	HHDT
Site Restoration	—	—	—	—
Site Restoration	Worker	7.50	18.5	LDA,LDT1,LDT2
Site Restoration	Vendor	0.00	10.2	HHDT,MHDT
Site Restoration	Hauling	0.00	20.0	HHDT
Site Restoration	Onsite truck	—	—	HHDT
Linear, Paving	—	—	—	—
Linear, Paving	Worker	17.5	18.5	LDA,LDT1,LDT2
Linear, Paving	Vendor	0.00	10.2	HHDT,MHDT
Linear, Paving	Hauling	0.00	20.0	HHDT
Linear, Paving	Onsite truck	—	—	HHDT

5.3.2. Mitigated

Phase Name	Trip Type	One-Way Trips per Day	Miles per Trip	Vehicle Mix
Infrastructure Installation	—	—	—	—
Infrastructure Installation	Worker	47.5	18.5	LDA,LDT1,LDT2
Infrastructure Installation	Vendor	0.00	10.2	HHDT,MHDT
Infrastructure Installation	Hauling	0.31	9.30	HHDT
Infrastructure Installation	Onsite truck	—	—	HHDT

Site Restoration	—	—	—	—
Site Restoration	Worker	7.50	18.5	LDA,LDT1,LDT2
Site Restoration	Vendor	0.00	10.2	HHDT,MHDT
Site Restoration	Hauling	0.00	20.0	HHDT
Site Restoration	Onsite truck	—	—	HHDT
Linear, Paving	—	—	—	—
Linear, Paving	Worker	17.5	18.5	LDA,LDT1,LDT2
Linear, Paving	Vendor	0.00	10.2	HHDT,MHDT
Linear, Paving	Hauling	0.00	20.0	HHDT
Linear, Paving	Onsite truck	—	—	HHDT

5.4. Vehicles

5.4.1. Construction Vehicle Control Strategies

Non-applicable. No control strategies activated by user.

5.5. Architectural Coatings

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

5.6. Dust Mitigation

5.6.1. Construction Earthmoving Activities

Phase Name	Material Imported (Cubic Yards)	Material Exported (Cubic Yards)	Acres Graded (acres)	Material Demolished (sq. ft.)	Acres Paved (acres)
Infrastructure Installation	400	300	0.24	0.00	—
Site Restoration	0.00	0.00	0.24	0.00	—

5.6.2. Construction Earthmoving Control Strategies

Non-applicable. No control strategies activated by user.

5.7. Construction Paving

Land Use	Area Paved (acres)	% Asphalt
Road Construction	0.24	100%

5.8. Construction Electricity Consumption and Emissions Factors

kWh per Year and Emission Factor (lb/MWh)

Year	kWh per Year	CO2	CH4	N2O
2024	0.00	532	0.03	< 0.005
2025	0.00	532	0.03	< 0.005
2026	0.00	532	0.03	< 0.005

5.18. Vegetation

5.18.1. Land Use Change

5.18.1.1. Unmitigated

Vegetation Land Use Type	Vegetation Soil Type	Initial Acres	Final Acres

5.18.1.2. Mitigated

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

5.18.1.2. Mitigated

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)

5.18.2.2. Mitigated

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	20.3	annual days of extreme heat
Extreme Precipitation	6.60	annual days with precipitation above 20 mm
Sea Level Rise	0.00	meters of inundation depth
Wildfire	10.5	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 (2040–2059 average under RCP 8.5), and consider different increments of sea level rise coupled with extreme storm events. Users may select from four model simulations to view the range in potential inundation depth 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 50 meters (m) by 50 m, or about 164 feet (ft) by 164 ft.

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	2	0	0	N/A
Extreme Precipitation	N/A	N/A	N/A	N/A
Sea Level Rise	1	0	0	N/A
Wildfire	1	0	0	N/A
Flooding	N/A	N/A	N/A	N/A
Drought	N/A	N/A	N/A	N/A
Snowpack Reduction	N/A	N/A	N/A	N/A
Air Quality Degradation	0	0	0	N/A

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

6.3. Adjusted Climate Risk Scores

Climate Hazard	Exposure Score	Sensitivity Score	Adaptive Capacity Score	Vulnerability Score
Temperature and Extreme Heat	2	1	1	3
Extreme Precipitation	N/A	N/A	N/A	N/A
Sea Level Rise	1	1	1	2
Wildfire	1	1	1	2
Flooding	N/A	N/A	N/A	N/A
Drought	N/A	N/A	N/A	N/A
Snowpack Reduction	N/A	N/A	N/A	N/A

Air Quality Degradation	1	1	1	2

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

6.4. Climate Risk Reduction Measures

7. Health and Equity Details

7.1. CalEnviroScreen 4.0 Scores

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

Indicator	Result for Project Census Tract
Exposure Indicators	—
AQ-Ozone	95.3
AQ-PM	49.6
AQ-DPM	47.1
Drinking Water	68.0
Lead Risk Housing	30.1
Pesticides	0.00
Toxic Releases	41.5
Traffic	49.9
Effect Indicators	—
CleanUp Sites	4.12
Groundwater	3.30
Haz Waste Facilities/Generators	0.00
Impaired Water Bodies	12.5
Solid Waste	80.0

Sensitive Population	—
Asthma	52.5
Cardio-vascular	52.3
Low Birth Weights	68.1
Socioeconomic Factor Indicators	—
Education	43.4
Housing	20.6
Linguistic	46.0
Poverty	21.7
Unemployment	37.7

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	74.36160657
Employed	85.83344027
Median HI	57.98793789
Education	—
Bachelor's or higher	41.76825356
High school enrollment	4.658026434
Preschool enrollment	70.3580136
Transportation	—
Auto Access	24.53483896
Active commuting	47.60682664
Social	—
2-parent households	82.42012062

Voting	56.28127807
Neighborhood	—
Alcohol availability	97.0101373
Park access	12.51122803
Retail density	48.64622097
Supermarket access	8.571795201
Tree canopy	73.98947774
Housing	—
Homeownership	69.39561145
Housing habitability	65.96945977
Low-inc homeowner severe housing cost burden	63.50571025
Low-inc renter severe housing cost burden	55.46002823
Uncrowded housing	42.30719877
Health Outcomes	—
Insured adults	58.50121904
Arthritis	64.8
Asthma ER Admissions	43.7
High Blood Pressure	81.4
Cancer (excluding skin)	36.4
Asthma	69.3
Coronary Heart Disease	74.7
Chronic Obstructive Pulmonary Disease	68.2
Diagnosed Diabetes	78.0
Life Expectancy at Birth	46.9
Cognitively Disabled	74.6
Physically Disabled	45.1
Heart Attack ER Admissions	14.4

Mental Health Not Good	62.3
Chronic Kidney Disease	79.8
Obesity	55.2
Pedestrian Injuries	19.6
Physical Health Not Good	68.2
Stroke	80.6
Health Risk Behaviors	—
Binge Drinking	9.5
Current Smoker	62.2
No Leisure Time for Physical Activity	78.5
Climate Change Exposures	—
Wildfire Risk	64.6
SLR Inundation Area	0.0
Children	67.0
Elderly	53.8
English Speaking	57.0
Foreign-born	50.7
Outdoor Workers	58.5
Climate Change Adaptive Capacity	—
Impervious Surface Cover	81.5
Traffic Density	27.5
Traffic Access	23.0
Other Indices	—
Hardship	44.4
Other Decision Support	—
2016 Voting	48.4

7.3. Overall Health & Equity Scores

Metric	Result for Project Census Tract
CalEnviroScreen 4.0 Score for Project Location (a)	43.0
Healthy Places Index Score for Project Location (b)	54.0
Project Located in a Designated Disadvantaged Community (Senate Bill 535)	No
Project Located in a Low-Income Community (Assembly Bill 1550)	No
Project Located in a Community Air Protection Program Community (Assembly Bill 617)	No

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

7.4. Health & Equity Measures

No Health & Equity Measures selected.

7.5. Evaluation Scorecard

Health & Equity Evaluation Scorecard not completed.

7.6. Health & Equity Custom Measures

No Health & Equity Custom Measures created.

8. User Changes to Default Data

Screen	Justification
Construction: Construction Phases	Based on applicant provided data
Construction: Off-Road Equipment	Based on applicant provided information
Construction: Dust From Material Movement	Based on applicant provided data
Construction: Trips and VMT	Based on applicant provided information

Honby Tanks Pipeline Project - Mitigated Detailed Report

Table of Contents

8. User Changes to Default Data

1. Basic Project Information

1.1. Basic Project Information

Data Field	Value
Project Name	Honby Tanks Pipeline Project - Mitigated
Construction Start Date	10/1/2024
Lead Agency	—
Land Use Scale	Project/site
Analysis Level for Defaults	County
Windspeed (m/s)	2.50
Precipitation (days)	19.6
Location	34.43101393102373, -118.49246998613651
County	Los Angeles-South Coast
City	Santa Clarita
Air District	South Coast AQMD
Air Basin	South Coast
TAZ	3620
EDFZ	7
Electric Utility	Southern California Edison
Gas Utility	Southern California Gas
App Version	2022.1.1.14

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
Road Construction	0.49	Mile	0.24	0.00	0.00	—	—	—

1.3. User-Selected Emission Reduction Measures by Emissions Sector

Sector	#	Measure Title
Construction	C-2*	Limit Heavy-Duty Diesel Vehicle Idling
Construction	C-10-A	Water Exposed Surfaces
Construction	C-10-C	Water Unpaved Construction Roads
Construction	C-11	Limit Vehicle Speeds on Unpaved Roads
Construction	C-12	Sweep Paved Roads

* Qualitative or supporting measure. Emission reductions not included in the mitigated emissions results.

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.	ROG	NOx	CO	SO2	PM10E	PM10D	PM10T	PM2.5E	PM2.5D	PM2.5T	BCO2	NBCO2	CO2T	CH4	N2O	R	CO2e
Daily, Summer (Max)	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Unmit.	3.54	29.5	36.0	0.06	1.16	7.18	8.33	1.07	3.51	4.58	—	6,307	6,307	0.26	0.07	2.43	6,337
Mit.	3.54	29.5	36.0	0.06	1.16	2.33	3.49	1.07	1.02	2.09	—	6,307	6,307	0.26	0.07	2.43	6,337
% Reduced	—	—	—	—	—	68%	58%	—	71%	54%	—	—	—	—	—	—	—
Daily, Winter (Max)	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Unmit.	4.44	37.3	46.3	0.08	1.48	7.40	8.89	1.36	3.57	4.93	—	8,767	8,767	0.36	0.10	0.09	8,805
Mit.	4.44	37.3	46.3	0.08	1.48	2.56	4.04	1.36	1.08	2.44	—	8,767	8,767	0.36	0.10	0.09	8,805
% Reduced	—	—	—	—	—	65%	55%	—	70%	51%	—	—	—	—	—	—	—

Average Daily (Max)	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Unmit.	2.29	19.1	23.3	0.04	0.75	4.31	5.06	0.69	2.10	2.79	—	4,214	4,214	0.17	0.05	0.70	4,233
Mit.	2.29	19.1	23.3	0.04	0.75	1.43	2.18	0.69	0.62	1.31	—	4,214	4,214	0.17	0.05	0.70	4,233
% Reduced	—	—	—	—	—	67%	57%	—	71%	53%	—	—	—	—	—	—	—
Annual (Max)	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Unmit.	0.42	3.49	4.26	0.01	0.14	0.79	0.92	0.13	0.38	0.51	—	698	698	0.03	0.01	0.12	701
Mit.	0.42	3.49	4.26	0.01	0.14	0.26	0.40	0.13	0.11	0.24	—	698	698	0.03	0.01	0.12	701
% Reduced	—	—	—	—	—	67%	57%	—	71%	53%	—	—	—	—	—	—	—

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	ROG	NOx	CO	SO2	PM10E	PM10D	PM10T	PM2.5E	PM2.5D	PM2.5T	BCO2	NBCO2	CO2T	CH4	N2O	R	CO2e
Daily - Summer (Max)	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
2025	3.54	29.5	36.0	0.06	1.16	7.18	8.33	1.07	3.51	4.58	—	6,307	6,307	0.26	0.07	2.43	6,337
Daily - Winter (Max)	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
2024	3.82	32.0	36.9	0.06	1.34	7.18	8.52	1.23	3.51	4.75	—	6,286	6,286	0.26	0.07	0.07	6,314
2025	4.44	37.3	46.3	0.08	1.48	7.40	8.89	1.36	3.57	4.93	—	8,767	8,767	0.36	0.10	0.09	8,805
2026	0.34	2.24	2.56	< 0.005	0.09	0.10	0.19	0.09	0.02	0.11	—	414	414	0.02	0.01	0.01	417
Average Daily	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
2024	0.69	5.77	6.67	0.01	0.24	1.29	1.53	0.22	0.63	0.85	—	1,133	1,133	0.05	0.01	0.21	1,139
2025	2.29	19.1	23.3	0.04	0.75	4.31	5.06	0.69	2.10	2.79	—	4,214	4,214	0.17	0.05	0.70	4,233

2026	0.02	0.13	0.15	< 0.005	0.01	0.01	0.01	0.01	< 0.005	0.01	—	24.4	24.4	< 0.005	< 0.005	0.01	24.5
Annual	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
2024	0.13	1.05	1.22	< 0.005	0.04	0.24	0.28	0.04	0.12	0.16	—	188	188	0.01	< 0.005	0.03	189
2025	0.42	3.49	4.26	0.01	0.14	0.79	0.92	0.13	0.38	0.51	—	698	698	0.03	0.01	0.12	701
2026	< 0.005	0.02	0.03	< 0.005	< 0.005	< 0.005	< 0.005	< 0.005	< 0.005	< 0.005	—	4.04	4.04	< 0.005	< 0.005	< 0.005	4.06

2.3. Construction Emissions by Year, Mitigated

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

Year	ROG	NOx	CO	SO2	PM10E	PM10D	PM10T	PM2.5E	PM2.5D	PM2.5T	BCO2	NBCO2	CO2T	CH4	N2O	R	CO2e
Daily - Summer (Max)	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
2025	3.54	29.5	36.0	0.06	1.16	2.33	3.49	1.07	1.02	2.09	—	6,307	6,307	0.26	0.07	2.43	6,337
Daily - Winter (Max)	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
2024	3.82	32.0	36.9	0.06	1.34	2.33	3.67	1.23	1.02	2.25	—	6,286	6,286	0.26	0.07	0.07	6,314
2025	4.44	37.3	46.3	0.08	1.48	2.56	4.04	1.36	1.08	2.44	—	8,767	8,767	0.36	0.10	0.09	8,805
2026	0.34	2.24	2.56	< 0.005	0.09	0.10	0.19	0.09	0.02	0.11	—	414	414	0.02	0.01	0.01	417
Average Daily	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
2024	0.69	5.77	6.67	0.01	0.24	0.42	0.66	0.22	0.18	0.41	—	1,133	1,133	0.05	0.01	0.21	1,139
2025	2.29	19.1	23.3	0.04	0.75	1.43	2.18	0.69	0.62	1.31	—	4,214	4,214	0.17	0.05	0.70	4,233
2026	0.02	0.13	0.15	< 0.005	0.01	0.01	0.01	0.01	< 0.005	0.01	—	24.4	24.4	< 0.005	< 0.005	0.01	24.5
Annual	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
2024	0.13	1.05	1.22	< 0.005	0.04	0.08	0.12	0.04	0.03	0.07	—	188	188	0.01	< 0.005	0.03	189
2025	0.42	3.49	4.26	0.01	0.14	0.26	0.40	0.13	0.11	0.24	—	698	698	0.03	0.01	0.12	701
2026	< 0.005	0.02	0.03	< 0.005	< 0.005	< 0.005	< 0.005	< 0.005	< 0.005	< 0.005	—	4.04	4.04	< 0.005	< 0.005	< 0.005	4.06

3. Construction Emissions Details

3.1. Linear, Grubbing & Land Clearing (2025) - Unmitigated

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

Location	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	0.32	2.24	2.16	< 0.005	0.10	—	0.10	0.09	—	0.09	—	318	318	0.01	< 0.005	—	319
Dust From Material Movement	—	—	—	—	—	0.00	0.00	—	0.00	0.00	—	—	—	—	—	—	—
Onsite truck	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	—	0.00	0.00	0.00	0.00	0.00	0.00
Average Daily	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Off-Road Equipment	0.02	0.14	0.13	< 0.005	0.01	—	0.01	0.01	—	0.01	—	19.3	19.3	< 0.005	< 0.005	—	19.4
Dust From Material Movement	—	—	—	—	—	0.00	0.00	—	0.00	0.00	—	—	—	—	—	—	—
Onsite truck	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	—	0.00	0.00	0.00	0.00	0.00	0.00
Annual	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Off-Road Equipment	< 0.005	0.02	0.02	< 0.005	< 0.005	—	< 0.005	< 0.005	—	< 0.005	—	3.19	3.19	< 0.005	< 0.005	—	3.21

Dust From Material Movement	—	—	—	—	—	0.00	0.00	—	0.00	0.00	—	—	—	—	—	—	—
Onsite truck	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	—	0.00	0.00	0.00	0.00	0.00	0.00
Offsite	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Daily, Summer (Max)	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Daily, Winter (Max)	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Worker	0.03	0.04	0.44	0.00	0.00	0.10	0.10	0.00	0.02	0.02	—	98.3	98.3	< 0.005	< 0.005	0.01	99.5
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
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
Average Daily	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Worker	< 0.005	< 0.005	0.03	0.00	0.00	0.01	0.01	0.00	< 0.005	< 0.005	—	6.05	6.05	< 0.005	< 0.005	0.01	6.13
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
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
Annual	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Worker	< 0.005	< 0.005	0.01	0.00	0.00	< 0.005	< 0.005	0.00	< 0.005	< 0.005	—	1.00	1.00	< 0.005	< 0.005	< 0.005	1.02
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
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

3.2. Linear, Grubbing & Land Clearing (2025) - Mitigated

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

Location	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	0.32	2.24	2.16	< 0.005	0.10	—	0.10	0.09	—	0.09	—	318	318	0.01	< 0.005	—	319
Dust From Material Movement	—	—	—	—	—	0.00	0.00	—	0.00	0.00	—	—	—	—	—	—	—
Onsite truck	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	—	0.00	0.00	0.00	0.00	0.00	0.00
Average Daily	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Off-Road Equipment	0.02	0.14	0.13	< 0.005	0.01	—	0.01	0.01	—	0.01	—	19.3	19.3	< 0.005	< 0.005	—	19.4
Dust From Material Movement	—	—	—	—	—	0.00	0.00	—	0.00	0.00	—	—	—	—	—	—	—
Onsite truck	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	—	0.00	0.00	0.00	0.00	0.00	0.00
Annual	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Off-Road Equipment	< 0.005	0.02	0.02	< 0.005	< 0.005	—	< 0.005	< 0.005	—	< 0.005	—	3.19	3.19	< 0.005	< 0.005	—	3.21
Dust From Material Movement	—	—	—	—	—	0.00	0.00	—	0.00	0.00	—	—	—	—	—	—	—
Onsite truck	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	—	0.00	0.00	0.00	0.00	0.00	0.00
Offsite	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—

Daily, Summer (Max)	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Daily, Winter (Max)	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Worker	0.03	0.04	0.44	0.00	0.00	0.10	0.10	0.00	0.02	0.02	—	98.3	98.3	< 0.005	< 0.005	0.01	99.5
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
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
Average Daily	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Worker	< 0.005	< 0.005	0.03	0.00	0.00	0.01	0.01	0.00	< 0.005	< 0.005	—	6.05	6.05	< 0.005	< 0.005	0.01	6.13
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
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
Annual	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Worker	< 0.005	< 0.005	0.01	0.00	0.00	< 0.005	< 0.005	0.00	< 0.005	< 0.005	—	1.00	1.00	< 0.005	< 0.005	< 0.005	1.02
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
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

3.3. Linear, Grubbing & Land Clearing (2026) - Unmitigated

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

Location	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	0.31	2.21	2.15	< 0.005	0.09	—	0.09	0.09	—	0.09	—	318	318	0.01	< 0.005	—	319

Dust From Material Movement	—	—	—	—	—	0.00	0.00	—	0.00	0.00	—	—	—	—	—	—	—
Onsite truck	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	—	0.00	0.00	0.00	0.00	0.00	0.00
Average Daily	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Off-Road Equipment	0.02	0.13	0.13	< 0.005	0.01	—	0.01	0.01	—	0.01	—	18.7	18.7	< 0.005	< 0.005	—	18.7
Dust From Material Movement	—	—	—	—	—	0.00	0.00	—	0.00	0.00	—	—	—	—	—	—	—
Onsite truck	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	—	0.00	0.00	0.00	0.00	0.00	0.00
Annual	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Off-Road Equipment	< 0.005	0.02	0.02	< 0.005	< 0.005	—	< 0.005	< 0.005	—	< 0.005	—	3.09	3.09	< 0.005	< 0.005	—	3.10
Dust From Material Movement	—	—	—	—	—	0.00	0.00	—	0.00	0.00	—	—	—	—	—	—	—
Onsite truck	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	—	0.00	0.00	0.00	0.00	0.00	0.00
Offsite	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Daily, Summer (Max)	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Daily, Winter (Max)	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Worker	0.03	0.03	0.41	0.00	0.00	0.10	0.10	0.00	0.02	0.02	—	96.3	96.3	< 0.005	< 0.005	0.01	97.5
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
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

Average Daily	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Worker	< 0.005	< 0.005	0.03	0.00	0.00	0.01	0.01	0.00	< 0.005	< 0.005	—	5.74	5.74	< 0.005	< 0.005	0.01	5.82
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
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
Annual	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Worker	< 0.005	< 0.005	< 0.005	0.00	0.00	< 0.005	< 0.005	0.00	< 0.005	< 0.005	—	0.95	0.95	< 0.005	< 0.005	< 0.005	0.96
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
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

3.4. Linear, Grubbing & Land Clearing (2026) - Mitigated

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

Location	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	0.31	2.21	2.15	< 0.005	0.09	—	0.09	0.09	—	0.09	—	318	318	0.01	< 0.005	—	319
Dust From Material Movement	—	—	—	—	—	0.00	0.00	—	0.00	0.00	—	—	—	—	—	—	—
Onsite truck	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	—	0.00	0.00	0.00	0.00	0.00	0.00
Average Daily	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Off-Road Equipment	0.02	0.13	0.13	< 0.005	0.01	—	0.01	0.01	—	0.01	—	18.7	18.7	< 0.005	< 0.005	—	18.7

Dust From Material Movement	—	—	—	—	—	0.00	0.00	—	0.00	0.00	—	—	—	—	—	—	—
Onsite truck	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	—	0.00	0.00	0.00	0.00	0.00	0.00
Annual	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Off-Road Equipment	< 0.005	0.02	0.02	< 0.005	< 0.005	—	< 0.005	< 0.005	—	< 0.005	—	3.09	3.09	< 0.005	< 0.005	—	3.10
Dust From Material Movement	—	—	—	—	—	0.00	0.00	—	0.00	0.00	—	—	—	—	—	—	—
Onsite truck	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	—	0.00	0.00	0.00	0.00	0.00	0.00
Offsite	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Daily, Summer (Max)	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Daily, Winter (Max)	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Worker	0.03	0.03	0.41	0.00	0.00	0.10	0.10	0.00	0.02	0.02	—	96.3	96.3	< 0.005	< 0.005	0.01	97.5
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
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
Average Daily	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Worker	< 0.005	< 0.005	0.03	0.00	0.00	0.01	0.01	0.00	< 0.005	< 0.005	—	5.74	5.74	< 0.005	< 0.005	0.01	5.82
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
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
Annual	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Worker	< 0.005	< 0.005	< 0.005	0.00	0.00	< 0.005	< 0.005	0.00	< 0.005	< 0.005	—	0.95	0.95	< 0.005	< 0.005	< 0.005	0.96
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

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

3.5. Linear, Drainage, Utilities, & Sub-Grade (2024) - Unmitigated

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

Location	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	3.61	31.7	33.8	0.06	1.34	—	1.34	1.23	—	1.23	—	5,640	5,640	0.23	0.05	—	5,659
Dust From Material Movement	—	—	—	—	—	6.55	6.55	—	3.37	3.37	—	—	—	—	—	—	—
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
Average Daily	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Off-Road Equipment	0.65	5.72	6.09	0.01	0.24	—	0.24	0.22	—	0.22	—	1,015	1,015	0.04	0.01	—	1,019
Dust From Material Movement	—	—	—	—	—	1.18	1.18	—	0.61	0.61	—	—	—	—	—	—	—
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
Annual	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Off-Road Equipment	0.12	1.04	1.11	< 0.005	0.04	—	0.04	0.04	—	0.04	—	168	168	0.01	< 0.005	—	169

Dust From Material Movement	—	—	—	—	—	0.22	0.22	—	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
Offsite	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Daily, Summer (Max)	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Daily, Winter (Max)	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Worker	0.21	0.27	3.03	0.00	0.00	0.62	0.62	0.00	0.15	0.15	—	636	636	0.03	0.02	0.07	643
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
Hauling	< 0.005	0.02	0.01	< 0.005	< 0.005	< 0.005	< 0.005	< 0.005	< 0.005	< 0.005	—	10.5	10.5	< 0.005	< 0.005	< 0.005	11.0
Average Daily	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Worker	0.04	0.05	0.57	0.00	0.00	0.11	0.11	0.00	0.03	0.03	—	116	116	0.01	< 0.005	0.21	118
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
Hauling	< 0.005	< 0.005	< 0.005	< 0.005	< 0.005	< 0.005	< 0.005	< 0.005	< 0.005	< 0.005	—	1.88	1.88	< 0.005	< 0.005	< 0.005	1.98
Annual	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Worker	0.01	0.01	0.10	0.00	0.00	0.02	0.02	0.00	< 0.005	< 0.005	—	19.2	19.2	< 0.005	< 0.005	0.03	19.5
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
Hauling	< 0.005	< 0.005	< 0.005	< 0.005	< 0.005	< 0.005	< 0.005	< 0.005	< 0.005	< 0.005	—	0.31	0.31	< 0.005	< 0.005	< 0.005	0.33

3.6. Linear, Drainage, Utilities, & Sub-Grade (2024) - Mitigated

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

Location	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	3.61	31.7	33.8	0.06	1.34	—	1.34	1.23	—	1.23	—	5,640	5,640	0.23	0.05	—	5,659
Dust From Material Movement	—	—	—	—	—	1.70	1.70	—	0.88	0.88	—	—	—	—	—	—	—
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
Average Daily	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Off-Road Equipment	0.65	5.72	6.09	0.01	0.24	—	0.24	0.22	—	0.22	—	1,015	1,015	0.04	0.01	—	1,019
Dust From Material Movement	—	—	—	—	—	0.31	0.31	—	0.16	0.16	—	—	—	—	—	—	—
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
Annual	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Off-Road Equipment	0.12	1.04	1.11	< 0.005	0.04	—	0.04	0.04	—	0.04	—	168	168	0.01	< 0.005	—	169
Dust From Material Movement	—	—	—	—	—	0.06	0.06	—	0.03	0.03	—	—	—	—	—	—	—
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
Offsite	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—

Daily, Summer (Max)	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Daily, Winter (Max)	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Worker	0.21	0.27	3.03	0.00	0.00	0.62	0.62	0.00	0.15	0.15	—	636	636	0.03	0.02	0.07	643
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
Hauling	< 0.005	0.02	0.01	< 0.005	< 0.005	< 0.005	< 0.005	< 0.005	< 0.005	< 0.005	—	10.5	10.5	< 0.005	< 0.005	< 0.005	11.0
Average Daily	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Worker	0.04	0.05	0.57	0.00	0.00	0.11	0.11	0.00	0.03	0.03	—	116	116	0.01	< 0.005	0.21	118
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
Hauling	< 0.005	< 0.005	< 0.005	< 0.005	< 0.005	< 0.005	< 0.005	< 0.005	< 0.005	< 0.005	—	1.88	1.88	< 0.005	< 0.005	< 0.005	1.98
Annual	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Worker	0.01	0.01	0.10	0.00	0.00	0.02	0.02	0.00	< 0.005	< 0.005	—	19.2	19.2	< 0.005	< 0.005	0.03	19.5
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
Hauling	< 0.005	< 0.005	< 0.005	< 0.005	< 0.005	< 0.005	< 0.005	< 0.005	< 0.005	< 0.005	—	0.31	0.31	< 0.005	< 0.005	< 0.005	0.33

3.7. Linear, Drainage, Utilities, & Sub-Grade (2025) - Unmitigated

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

Location	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	3.34	29.3	32.7	0.06	1.16	—	1.16	1.07	—	1.07	—	5,640	5,640	0.23	0.05	—	5,660

Dust From Material Movement	—	—	—	—	—	6.55	6.55	—	3.37	3.37	—	—	—	—	—	—	—
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
Daily, Winter (Max)	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Off-Road Equipment	3.34	29.3	32.7	0.06	1.16	—	1.16	1.07	—	1.07	—	5,640	5,640	0.23	0.05	—	5,660
Dust From Material Movement	—	—	—	—	—	6.55	6.55	—	3.37	3.37	—	—	—	—	—	—	—
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
Average Daily	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Off-Road Equipment	1.98	17.4	19.4	0.03	0.69	—	0.69	0.63	—	0.63	—	3,355	3,355	0.14	0.03	—	3,367
Dust From Material Movement	—	—	—	—	—	3.90	3.90	—	2.00	2.00	—	—	—	—	—	—	—
Onsite truck	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	—	0.00	0.00	0.00	0.00	0.00	0.00
Annual	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Off-Road Equipment	0.36	3.18	3.55	0.01	0.13	—	0.13	0.12	—	0.12	—	556	556	0.02	< 0.005	—	557
Dust From Material Movement	—	—	—	—	—	0.71	0.71	—	0.37	0.37	—	—	—	—	—	—	—
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

Offsite	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Daily, Summer (Max)	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Worker	0.20	0.21	3.30	0.00	0.00	0.62	0.62	0.00	0.15	0.15	—	657	657	0.03	0.02	2.40	667
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
Hauling	< 0.005	0.01	0.01	< 0.005	< 0.005	< 0.005	< 0.005	< 0.005	< 0.005	< 0.005	—	10.3	10.3	< 0.005	< 0.005	0.02	10.8
Daily, Winter (Max)	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Worker	0.20	0.23	2.80	0.00	0.00	0.62	0.62	0.00	0.15	0.15	—	623	623	0.03	0.02	0.06	630
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
Hauling	< 0.005	0.02	0.01	< 0.005	< 0.005	< 0.005	< 0.005	< 0.005	< 0.005	< 0.005	—	10.3	10.3	< 0.005	< 0.005	< 0.005	10.8
Average Daily	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Worker	0.12	0.15	1.75	0.00	0.00	0.36	0.36	0.00	0.09	0.09	—	376	376	0.02	0.01	0.62	381
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
Hauling	< 0.005	0.01	< 0.005	< 0.005	< 0.005	< 0.005	< 0.005	< 0.005	< 0.005	< 0.005	—	6.11	6.11	< 0.005	< 0.005	0.01	6.41
Annual	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Worker	0.02	0.03	0.32	0.00	0.00	0.07	0.07	0.00	0.02	0.02	—	62.2	62.2	< 0.005	< 0.005	0.10	63.1
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
Hauling	< 0.005	< 0.005	< 0.005	< 0.005	< 0.005	< 0.005	< 0.005	< 0.005	< 0.005	< 0.005	—	1.01	1.01	< 0.005	< 0.005	< 0.005	1.06

3.8. Linear, Drainage, Utilities, & Sub-Grade (2025) - Mitigated

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

Location	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	3.34	29.3	32.7	0.06	1.16	—	1.16	1.07	—	1.07	—	5,640	5,640	0.23	0.05	—	5,660
Dust From Material Movement	—	—	—	—	—	1.70	1.70	—	0.88	0.88	—	—	—	—	—	—	—
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
Daily, Winter (Max)	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Off-Road Equipment	3.34	29.3	32.7	0.06	1.16	—	1.16	1.07	—	1.07	—	5,640	5,640	0.23	0.05	—	5,660
Dust From Material Movement	—	—	—	—	—	1.70	1.70	—	0.88	0.88	—	—	—	—	—	—	—
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
Average Daily	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Off-Road Equipment	1.98	17.4	19.4	0.03	0.69	—	0.69	0.63	—	0.63	—	3,355	3,355	0.14	0.03	—	3,367
Dust From Material Movement	—	—	—	—	—	1.01	1.01	—	0.52	0.52	—	—	—	—	—	—	—
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
Annual	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Off-Road Equipment	0.36	3.18	3.55	0.01	0.13	—	0.13	0.12	—	0.12	—	556	556	0.02	< 0.005	—	557
Dust From Material Movement	—	—	—	—	—	0.18	0.18	—	0.10	0.10	—	—	—	—	—	—	—

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
Offsite	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Daily, Summer (Max)	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Worker	0.20	0.21	3.30	0.00	0.00	0.62	0.62	0.00	0.15	0.15	—	657	657	0.03	0.02	2.40	667
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
Hauling	< 0.005	0.01	0.01	< 0.005	< 0.005	< 0.005	< 0.005	< 0.005	< 0.005	< 0.005	—	10.3	10.3	< 0.005	< 0.005	0.02	10.8
Daily, Winter (Max)	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Worker	0.20	0.23	2.80	0.00	0.00	0.62	0.62	0.00	0.15	0.15	—	623	623	0.03	0.02	0.06	630
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
Hauling	< 0.005	0.02	0.01	< 0.005	< 0.005	< 0.005	< 0.005	< 0.005	< 0.005	< 0.005	—	10.3	10.3	< 0.005	< 0.005	< 0.005	10.8
Average Daily	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Worker	0.12	0.15	1.75	0.00	0.00	0.36	0.36	0.00	0.09	0.09	—	376	376	0.02	0.01	0.62	381
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
Hauling	< 0.005	0.01	< 0.005	< 0.005	< 0.005	< 0.005	< 0.005	< 0.005	< 0.005	< 0.005	—	6.11	6.11	< 0.005	< 0.005	0.01	6.41
Annual	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Worker	0.02	0.03	0.32	0.00	0.00	0.07	0.07	0.00	0.02	0.02	—	62.2	62.2	< 0.005	< 0.005	0.10	63.1
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
Hauling	< 0.005	< 0.005	< 0.005	< 0.005	< 0.005	< 0.005	< 0.005	< 0.005	< 0.005	< 0.005	—	1.01	1.01	< 0.005	< 0.005	< 0.005	1.06

3.9. Linear, Paving (2025) - Unmitigated

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

Location	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	0.83	7.70	9.78	0.02	0.32	—	0.32	0.30	—	0.30	—	2,265	2,265	0.09	0.02	—	2,272
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
Average Daily	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Off-Road Equipment	0.15	1.39	1.77	< 0.005	0.06	—	0.06	0.05	—	0.05	—	409	409	0.02	< 0.005	—	411
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
Annual	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Off-Road Equipment	0.03	0.25	0.32	< 0.005	0.01	—	0.01	0.01	—	0.01	—	67.8	67.8	< 0.005	< 0.005	—	68.0
Onsite truck	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	—	0.00	0.00	0.00	0.00	0.00	0.00
Offsite	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Daily, Summer (Max)	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Daily, Winter (Max)	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Worker	0.07	0.08	1.03	0.00	0.00	0.23	0.23	0.00	0.05	0.05	—	229	229	0.01	0.01	0.02	232
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
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
Average Daily	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—

Worker	0.01	0.02	0.20	0.00	0.00	0.04	0.04	0.00	0.01	0.01	—	42.1	42.1	< 0.005	< 0.005	0.07	42.7
Vendor	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	—	0.00	0.00	0.00	0.00	0.00	0.00
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
Annual	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Worker	< 0.005	< 0.005	0.04	0.00	0.00	0.01	0.01	0.00	< 0.005	< 0.005	—	6.97	6.97	< 0.005	< 0.005	0.01	7.06
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
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

3.10. Linear, Paving (2025) - Mitigated

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

Location	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	0.83	7.70	9.78	0.02	0.32	—	0.32	0.30	—	0.30	—	2,265	2,265	0.09	0.02	—	2,272
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
Average Daily	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Off-Road Equipment	0.15	1.39	1.77	< 0.005	0.06	—	0.06	0.05	—	0.05	—	409	409	0.02	< 0.005	—	411
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
Annual	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Off-Road Equipment	0.03	0.25	0.32	< 0.005	0.01	—	0.01	0.01	—	0.01	—	67.8	67.8	< 0.005	< 0.005	—	68.0

Onsite truck	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	—	0.00	0.00	0.00	0.00	0.00	0.00
Offsite	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Daily, Summer (Max)	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Daily, Winter (Max)	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Worker	0.07	0.08	1.03	0.00	0.00	0.23	0.23	0.00	0.05	0.05	—	229	229	0.01	0.01	0.02	232
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
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
Average Daily	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Worker	0.01	0.02	0.20	0.00	0.00	0.04	0.04	0.00	0.01	0.01	—	42.1	42.1	< 0.005	< 0.005	0.07	42.7
Vendor	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	—	0.00	0.00	0.00	0.00	0.00	0.00
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
Annual	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Worker	< 0.005	< 0.005	0.04	0.00	0.00	0.01	0.01	0.00	< 0.005	< 0.005	—	6.97	6.97	< 0.005	< 0.005	0.01	7.06
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
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

4. Operations Emissions Details

4.10. Soil Carbon Accumulation By Vegetation Type

4.10.1. Soil Carbon Accumulation By Vegetation Type - Unmitigated

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

Vegetation	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	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	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	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—

4.10.4. Soil Carbon Accumulation By Vegetation Type - Mitigated

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

Vegetation	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	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—

4.10.5. Above and Belowground Carbon Accumulation by Land Use Type - Mitigated

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

Land Use	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	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—

4.10.6. Avoided and Sequestered Emissions by Species - Mitigated

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

Species	ROG	NOx	CO	SO2	PM10E	PM10D	PM10T	PM2.5E	PM2.5D	PM2.5T	BCO2	NBCO2	CO2T	CH4	N2O	R	CO2e
Daily, Summer (Max)	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Avoided	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Subtotal	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Sequestered	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Subtotal	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Removed	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Subtotal	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Daily, Winter (Max)	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Avoided	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Subtotal	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Sequestered	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Subtotal	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Removed	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Subtotal	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Annual	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Avoided	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Subtotal	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Sequestered	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Subtotal	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—

Removed	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Subtotal	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—

5. Activity Data

5.1. Construction Schedule

Phase Name	Phase Type	Start Date	End Date	Days Per Week	Work Days per Phase	Phase Description
Site Restoration	Linear, Grubbing & Land Clearing	12/1/2025	1/30/2026	5.00	45.0	—
Infrastructure Installation	Linear, Drainage, Utilities, & Sub-Grade	10/1/2024	10/31/2025	5.00	284	—
Paving	Linear, Paving	10/1/2025	12/31/2025	5.00	66.0	—

5.2. Off-Road Equipment

5.2.1. Unmitigated

Phase Name	Equipment Type	Fuel Type	Engine Tier	Number per Day	Hours Per Day	Horsepower	Load Factor
Site Restoration	Pressure Washers	Diesel	Average	1.00	8.00	14.0	0.30
Site Restoration	Generator Sets	Diesel	Average	1.00	8.00	14.0	0.74
Site Restoration	Sweepers/Scrubbers	Diesel	Average	1.00	8.00	36.0	0.46
Infrastructure Installation	Tractors/Loaders/Backhoes	Diesel	Average	3.00	8.00	84.0	0.37
Infrastructure Installation	Plate Compactors	Diesel	Average	1.00	8.00	8.00	0.43
Infrastructure Installation	Air Compressors	Diesel	Average	1.00	8.00	37.0	0.48
Infrastructure Installation	Cranes	Diesel	Average	1.00	8.00	367	0.29

Infrastructure Installation	Rubber Tired Dozers	Diesel	Average	1.00	8.00	367	0.40
Infrastructure Installation	Dumpers/Tenders	Diesel	Average	1.00	8.00	16.0	0.38
Infrastructure Installation	Forklifts	Diesel	Average	1.00	8.00	82.0	0.20
Infrastructure Installation	Generator Sets	Diesel	Average	2.00	8.00	14.0	0.74
Infrastructure Installation	Rough Terrain Forklifts	Diesel	Average	2.00	8.00	96.0	0.40
Infrastructure Installation	Signal Boards	Diesel	Average	1.00	8.00	6.00	0.82
Infrastructure Installation	Sweepers/Scrubbers	Diesel	Average	1.00	8.00	36.0	0.46
Infrastructure Installation	Trenchers	Diesel	Average	2.00	8.00	40.0	0.50
Infrastructure Installation	Welders	Diesel	Average	2.00	8.00	46.0	0.45
Paving	Cement and Mortar Mixers	Diesel	Average	1.00	8.00	10.0	0.56
Paving	Paving Equipment	Diesel	Average	1.00	8.00	89.0	0.36
Paving	Rollers	Diesel	Average	1.00	8.00	36.0	0.38
Paving	Signal Boards	Diesel	Average	1.00	8.00	6.00	0.82
Paving	Tractors/Loaders/Backhoes	Diesel	Average	1.00	8.00	84.0	0.37
Paving	Pavers	Diesel	Average	1.00	8.00	81.0	0.42
Paving	Surfacing Equipment	Diesel	Average	1.00	8.00	399	0.30

5.2.2. Mitigated

Phase Name	Equipment Type	Fuel Type	Engine Tier	Number per Day	Hours Per Day	Horsepower	Load Factor
Site Restoration	Pressure Washers	Diesel	Average	1.00	8.00	14.0	0.30

Site Restoration	Generator Sets	Diesel	Average	1.00	8.00	14.0	0.74
Site Restoration	Sweepers/Scrubbers	Diesel	Average	1.00	8.00	36.0	0.46
Infrastructure Installation	Tractors/Loaders/Backhoes	Diesel	Average	3.00	8.00	84.0	0.37
Infrastructure Installation	Plate Compactors	Diesel	Average	1.00	8.00	8.00	0.43
Infrastructure Installation	Air Compressors	Diesel	Average	1.00	8.00	37.0	0.48
Infrastructure Installation	Cranes	Diesel	Average	1.00	8.00	367	0.29
Infrastructure Installation	Rubber Tired Dozers	Diesel	Average	1.00	8.00	367	0.40
Infrastructure Installation	Dumpers/Tenders	Diesel	Average	1.00	8.00	16.0	0.38
Infrastructure Installation	Forklifts	Diesel	Average	1.00	8.00	82.0	0.20
Infrastructure Installation	Generator Sets	Diesel	Average	2.00	8.00	14.0	0.74
Infrastructure Installation	Rough Terrain Forklifts	Diesel	Average	2.00	8.00	96.0	0.40
Infrastructure Installation	Signal Boards	Diesel	Average	1.00	8.00	6.00	0.82
Infrastructure Installation	Sweepers/Scrubbers	Diesel	Average	1.00	8.00	36.0	0.46
Infrastructure Installation	Trenchers	Diesel	Average	2.00	8.00	40.0	0.50
Infrastructure Installation	Welders	Diesel	Average	2.00	8.00	46.0	0.45
Paving	Cement and Mortar Mixers	Diesel	Average	1.00	8.00	10.0	0.56
Paving	Paving Equipment	Diesel	Average	1.00	8.00	89.0	0.36
Paving	Rollers	Diesel	Average	1.00	8.00	36.0	0.38
Paving	Signal Boards	Diesel	Average	1.00	8.00	6.00	0.82

Paving	Tractors/Loaders/Backh	Diesel	Average	1.00	8.00	84.0	0.37
Paving	Pavers	Diesel	Average	1.00	8.00	81.0	0.42
Paving	Surfacing Equipment	Diesel	Average	1.00	8.00	399	0.30

5.3. Construction Vehicles

5.3.1. Unmitigated

Phase Name	Trip Type	One-Way Trips per Day	Miles per Trip	Vehicle Mix
Infrastructure Installation	—	—	—	—
Infrastructure Installation	Worker	47.5	18.5	LDA,LDT1,LDT2
Infrastructure Installation	Vendor	0.00	10.2	HHDT,MHDT
Infrastructure Installation	Hauling	0.31	9.30	HHDT
Infrastructure Installation	Onsite truck	—	—	HHDT
Site Restoration	—	—	—	—
Site Restoration	Worker	7.50	18.5	LDA,LDT1,LDT2
Site Restoration	Vendor	0.00	10.2	HHDT,MHDT
Site Restoration	Hauling	0.00	20.0	HHDT
Site Restoration	Onsite truck	—	—	HHDT
Paving	—	—	—	—
Paving	Worker	17.5	18.5	LDA,LDT1,LDT2
Paving	Vendor	0.00	10.2	HHDT,MHDT
Paving	Hauling	0.00	20.0	HHDT
Paving	Onsite truck	—	—	HHDT

5.3.2. Mitigated

Phase Name	Trip Type	One-Way Trips per Day	Miles per Trip	Vehicle Mix
Infrastructure Installation	—	—	—	—

Infrastructure Installation	Worker	47.5	18.5	LDA,LDT1,LDT2
Infrastructure Installation	Vendor	0.00	10.2	HHDT,MHDT
Infrastructure Installation	Hauling	0.31	9.30	HHDT
Infrastructure Installation	Onsite truck	—	—	HHDT
Site Restoration	—	—	—	—
Site Restoration	Worker	7.50	18.5	LDA,LDT1,LDT2
Site Restoration	Vendor	0.00	10.2	HHDT,MHDT
Site Restoration	Hauling	0.00	20.0	HHDT
Site Restoration	Onsite truck	—	—	HHDT
Paving	—	—	—	—
Paving	Worker	17.5	18.5	LDA,LDT1,LDT2
Paving	Vendor	0.00	10.2	HHDT,MHDT
Paving	Hauling	0.00	20.0	HHDT
Paving	Onsite truck	—	—	HHDT

5.4. Vehicles

5.4.1. Construction Vehicle Control Strategies

Non-applicable. No control strategies activated by user.

5.5. Architectural Coatings

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

5.6. Dust Mitigation

5.6.1. Construction Earthmoving Activities

Phase Name	Material Imported (Cubic Yards)	Material Exported (Cubic Yards)	Acres Graded (acres)	Material Demolished (sq. ft.)	Acres Paved (acres)

Site Restoration	0.00	0.00	0.24	0.00	—
Infrastructure Installation	400	300	0.24	0.00	—

5.6.2. Construction Earthmoving Control Strategies

Non-applicable. No control strategies activated by user.

5.7. Construction Paving

Land Use	Area Paved (acres)	% Asphalt
Road Construction	0.24	100%

5.8. Construction Electricity Consumption and Emissions Factors

kWh per Year and Emission Factor (lb/MWh)

Year	kWh per Year	CO2	CH4	N2O
2024	0.00	532	0.03	< 0.005
2025	0.00	532	0.03	< 0.005
2026	0.00	532	0.03	< 0.005

5.18. Vegetation

5.18.1. Land Use Change

5.18.1.1. Unmitigated

Vegetation Land Use Type	Vegetation Soil Type	Initial Acres	Final Acres

5.18.1.2. Mitigated

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

5.18.1.2. Mitigated

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)

5.18.2.2. Mitigated

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	20.3	annual days of extreme heat
Extreme Precipitation	6.60	annual days with precipitation above 20 mm
Sea Level Rise	0.00	meters of inundation depth
Wildfire	10.5	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 (2040–2059 average under RCP 8.5), and consider different increments of sea level rise coupled with extreme storm events. Users may select from four model simulations to view the range in potential inundation depth 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 50 meters (m) by 50 m, or about 164 feet (ft) by 164 ft.
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	2	0	0	N/A
Extreme Precipitation	N/A	N/A	N/A	N/A
Sea Level Rise	1	0	0	N/A
Wildfire	1	0	0	N/A
Flooding	N/A	N/A	N/A	N/A
Drought	N/A	N/A	N/A	N/A
Snowpack Reduction	N/A	N/A	N/A	N/A
Air Quality Degradation	0	0	0	N/A

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

6.3. Adjusted Climate Risk Scores

Climate Hazard	Exposure Score	Sensitivity Score	Adaptive Capacity Score	Vulnerability Score
Temperature and Extreme Heat	2	1	1	3
Extreme Precipitation	N/A	N/A	N/A	N/A

Sea Level Rise	1	1	1	2
Wildfire	1	1	1	2
Flooding	N/A	N/A	N/A	N/A
Drought	N/A	N/A	N/A	N/A
Snowpack Reduction	N/A	N/A	N/A	N/A
Air Quality Degradation	1	1	1	2

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

6.4. Climate Risk Reduction Measures

7. Health and Equity Details

7.1. CalEnviroScreen 4.0 Scores

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

Indicator	Result for Project Census Tract
Exposure Indicators	—
AQ-Ozone	95.3
AQ-PM	49.6
AQ-DPM	47.1
Drinking Water	68.0
Lead Risk Housing	30.1
Pesticides	0.00
Toxic Releases	41.5
Traffic	49.9
Effect Indicators	—

CleanUp Sites	4.12
Groundwater	3.30
Haz Waste Facilities/Generators	0.00
Impaired Water Bodies	12.5
Solid Waste	80.0
Sensitive Population	—
Asthma	52.5
Cardio-vascular	52.3
Low Birth Weights	68.1
Socioeconomic Factor Indicators	—
Education	43.4
Housing	20.6
Linguistic	46.0
Poverty	21.7
Unemployment	37.7

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	74.36160657
Employed	85.83344027
Median HI	57.98793789
Education	—
Bachelor's or higher	41.76825356
High school enrollment	4.658026434
Preschool enrollment	70.3580136

Transportation	—
Auto Access	24.53483896
Active commuting	47.60682664
Social	—
2-parent households	82.42012062
Voting	56.28127807
Neighborhood	—
Alcohol availability	97.0101373
Park access	12.51122803
Retail density	48.64622097
Supermarket access	8.571795201
Tree canopy	73.98947774
Housing	—
Homeownership	69.39561145
Housing habitability	65.96945977
Low-inc homeowner severe housing cost burden	63.50571025
Low-inc renter severe housing cost burden	55.46002823
Uncrowded housing	42.30719877
Health Outcomes	—
Insured adults	58.50121904
Arthritis	64.8
Asthma ER Admissions	43.7
High Blood Pressure	81.4
Cancer (excluding skin)	36.4
Asthma	69.3
Coronary Heart Disease	74.7
Chronic Obstructive Pulmonary Disease	68.2

Diagnosed Diabetes	78.0
Life Expectancy at Birth	46.9
Cognitively Disabled	74.6
Physically Disabled	45.1
Heart Attack ER Admissions	14.4
Mental Health Not Good	62.3
Chronic Kidney Disease	79.8
Obesity	55.2
Pedestrian Injuries	19.6
Physical Health Not Good	68.2
Stroke	80.6
Health Risk Behaviors	—
Binge Drinking	9.5
Current Smoker	62.2
No Leisure Time for Physical Activity	78.5
Climate Change Exposures	—
Wildfire Risk	64.6
SLR Inundation Area	0.0
Children	67.0
Elderly	53.8
English Speaking	57.0
Foreign-born	50.7
Outdoor Workers	58.5
Climate Change Adaptive Capacity	—
Impervious Surface Cover	81.5
Traffic Density	27.5
Traffic Access	23.0

Other Indices	—
Hardship	44.4
Other Decision Support	—
2016 Voting	48.4

7.3. Overall Health & Equity Scores

Metric	Result for Project Census Tract
CalEnviroScreen 4.0 Score for Project Location (a)	43.0
Healthy Places Index Score for Project Location (b)	54.0
Project Located in a Designated Disadvantaged Community (Senate Bill 535)	No
Project Located in a Low-Income Community (Assembly Bill 1550)	No
Project Located in a Community Air Protection Program Community (Assembly Bill 617)	No

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

7.4. Health & Equity Measures

No Health & Equity Measures selected.

7.5. Evaluation Scorecard

Health & Equity Evaluation Scorecard not completed.

7.6. Health & Equity Custom Measures

No Health & Equity Custom Measures created.

8. User Changes to Default Data

Screen	Justification
Construction: Construction Phases	Based on applicant provided data
Construction: Off-Road Equipment	Based on applicant provided information
Construction: Trips and VMT	Based on applicant provided information. Material would be hauled to Sunshine Canyon Landfill

Appendix B

Biological Resources Assessment and Coastal California Gnatcatcher Focused Survey Report

Honby Tanks Pipeline Project

Biological Resources Assessment

prepared for

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

prepared by

Rincon Consultants, Inc.
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June 2023

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1 Introduction

The Honby Pipeline is a critical piece of Santa Clarita Valley Water Agency (SCV Water) infrastructure, connecting the Honby Tanks on the north side of the Santa Clara River to the pump stations and wells that supply the tanks on the south side of the river. The Honby Pipeline conveys water to and from the Honby Tanks and the Honby Booster Station. Well SC-8, Well SC-9, Santa Clarita Wells, Honby Well, and the North Oak Wells all feed into the Honby tanks via the Honby Pipeline. The Honby Pipeline has been identified as a hydraulic bottleneck and requires replacement to ensure water supply reliability and longevity for the SCV Water system.

In October 2022, Rincon Consultants, Inc. (Rincon) Rincon prepared a Draft Biological Resources Assessment (BRA) describing existing biological conditions and considerations as part of SCV Water's environmental due diligence for the Honby Tanks Pipeline Project (herein referred to as "proposed project" or "project"). At the time, three alignment alternatives were under consideration:

- Alternative 1: Alternative 1 proceeds south from the Honby Tanks along the existing Honby Pipeline alignment, west along the northern perimeter of Rio Vista Elementary School, and south along Honby Avenue to the intersection of Santa Clara Street.
- Alternative 2: Alternative 2 proceeds south from the Honby Tanks along the topographic ridge to the east of the existing Honby Pipeline alignment, west along the northern perimeter of Rio Vista Elementary School, and south along Honby Avenue to the intersection of Santa Clara Street.
- Alternative 3: Alternative 3 proceeds south from the Honby Tanks parallel to the existing sewer line alignment and easement to Honby Avenue and south along Honby Avenue to the intersection of Santa Clara Street and Honby Avenue.

SCV Water selected Alternative 1 in May 2023 and this document updates the previous Draft BRA to include an impact analysis and necessary avoidance, minimization, and mitigation measures.

This Final BRA to provide SCV Water with relevant information about the biological conditions of the project site to inform the California Environmental Quality Act (CEQA) and regulatory permitting processes for the project, including an evaluation of special status species, sensitive plant communities, and jurisdictional waters potentially impacted by project construction.

1.1 Project Location

The project site is located on Assessor's Parcel Number (APN) 2801-001-900, 2805-002-008, 2805-002-902, and 2805-013-900 and within public rights-of-way within Santa Clarita, California (Figure 1). The Survey Area includes the previously proposed pipeline alignments plus a 100-foot buffer where appropriate (Figure 2 and Figure 3).

The Survey Area is located along the Santa Clara River, approximately 0.6 mile northeast of the Golden Valley Road and Soledad Canyon Road intersection, in the city of Santa Clarita. The Survey Area lies in the Santa Clarita Valley between the Santa Susana and San Gabriel mountains at an approximate elevation of 1295 to 1520 feet (395 to 463 meters) above mean sea level.

Figure 1 Regional Location Map

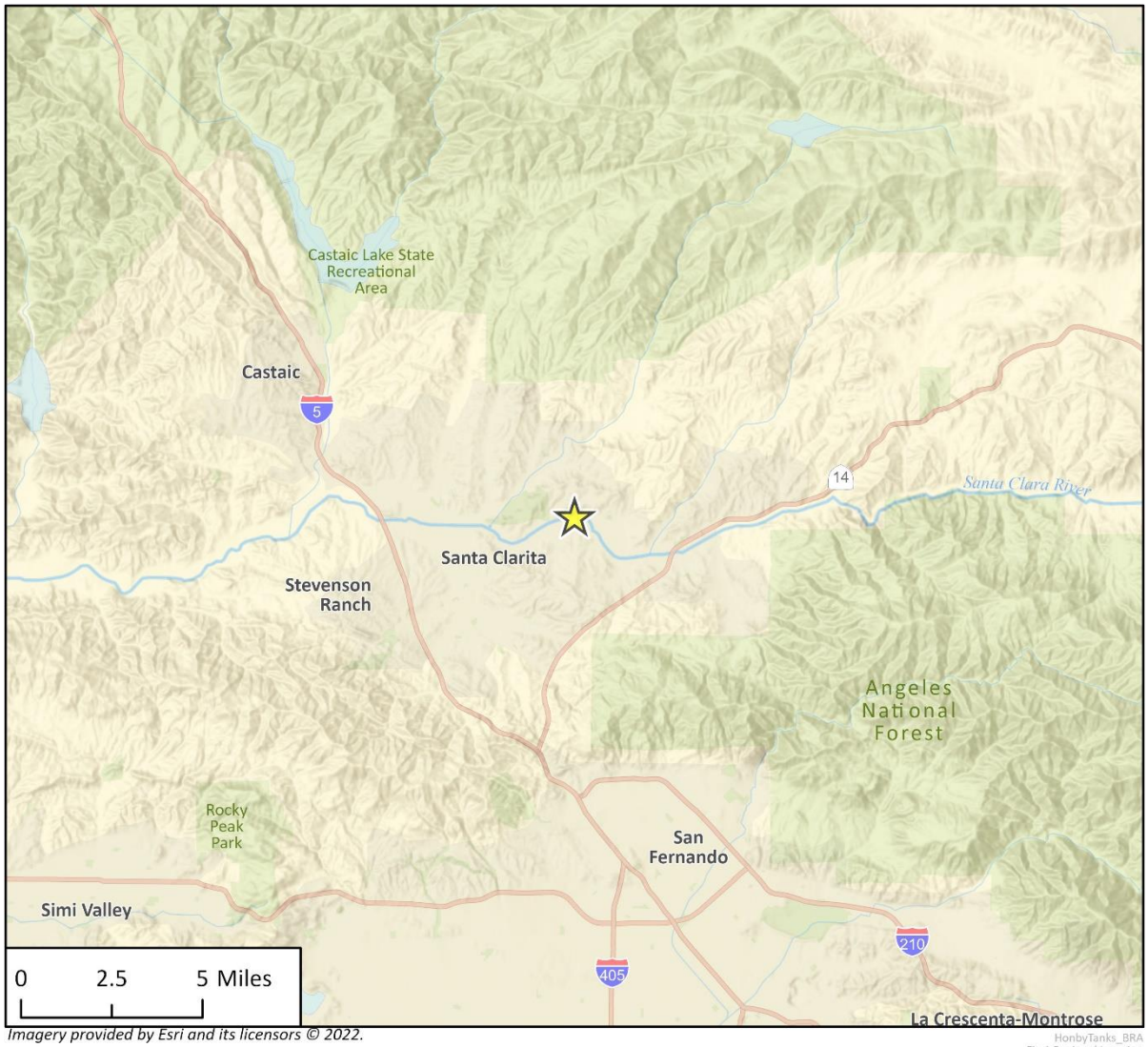

Figure 2 Survey Area

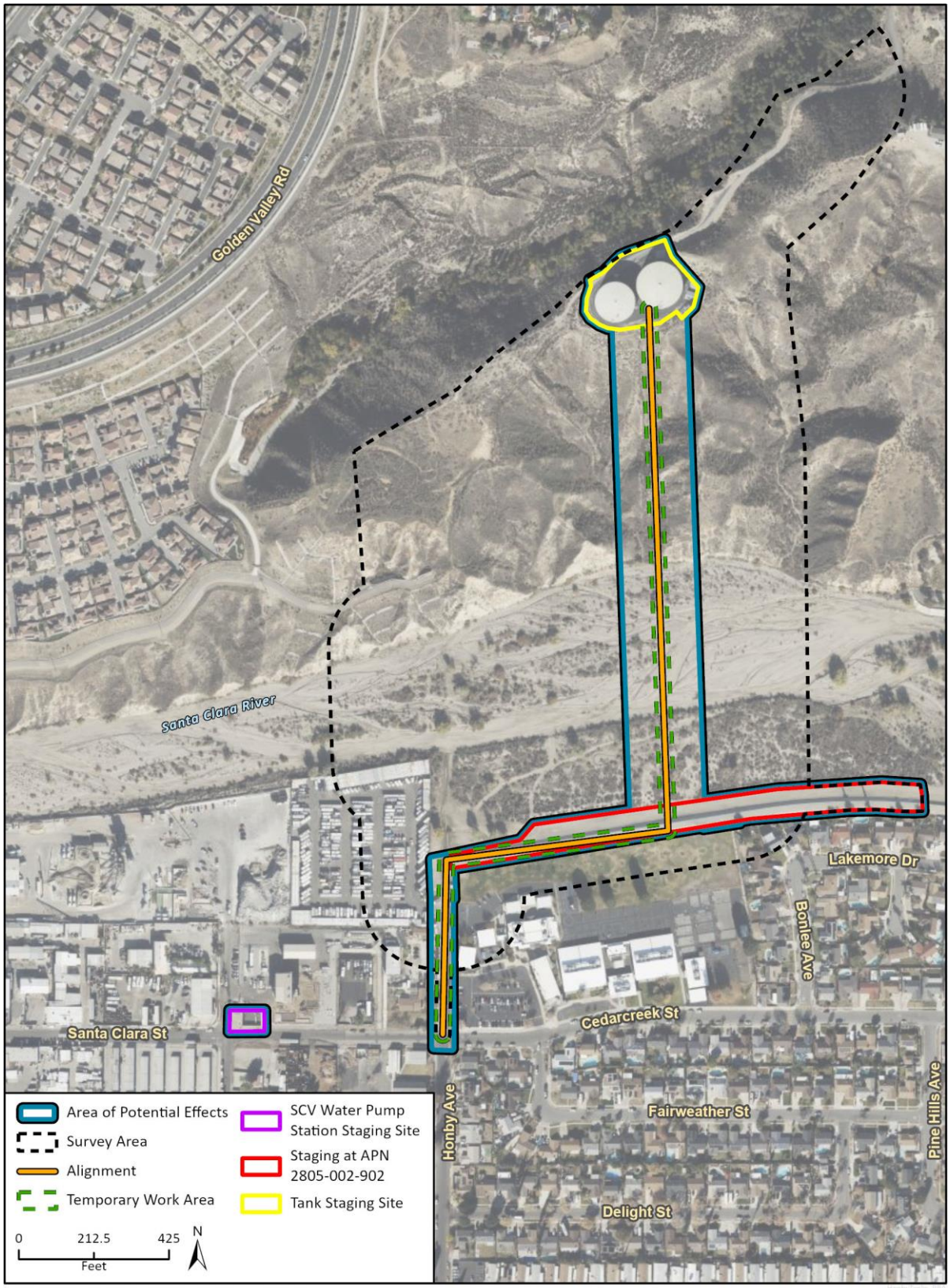

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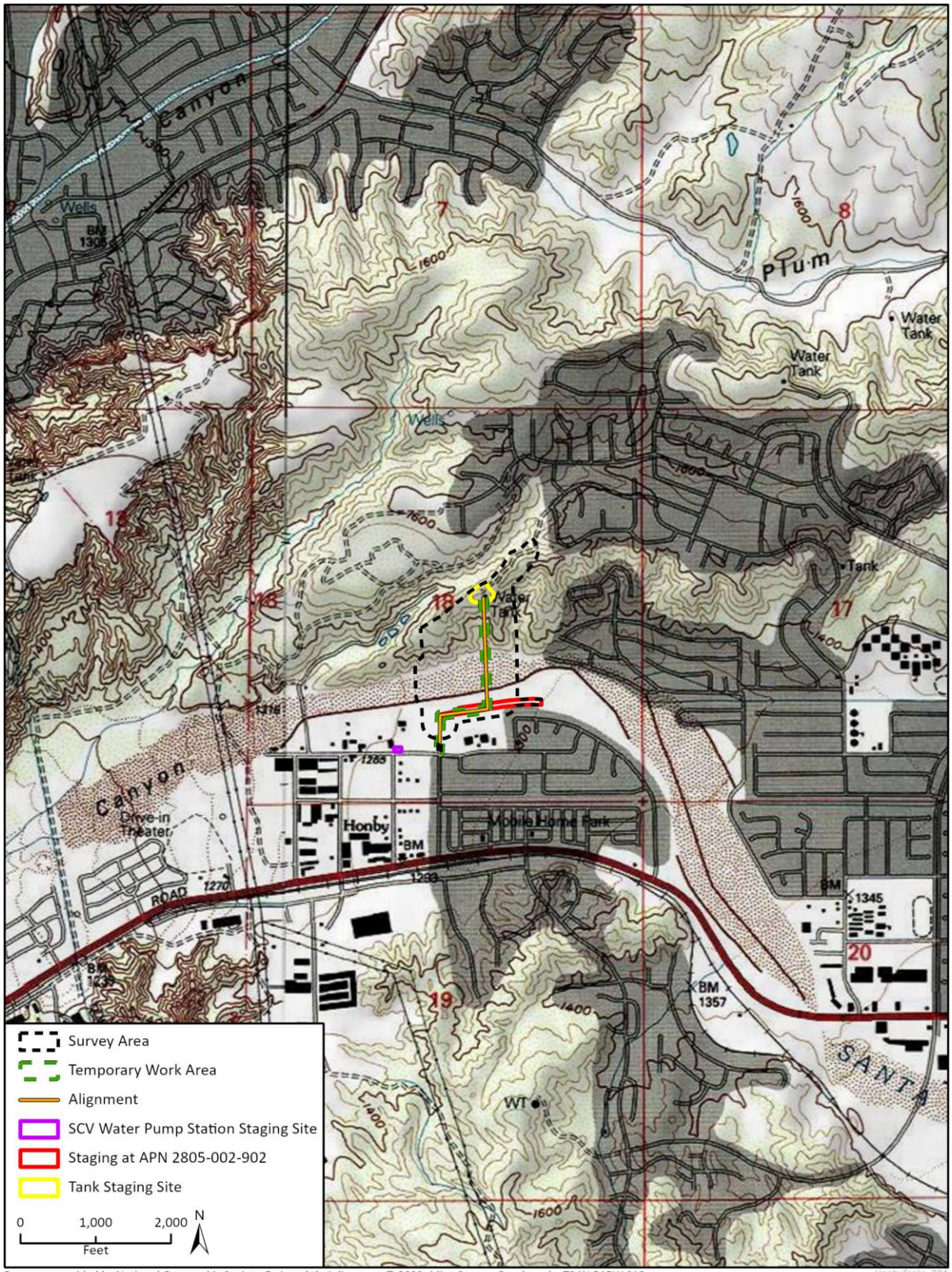
Figure 3 Topographic Map



Basemap provided by National Geographic Society, Esri, and their licensors © 2023. Mint Canyon Quadrangle. T04N R15W S18.
The topographic representation depicted in this map may not portray all of the features currently found in the vicinity today and/or features depicted in this map may have changed since the original topographic map was assembled.

HonbyTanks_BRA
Fig 3 Topographic Map

The proposed project encompasses portions of Section 18 of Township 4 north, Range 15 west (San Bernardino Meridian) (Earth Point 2022) on the *Mint Canyon, California*, United States Geological Survey (USGS) 7.5-minute topographic quadrangle (USGS 2018).

1.2 Project Description

The project involves construction and operation of a new pipeline to convey water to and from the Honby Tanks and the Honby Booster Station. The new pipeline would be constructed of either steel or ductile iron and would be upsized from 16 inches in diameter to between 24 to 30 inches in diameter. The pipeline would follow the alignment of the existing Honby Pipeline downhill from the Honby Tank site to the Santa Clara River and would be approximately 2,608 feet in length. The pipeline would cross the Santa Clara River then head west, parallel to the river to the intersection with Honby Avenue. Once the pipeline intersects with Honby Avenue, it would turn south, and connect with the existing pipeline at the intersection of Honby Avenue and Santa Clara Street (Figure 2).

The temporary work area would require approximately 40 total feet of width. A minimum 20-foot permanent easement and additional 20-foot temporary easement would be required for the project. The proposed pipeline would be buried underground for the entirety of the alignment and would not have any above ground components upon completion. The project would require the removal of the fencing bordering the Honby Tanks due to the limited work area at the top of the slope. Upon completion, the existing Honby pipeline would be abandoned in place.

The pipeline would be installed via open cut installation across the river and on the hillside. This is expected to require dewatering, which may include treatment of groundwater prior to discharge into a storm drain or into the Santa Clara River. Tight sheet shoring to protect the trench would be required due to the potential of groundwater and potential sloughing of alluvial soils.

Construction of the proposed project would occur between October 2024 and January 2026 Construction activities would typically occur between 7:00 A.M. and 4:00 PM Monday through Friday. No nighttime construction is proposed. Construction personnel vehicles would be parked along Furnivall Avenue as well as on the SCV Water-owned pump station located on the northeast corner of Santa Clara Street and Furnivall Avenue, as needed. Staging is anticipated at several locations including the SCV Water-owned tank site at the top of the hill, the SCV Water easement behind the school, and the SCV Water-owned pump station located on the northeast corner of Santa Clara Street and Furnivall Avenue.

Construction of the project would have a ground disturbance of approximately 2.4 acres. Given the project would disturb over one acre, the project would be subject to the requirements of the National Pollutant Discharge Elimination System (NPDES) Construction General Permit. The Construction General Permit requires the development of a Storm Water Pollution Prevention Plan (SWPPP). The majority of the excavation would be approximately 10 feet deep.

Construction within the Santa Clara River bed would occur over the course of one month. The segment of pipeline underlying the Santa Clara River would be installed at a depth below the known river scour level, which is estimated to be 20 feet. The pipe would be installed with a minimum of 24.5 feet of cover. Construction methods include the use of light sheet shoring to allow groundwater to be pumped from the trench. Approximately 300 cubic yards of soil would be exported via haul trucks. Approximately 400 cubic yards of soil would be imported from off-site sources for pipe bedding. Twenty-five (25) haul truck trips would occur for soil import.

2 Methodology

The assessment of potential biological and jurisdictional resources included a literature review of existing studies, maps, and other publications followed by field surveys to identify, describe, and map all potential biological and jurisdictional resources within the Survey Area.

2.1 Definition of Sensitive Biological Resources

For the purposes of this report, special status species include:

- Species listed or proposed for listing as threatened or endangered under the federal Endangered Species Act (ESA); 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, threatened, endangered, or rare by CDFW under the California Endangered Species Act (CESA) or Native Plant Protection Act;
- Species ranked globally (G) and subnationally (S) 1 through 3 based on NatureServe's (2012) methodologies:
  - G1 or S1 - Critically Imperiled Globally or State-wide
  - G2 or S2 - Imperiled Globally or State-wide
  - G3 or S3 - Vulnerable to extirpation or extinction Globally or State-wide
- Plants occurring on lists 1 through 4 of the California Native Plant Society (CNPS) California Rare Plant Rank system (CRPR);
- Species designated as Fully Protected, Species of Special Concern (SSC), or Watch List (WL) by the CFGC or CDFW; and
- Species designated as sensitive and/or otherwise protected through ordinance or local policy.

Sensitive vegetation communities were identified in accordance with the CDFW *California Natural Community List,* which ranks vegetation communities occurring throughout California, and is based in part on global (G) and state (S) rarity ranks (CDFW 2022b). Vegetation communities ranked S1 to S3 are generally considered sensitive, though some communities with other ranks may also be considered sensitive. Communities dominated by non-native species are considered semi-natural alliances and have no global and state rankings (ranking denoted as GNASNA).

2.2 Literature Review

The literature review and database query evaluated the potential for the Survey Area to support special status species, aquatic resources, and sensitive natural vegetation communities. This review included an evaluation of existing aerial imagery and published datasets, followed by a field survey and delineation of potential jurisdictional waters. Prior to visiting the Survey Area, recent aerial photography of the site (Google Earth Pro 2023) was reviewed. The CNPS *Online Inventory of Rare and Endangered Plants* (CNPS 2023) was reviewed for records of CRPR list 1-4 plant species within the *Mint Canyon*, *California* USGS quadrangle and the eight surrounding quadrangles. Additionally, the California Natural Diversity Database (CNDDB) (CDFW 2023a) was searched for records of special status species within a five-mile radius of the Survey Area. A United States Fish and Wildlife

Service (USFWS) query of the Information, Planning, and Conservation System (IPaC) was conducted for federally listed species that may be affected by the project (USFWS 2023a). The USFWS Critical Habitat Portal (USFWS 2022b) was also reviewed for information on critical habitat designations in the Survey Area.

To aid in characterizing the nature and extent of jurisdictional waters potentially occurring within the Survey Area, resources including the most recent *Mint Canyon, California* USGS 7.5-minute topographic quadrangle map (USGS 2018), and the U.S. Department of Agriculture (USDA), Natural Resources Conservation Service (NRCS) Web Soil Survey (USDA NRCS 2022b) were reviewed. Additionally, the *National Hydrography Dataset* (NHD) (USGS 2023) and the *National Wetlands Inventory* (NWI) (USFWS 2023c) were reviewed to determine if any potential wetlands and/or other waters had been previously mapped on or in the Survey Area. The *State Hydric Soils List* (USDA NRCS 2023a) was reviewed to determine if any soil map unit types mapped in the Survey Area were classified as hydric.

2.3 Field Surveys

An initial field survey was conducted by Rincon Senior Biologist Robin Murray and Rincon Biologist Carolyn Welch on April 30, 2021. Rincon biologists Carolyn Welch and Kyle Gern conducted a supplemental survey of the Survey Area on August 10, 2022 between the hours of 0700 and 1400. The weather was sunny with temperatures ranging from approximately 71 to 96 degrees Fahrenheit (°F) and winds approximately one to five miles per hour. The survey consisted of the biologists walking the extent of the Survey Area where safe and accessible.

Extents of vegetation communities, land cover types, potentially jurisdictional resources, and sensitive biological resources were mapped using a Geode Geographic Positioning System (GPS) with sub-meter accuracy and plotted on aerial imagery. Vegetation community classification was conducted using the systems provided in *A Manual of California Vegetation, Second Edition* (MCV2) (Sawyer et al. 2009), in conjunction with the CDFW *California Natural Community List* (CDFW 2022b). Updates to the MCV2 provided in the online database (CNPS 2022) were taken into account. Land covers were characterized in areas which are unvegetated or dominated by ornamental vegetation (e.g., disturbed/developed). The data collected in the field were subsequently transferred to Rincon's geographic information system (GIS) to produce all the figures. The purpose of the field survey was to document the existing biological conditions, including all plant and wildlife species, vegetation communities, land cover types, potentially suitable habitat for regionally occurring wildlife, and aquatic resources. A summary of the existing conditions of the Survey Area, as determined by the results of the desktop/database review and field survey, is provided below.

Wildlife species were identified by direct observation, vocalization, or by sign (e.g., tracks, scat, burrows, etc.). The detection of plant and wildlife species was limited by seasonal and temporal factors. The survey was conducted during August; therefore, potentially occurring spring migrants and/or breeders would not be present during the time of the survey, and fall migrants, if present, would be transient without the likelihood of nesting. Likewise, plants more easily identified during their blooming periods in the spring and fall are difficult to detect without blooming characteristics. As the survey was performed during the day, identification of nocturnal wildlife was limited to signs if present on site. *The Jepson Manual: Vascular Plants of California, Second Edition* and online Jepson eFlora were used for plant identification and nomenclature (Baldwin et al. 2012; Jepson Flora Project 2022).

2.3.1 Jurisdictional Delineation Surveys

A jurisdictional delineation was conducted by Rincon Senior Biologist Robin Murray and Rincon Biologist Carolyn Welch on April 30, 2021. This delineation encompassed the southwestern corner of the Survey Area. A second jurisdictional delineation survey was conducted by Carolyn Welch and Kyle Gern during the August 10, 2022 field survey. This second survey encompassed the entirety of the Survey Area.

The biologists inspected drainage features exhibiting stream characteristics such as a defined bed, banks, or channel, ordinary high water mark (OHWM), or potential wetland indicators within the Survey Area. Current federal and state policies, methods, and guidelines were used to identify and delineate potential jurisdictional areas. The OHWM was evaluated using *A Field Guide to the Identification of the Ordinary High Water Mark (OHWM) in the Arid West Region of the Western United States* (USACE 2008b). Potential wetland features were evaluated for presence of wetland indicators (hydrophytic vegetation, hydric soils, and wetland hydrology) according to the routine delineation procedure within the *Wetlands Delineation Manual* (USACE 1987) and *Regional Supplement to the Corps of Engineers Wetland Delineation Manual: Arid West Region* (USACE 2008a). For a more detailed description of the applicable jurisdictional regulations, see Appendix A.

Data points representing the top of bank, OHWM, and other observation points were mapped using a GPS unit with sub-meter accuracy and were plotted on aerial photographs. The data were subsequently transferred to Rincon's GIS database and used in combination with recent, high resolution aerial photographs and topographic datasets to map the extent of potentially jurisdictional resources in the Survey Area.

Non-Wetland Waters of the U.S.

The lateral limits of USACE jurisdiction (i.e., width) of non-wetland waters were determined by the presence of physical characteristics indicative of the OHWM. The OHWM was identified in accordance with the applicable Code of Federal Regulations (CFR) sections (33 CFR 328.3 and 33 CFR 328.4) and Regulatory Guidance Letter 05-05 (USACE 2005), and in reference to various relevant technical publications, including, but not limited to: Review of *Ordinary High Water Mark Indicators for Delineating Arid Streams in the Southwestern United States* (USACE 2004), *Distribution of OHWM Indicators and Their Reliability in Identifying the Limits of "Waters of the United States" in Arid Southwestern Channels* (USACE 2006), and *A Field Guide to Identification of the OHWM in the Arid West Region of the United States* (USACE 2008b). The regulations were also reviewed in the determination of non-jurisdictional features including ephemeral drainages, artificially irrigated areas, and roadway ditches excavated in uplands.

Rincon biologists evaluated sources of water, potential connections, distances to traditional navigable waters (TNW) and streams that are perennial or intermittent in nature, and other factors that affect whether waters qualify as "waters of the United States" under the current USACE guidance. A more detailed regulatory definition of USACE jurisdiction is provided in Appendix A.

Wetland Waters of the U.S.

Potential wetland features were evaluated for presence of wetland indicators including hydrophytic vegetation, hydric soils, and wetland hydrology, according to routine delineation procedures in the *Wetlands Delineation Manual* (Environmental Laboratory 1987) and *Regional Supplement to the Corps of Engineers Wetland Delineation Manual: Arid West Region* (USACE 2008a). The USACE Arid West 2020 Regional Wetland Plant List was used to determine the wetland status of the examined

vegetation by the following indicator status categories: Upland (UPL), Facultative Upland (FACU), Facultative (FAC), Facultative Wetland (FACW), and Obligate Wetland (OBL) (Lichvar et al. 2020). Representative sample points were sited in areas most likely to exhibit wetland characteristics (i.e., those with a prevalence of hydrophytic vegetation and suitable landform) and examined in the field for potential wetland indicators. Sample points were not located in areas with an obvious prevalence of upland vegetation or in areas where the landform would not support wetland features, such as concrete channels and slopes with upland vegetation. Sample points were evaluated from a distance and soil pits were not assessed in cases where the channel bottom was not safe to access.

Waters of the State

"Waters of the State," as defined under the Porter-Cologne Act, are any surface water or groundwater, including saline waters, within the boundaries of the state. In those areas where an OHWM was present, the OHWM was used to represent the limits of non-wetland waters of the State. Swales that did not contain an OHWM and contained little to no evidence of water flow were determined to be non-jurisdictional.

Potential State wetland features were evaluated pursuant to the SWRCB's *State Wetland Definition and Procedures for Discharges of Dredged or Fill Material to Waters of the State* (SWRCB 2019). The SWRCB's definition relies on the same three parameters as the USACE definition (hydrophytic vegetation, wetland hydrology, and hydric soils) but allows for naturally unvegetated areas meeting the other two parameters to be considered wetlands. A more detailed regulatory definition of RWQCB jurisdiction is provided in Appendix A.

CDFW Streambeds

The extent of potential streambeds, streambanks, lakes, and riparian habitat subject to CDFW jurisdiction under Sections 1600 et seq. of the CFGC was delineated by reviewing the topography and morphology of potentially jurisdictional features to determine the outer limit of riparian vegetation, where present, or the tops of banks for stream features. A more detailed regulatory definition of CDFW jurisdiction is provided in Appendix A.

3 Existing Conditions

3.1 Topography, Climate and Land Use

The Survey Area is characterized by a Mediterranean climate with warm and dry days most of the year with mild-moist winters. The average annual rainfall is approximately 15 inches (World Weather & Climate 2022). The Survey Area is divided by the Santa Clara River, which flows east to west within the southern portion of the Survey Area. Steep hillsides are present north of the Santa Clara River. The Survey Area and surrounding area consists of undeveloped land, commercial/industrial buildings, and residential housing.

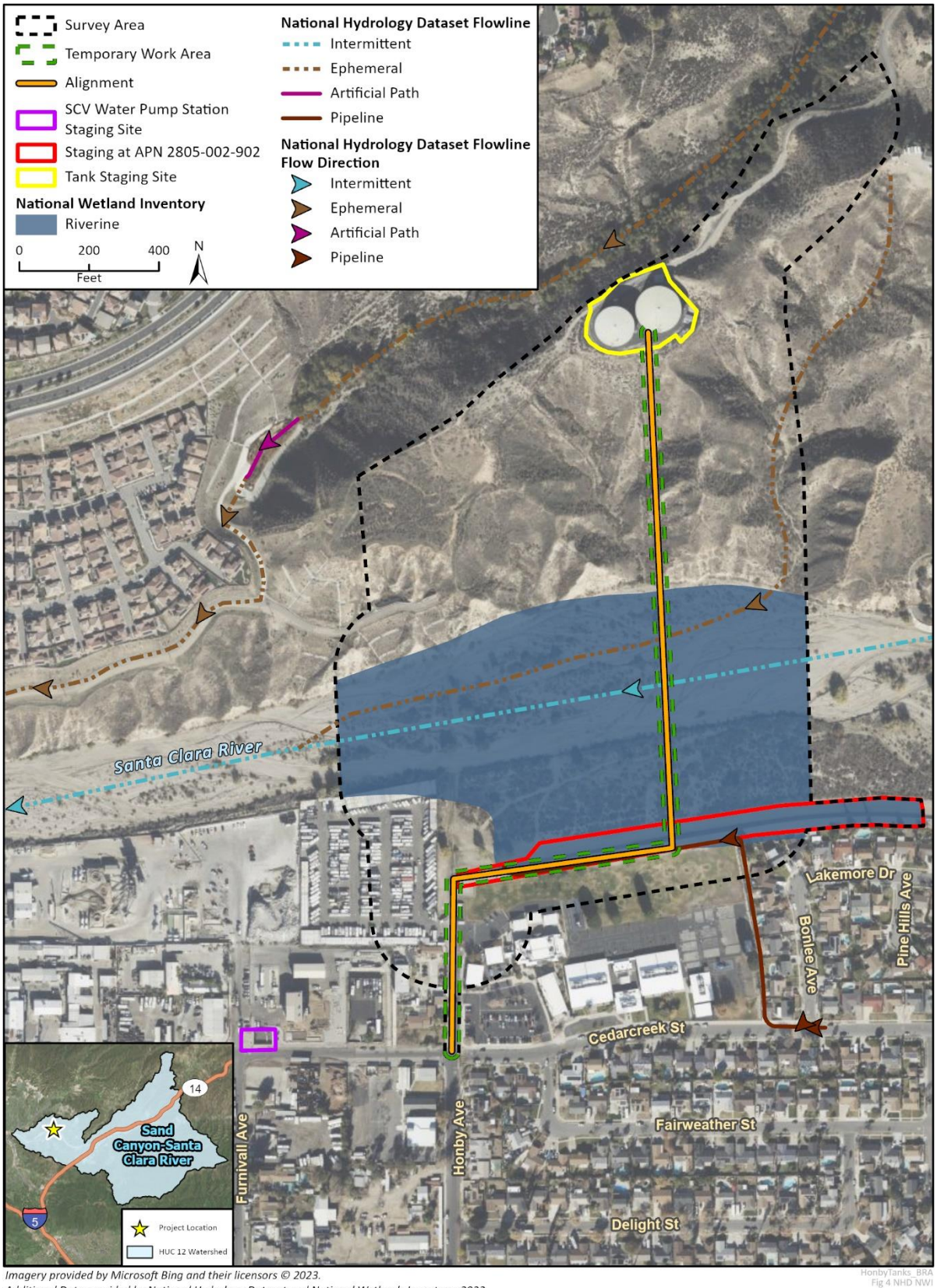
3.2 Hydrology

The Survey Area is located within the Headwaters Santa Clara River Hydrologic Unit Code (HUC) watershed (HUC-10 No. 1807010201) and the Sand Canyon-Santa Clara River (HUC-12 No. 180701020107) subwatershed (USGS 2022) (Figure 4). Within the Survey Area, the NWI (USFWS 2022c) identifies the Santa Clara River as an intermittent riverine system, which coincides with Rincon's field observations. The NHD (USGS 2022) identifies the Santa Clara River, one ephemeral tributary, and a pipeline in the Survey Area (Figure 4). The Santa Clara River connects to the Pacific Ocean, which is a TNW. It is noted that mapping presented in the NHD and NWI provide useful context but are not a completely accurate depiction of current existing conditions nor the extent of jurisdiction in the Survey Area.

3.3 Soils

According to the NRCS Web Soil Survey (USDA, NRCS 2022b), the Survey Area includes five soil map units: (1) Cortina sandy loam, 0 to 2 percent slopes, (2) Metz loamy sand, 0 to 2 percent slopes, (3) Riverwash, (4) Sandy alluvial land, and (5) Saugus loam, 30 to 50 percent slopes, eroded (Figure 5). All soil types in the Survey Area except for the Saugus loam are classified as hydric soils (USDA, NRCS 2022a).

Figure 4 Watershed and NHD/NWI Features



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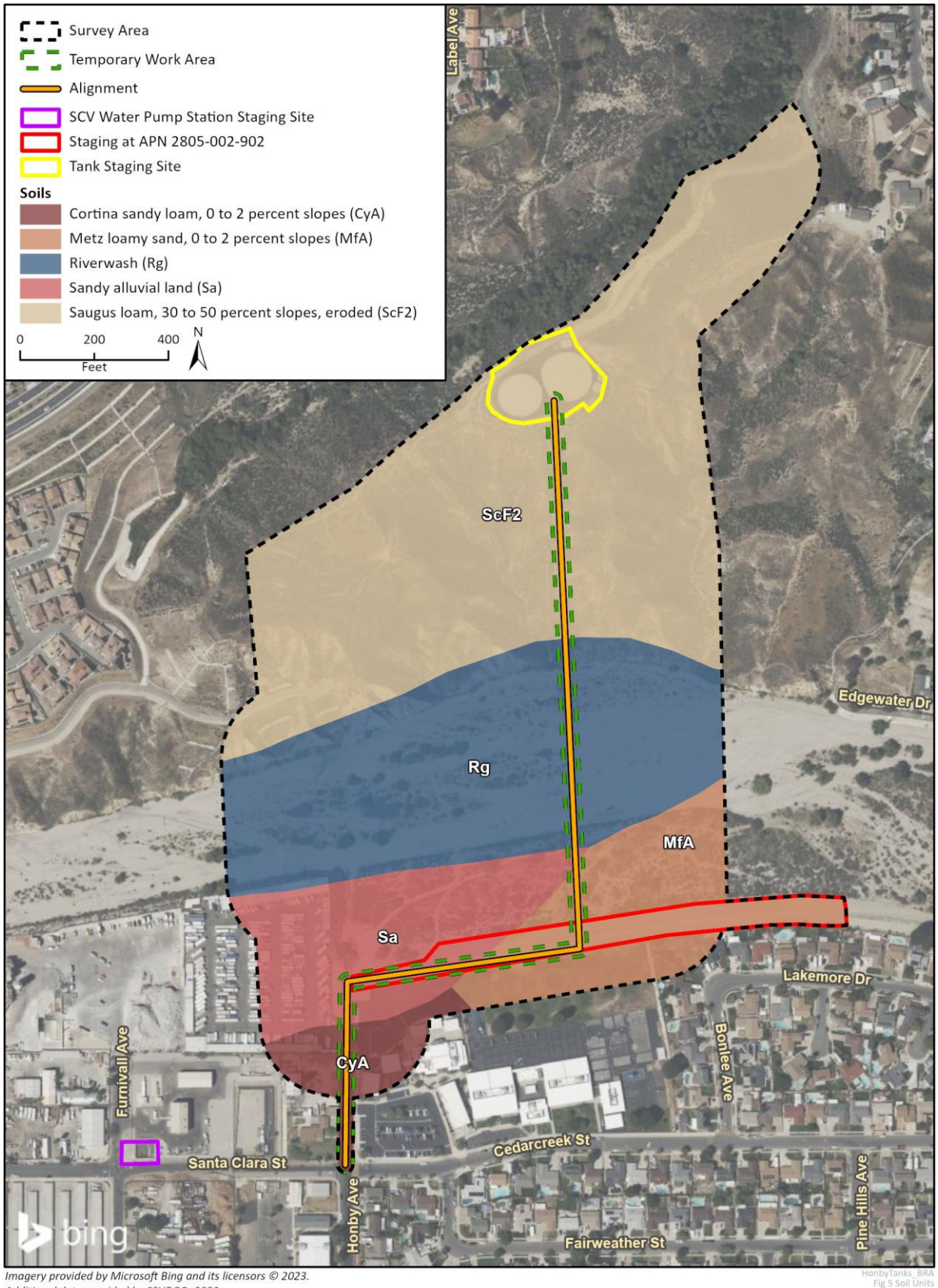
Additional Data provided by National Hydrology Dataset and National Wetlands Inventory; 2022.

HonbyTanks_BRA
Fig 4 NHD NWI

Figure 5 Soil Units



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Additional data provided by SSURGO; 2022.

HonbyTanks_BRA
Fig 5 Soil Units

3.4 Vegetation Communities and Land Cover Types

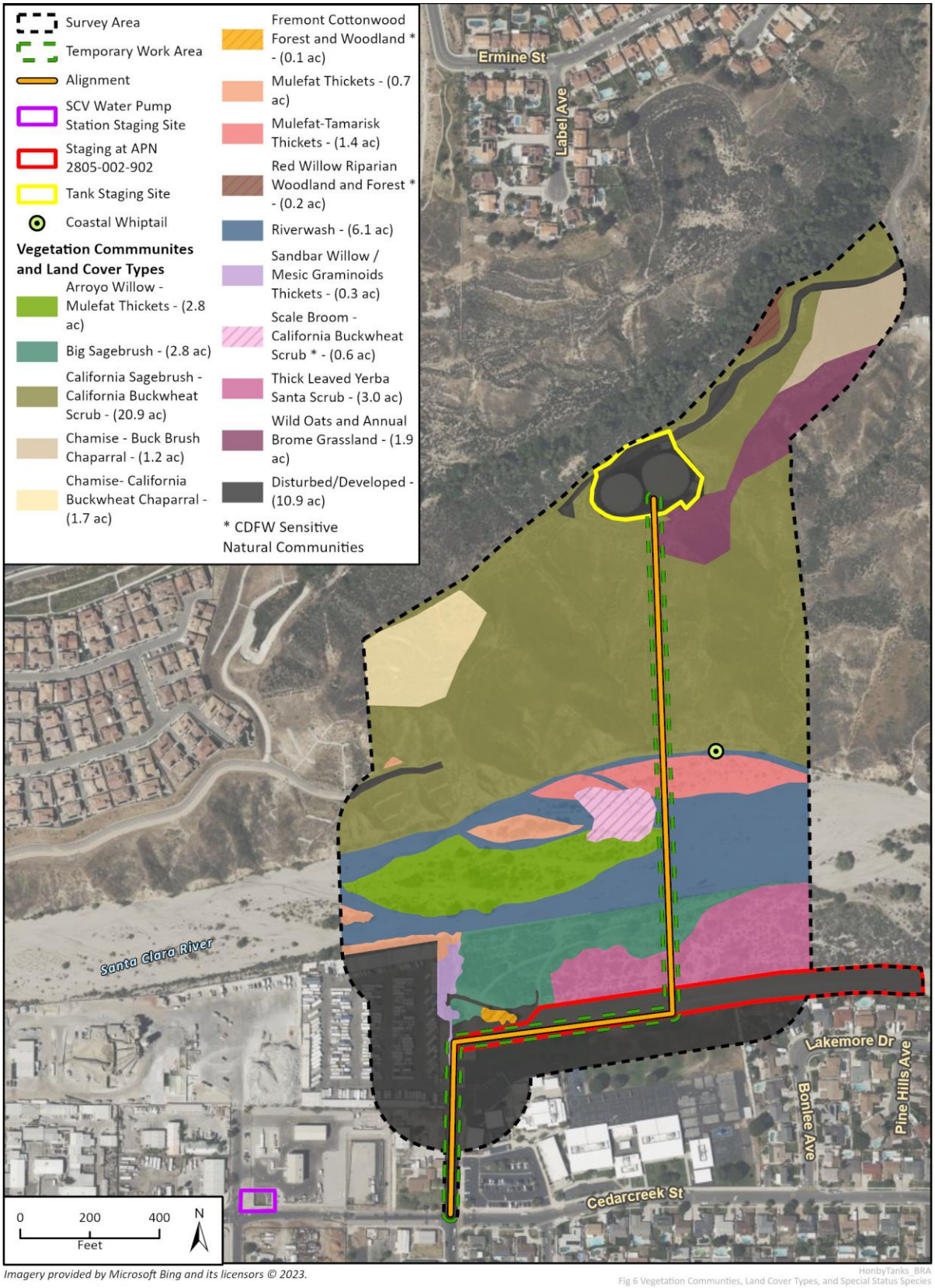
Thirteen vegetation communities and two land cover types occur within the Survey Area and are described below (Table 1 and Figure 6). A list of all plant species observed during the August 2022 field survey is provided in Appendix B.

Table 1 Summary of Vegetation and Land Cover Types in the Survey Area[1]

Vegetation Community or Land Cover Type	Approximate Acreage	CDFW Sensitive Natural Community (Yes/No)
Arroyo Willow Thickets Shrubland Alliance	-	G4S4; No
Arroyo Willow – Mulefat Thickets Association	2.8	G4S4; No
Big Sagebrush Shrubland Alliance	-	G5S5; No
Big Sagebrush Association	2.8	Unranked; No
California Sagebrush – (Purple Sage) Scrub Shrubland Alliance	-	G5S5; No
California Sagebrush – California Buckwheat Scrub Association	20.9	G4S4; No
Chamise Chaparral Shrubland Alliance	-	G5S5; No
Chamise – Buck Brush Chaparral Association	1.2	G4?; No
Chamise – California Buckwheat Chaparral Association	1.7	G4S4; No
Fremont Cottonwood Forest and Woodland Alliance	-	G4S3; Yes
Fremont Cottonwood Forest and Woodland Association	0.1	G2Q; Yes
Mulefat Thickets Shrubland Alliance	-	G4S4; No
Mulefat Thickets Association	0.7	G5S5; No
Mulefat – Tamarisk Thickets Association	1.4	Unranked; No
Goodding's Willow – Red Willow Riparian Woodland and Forest Alliance	-	G4S3; Yes
Red Willow Riparian Woodland and Forest Association	0.2	GNR; Yes
Sandbar Willow Thickets Shrubland Alliance	-	G5S4; No
Sandbar Willow / Mesic Graminoids Thickets Association	0.3	Unranked; No
Scalebroom Scrub Shrubland Alliance	-	G3S3; Yes
Scalebroom – California Buckwheat Scrub Association	0.6	Unranked; Yes
Deerweed - Silver Lupine - Yerba Santa Scrub Shrubland Alliance	-	G5S5; No
Thick Leaved Yerba Santa Scrub Association	3.0	Unranked; No
Wild Oats and Annual Brome Grasslands Herbaceous Semi-Natural Alliance	-	GNASNA; No
Wild Oats and Annual Brome Grasslands Association	1.9	GNASNA; No
Riverwash	6.1	N/A
Disturbed/Developed	10.1	N/A
Total	**53.8**	**N/A**

[1] Vegetation community ranks are from CDFW (2022). Associations are indicated in *italics*. CDFW sensitive natural communities are indicated in **bold**.

Figure 6 Vegetation Communities, Land Cover Types, and Special Status Species



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HonbyTanks_BRA
Fig 6 Vegetation Communities, Land Cover Types, and Special Status Species

Arroyo Willow Thickets (*Salix lasiolepis* Shrubland Alliance)

The arroyo willow thickets alliance typically occurs along stream banks and benches, slope seeps, and stringers along drainages from sea level to 2,170 meters in elevation. This alliance is characterized by an open to continuous shrub layer and variable herbaceous layer. The community is dominated by arroyo willow (*Salix lasiolepis*) with over 50 percent relative cover in the tree or shrub layer, and co-dominant species include Fremont cottonwood (*Populus fremontii*), giant reed (*Arundo donax*), and mulefat (*Baccharis salicifolia*). This alliance is represented by a single association in the Survey Area, described below.

Arroyo Willow – Mulefat Thickets (Salix lasiolepis – Baccharis salicifolia Association)

The arroyo willow – mulefat thickets association occurs in the Santa Clara River along the southwestern boundary of the Survey Area. The shrub layer is moderately dense and is dominated by arroyo willow and mulefat. The tree layer is sparse and includes emergent Fremont cottonwood. The herbaceous layer is sparse and includes red brome (*Bromus rubens*) and summer mustard (*Hirschfeldia incana*). The substrate consists of alluvial sand and rocks. This association is ranked G4S4 and is not a CDFW sensitive natural community (CDFW 2022b).

Big Sagebrush (*Artemisia tridentata* Shrubland Alliance)

Big sagebrush is typically found within plains, alluvial fans, bajadas, pediments, lower slopes, valley bottoms, hills, ridges, seasonal and perennial stream channels, and dry washes between 30 to 3,000 meters in elevation. Big sagebrush (*Artemisia tridentata*) constitutes at least 2% absolute cover in the shrub layer, with no other single species with greater cover. This alliance is represented by a single association in the Survey Area, described below.

Big Sagebrush (Artemisia tridentata Association)

This association is located in the southern portion of the Survey Area, south of the Santa Clara River. Soil consists of coarse sand. Basin big sagebrush (*Artemisia tridentata* ssp. *tridentata*) is dominant in the open shrub layer, with thick leaved yerba santa (*Eriodictyon crassifolium*) and California buckwheat commonly present. The herbaceous layer is sparse and dominated by summer mustard, red brome, and tumble mustard (*Sisymbrium* sp.). Scattered emergent Fremont cottonwood trees are present. This vegetation community is unranked and is not a CDFW sensitive natural community (CDFW 2022b).

California Sagebrush – (Purple Sage) Scrub (*Artemisia californica* – [*Salvia leucophylla*] Shrubland Alliance)

This alliance is typically found along slopes that are steep and rarely flooded, or on low-gradient deposits along streams between sea level and 1,200 meters in elevation. This alliance is characterized by an intermittent to continuous shrub canopy which may be two-tiered and a variable herbaceous layer. California sagebrush (*Artemisia californica*) has greater than 60 percent relative cover in the shrub layer. Purple sage (*Salvia leucophylla*), if present, has greater than 60 percent relative cover in the shrub layer, or greater than 30 percent relative cover in the shrub layer if it occurs with California sagebrush. This alliance is represented by one association in the Survey Area, described below.

California Sagebrush – California Buckwheat Scrub (Artemisia californica – Eriogonum fasciculatum Association)

California sagebrush – California buckwheat scrub (occurs on the north-facing slope in the northeast corner of the Survey Area. California sagebrush and California buckwheat are co-dominant in the sparse to dense shrub layer, with scattered blue elderberry (*Sambucus nigra* ssp. *caerulea*), tree tobacco (*Nicotiana glauca*), thick leaved yerba santa, buck brush (*Ceanothus cuneatus*), and white sage (*Salvia apiana*) present in the shrub layer at lower cover. The dense herbaceous layer includes summer mustard, red brome and annual bursage (*Ambrosia acanthicarpa*). This association is ranked G4S4 and is not a CDFW sensitive natural community (CDFW 2022b).

Chamise Chaparral (*Adenostoma fasciculatum* Shrubland Alliance)

Chamise chaparral is found within varied topography, typically within shallow soils over colluvium and many kinds of bedrock, between 10 to 1,800 meters in elevation. Chamise (*Adenostoma fasciculatum*) comprises at least 50% cover in the shrub layer. This alliance is represented by two associations in the Survey Area, described below.

Chamise-Buck Brush Chaparral (Adenostoma fasciculatum – Ceanothus cuneatus Shrubland Association)

This association is located in the northeast corner of the Survey Area, on a north-facing slope. The community is characterized by a sparse to dense shrub layer dominated by chamise and buckbrush. Other shrubs present include California sagebrush, California buckwheat, and tree tobacco. The dense herb layer includes summer mustard, red brome, and wild oats (*Avena* sp.). Parts of this association near buildings have been thinned for fuel modification. This association is ranked “G4?” and is not a CDFW sensitive natural community (CDFW 2022b).

Chamise-California Buckwheat Chaparral (Adenostoma fasciculatum – Eriogonum fasciculatum Shrubland Association)

This vegetation community is found near the northwest corner of the Survey Area, on a relatively flat hilltop. The shrub layer is open to dense and is dominated by chamise and California buckwheat. Other species present include brittlebush (*Encelia farinosa*) and chaparral yucca (*Hesperoyucca whipplei*). The dense herbaceous layer includes summer mustard, clustered tarweed (*Deinandra fasciculata*), red stemmed filaree (*Erodium cicutarium*), and tocalote (*Centaurea melitensis*), occurring within the northeastern portion of the Survey Area, on the northeastern-facing slope of a hill. This association is ranked G4S4 and is not a CDFW sensitive natural community (CDFW 2022b).

Fremont Cottonwood Forest and Woodland (*Populus fremontii* Forest & Woodland Alliance)

This alliance can be found on floodplains, along low-gradient rivers, perennial or seasonally intermittent streams, springs, in canyons, alluvial fans, and in valleys with a dependable subsurface water supply that varies considerably during the year. It may be found between sea level and 2,400 meters in elevation. The tree canopy is typically continuous to open, the shrub layer intermittent to open, and the herbaceous layer variable. This community is characterized by Fremont cottonwood with at least 5 percent absolute cover or at least 50 percent relative cover in the tree canopy. Fremont cottonwood may have as low as 30 percent relative cover in the tree canopy when other riparian trees such as willows (*Salix* spp.), walnuts (*Juglans* spp.) or box elder (*Acer negundo*) are present. This alliance is represented by one association in the Survey Area, described below.

Fremont Cottonwood Forest and Woodland (Populus fremontii Association)

One patch of this association is present near the southern border of the Survey Area. Several young and mature Fremont cottonwood trees are in an otherwise disturbed, sparsely vegetated flat area. The only other species present are summer mustard and tocalote. The trees are located in a swale downstream of a pipe outlet. This association is ranked G2Q and is classified as a CDFW sensitive natural community (CDFW 2022b).

Mulefat Thickets (*Baccharis salicifolia* Shrubland Alliance)

The mulefat thickets alliance is typically found within canyon bottoms, floodplains, irrigation ditches, lake margins, and stream channels, within mixed alluvial soils between sea level and 1,250 meters in elevation. Mulefat contributes at least 50 percent relative cover in the shrub layer, or at least 30 percent relative cover in the shrub layer with blue elderberry. This alliance is represented by two associations in the Survey Area, described below.

Mulefat Thickets (Baccharis salicifolia Association)

In the Survey Area, the mulefat thickets association is present in low terraces within the Santa Clara River riverbed, and along the southern bank of the river. One isolated patch of mulefat thickets is present north of the river, along an ephemeral drainage. These thickets are characterized by a relatively spares shrub layer dominated by mulefat. Occasional emergent Fremont cottonwood and Mexican fan palm (*Washingtonia robusta*) trees are present. Herbaceous species present include stinkwort (*Dittrichia graveolens*), summer mustard, and red stemmed filaree. The substrate consists of coarse alluvial sand. This association is ranked G5S5 and is not a CDFW sensitive natural community (CDFW 2022b).

Mulefat – Tamarisk Thickets (Baccharis salicifolia – Tamarix ramosissima Association)

This association is present on low terraces within the broad, alluvial riverbed of the Santa Clara River. Mulefat and tamarisk (*Tamarix ramosissima*) are dominant in the sparse shrub layer, along with California buckwheat and basin big sagebrush. A few scattered emergent Fremont cottonwood trees are present. The sparse herbaceous layer includes summer mustard, red brome, and giant woollystar (*Eriastrum densifolium*). This association is unranked and is not a CDFW sensitive natural community (CDFW 2022b).

Goodding's Willow – Red Willow Riparian Woodland and Forest (*Salix gooddingii – Salix laevigata* Forest & Woodland Alliance)

The red willow riparian woodland and forest community is typically found on terraces along large rivers, in canyons, or along the floodplains of streams, seeps, springs, ditches, lakes, or low-gradient depositions between sea level and 2,000 meters in elevation. This alliance is characterized by an open to continuous tree canopy, a sparse to continuous shrub layer, and a variable herbaceous layer. Goodding's willow (*Salix gooddingii*) and/or red willow are dominant in the tree canopy with over 50 percent relative cover in the tree canopy, or with over 30 percent relative cover when other willows are present. This alliance is represented by one association in the Survey Area, described below.

Red Willow Riparian Woodland and Forest (Salix laevigata Woodland Alliance)

This association is located along a drainage near the northern boundary of the Survey Area. Only a small portion of the larger community overlaps with the Survey Area. This association is dominated by red willow in the continuous tree canopy. Scattered shrubs present include thick leaved yerba santa and California sagebrush. The herbaceous layer is absent due to the dense tree cover. This association is ranked GNR and is classified as a CDFW sensitive natural community (CDFW 2022b).

Sandbar Willow Thickets (*Salix exigua* Shrubland Alliance)

Sandbar willow thickets are typically found on temporarily flooded floodplains, depositions along rivers and streams, and at springs between sea level 2,700 meters in elevation. This community is characterized by an intermittent to continuous shrub layer and a variable herbaceous layer. Sandbar willow (*Salix exigua*) has at least 30 percent relative cover in the shrub layer. This alliance is represented by one association in the Survey Area, described below.

Sandbar Willow / Mesic Graminoids Thickets (Salix exigua Shrubland Alliance)

In the Survey Area, this association is located south of the Santa Clara River, along a swale near the southwestern corner of the Survey Area. Sandbar willow is dominant in the dense to open shrub layer. Other shrubs present include basin big sagebrush, thick leaved yerba santa, and emergent red willows (*Salix laevigata*). Scattered emergent Fremont cottonwood trees are present as well. The herbaceous layer includes rabbitsfoot grass (*Polypogon monspeliensis*), persicaria (*Persicaria* sp.), white sweetclover (*Melilotus albus*), summer mustard, and tall flatsedge (*Cyperus eragrostis*). Soil is hardpacked and contain gravel. This association is unranked and is not a CDFW sensitive natural community (CDFW 2022b).

Scalebroom Scrub (*Lepidospartum squamatum* Shrubland Alliance)

The scalebroom scrub alliance is typically found along intermittently or rarely flooded, low-gradient alluvial deposits along streams, washes, and fans, between 50 to 1,500 meters in elevation. This alliance is characterized by an open to continuous shrub canopy which may be two tiered. The herbaceous layer is variable and may be grassy. Scalebroom (*Lepidospartum squamatum*) contributes to at least 1 percent absolute vegetation cover in alluvial environments. This alliance is represented by one association in the Survey Area, described below.

Scalebroom – California Buckwheat Scrub (Lepidospartum squamatum – Eriogonum fasciculatum Association)

In the Survey Area, this association is present in the Santa Clara River, both in the active channels and the low terraces. The substrate is coarse alluvial sand. The shrub layer is open and common shrubs include scalebroom, California buckwheat, and coastal goldenbush (*Isocoma menziesii*). The herbaceous layer is sparse and characterized by summer mustard and castor bean (*Ricinus communis*). This association is unranked and is classified as a CDFW sensitive natural community (CDFW 2022b).

Deerweed – Silver Lupine – Yerba Santa Scrub (*Lotus scoparius – Lupinus albifrons – Eriodictyon* spp. Shrubland Alliance)

This alliance is typically found on lower to upper slopes and ridges, typically exposed, in somewhat steep open settings, often in areas with recent disturbance, such as through clearing, fire, or

intermittent flooding. Elevations range between sea level and 1,800 meters in elevation. This alliance is characterized by an open to intermittent shrub canopy which may be two tiered and a sparse to intermittent herbaceous layer. One of the following species has at least 50 percent cover in the shrub layer: bush poppy (*Dendromecon rigida*), California yerba santa (*Eriodictyon californicum*), thick leaved yerba santa, deerweed (*Acmispon glaber*), silver bush lupine (*Lupinus albifrons*), or chaparral pea (*Pickeringia montana*). This alliance is represented by one association in the Survey Area, described below.

Thick Leaved Yerba Santa Scrub (Eriodictyon crassifolium Association)

This association is present to the south of the Santa Clara River, in the southern portion of the Survey Area. It is characterized by a dense shrub layer dominated by thick leaved yerba santa. Other species present at low cover include basin big sagebrush, California buckwheat, and rubber rabbitbrush (*Ericameria nauseosa*). The spare herbaceous layer includes summer mustard, tumble mustard, and red stemmed filaree. Scattered emergent Fremont cottonwood trees are present. The thick leaved yerba santa scrub is crossed by several unpaved footpaths and dirt bike trails. This association is provisional, it is unranked, and is not a CDFW sensitive natural community (CDFW 2022b).

Wild Oats and Annual Brome Grasslands (*Avena* spp. – *Bromus* spp. Herbaceous Semi-Natural Alliance)

Wild oat and annual brome grasslands are found in all topographic settings in foothills, waste places, rangelands, and openings in woodlands from sea level to 2,200 meters in elevation. Wild oats, annual bromes (*Bromus* spp.), purple false brome, filarees (*Erodium* spp.), rattlesnake grasses (*Briza* spp.) or cat's ears (*Hypochaeris* spp.) are dominant or co-dominant with other non-native species in the herbaceous layer. Emergent trees and shrubs may be present at low cover. This alliance is represented by a single association in the Survey Area, described below.

Wild Oats and Annual Brome Grasslands (Bromus diandrus – Avena spp. Association)

This association is present near the northeast corner of the Survey Area, near the ridgeline and on upper south facing slopes. The herbaceous layer is dense and includes wild oats, ripgut brome (*Bromus diandrus*), red brome, summer mustard, Russian thistle (*Salsola tragus*), red stemmed filaree, tocalote, and California primrose (*Eulobus californicus*). Scattered shrubs are present at low cover, including California sagebrush and California bush sunflower (*Encelia californica*). This association is ranked GNA SNA and is not a CDFW sensitive natural community (CDFW 2022b).

Riverwash

Riverwash is present within the Santa Clara River. This land cover type consists of sand and cobble which has accumulated in the channels and low terraces in the riverbed. Little to no vegetation is present. Riverwash is a naturally dynamic landform and may shift and change position depending on flood volumes and regularity. Portions of riverwash in the Survey Area were disturbed by off highway vehicle use.

Disturbed/Developed

Disturbed/developed areas consist of paved and unpaved substrate including roadways, parking areas, buildings, water tanks, and ornamental vegetation. Disturbed/developed areas are largely un-vegetated, except for ornamental vegetations irrigated and maintained by people. This land cover

type includes the road and tanks near the northern boundary of the Survey Area and the storage yard, residential development, and school buildings and lawn in the southern part of the Survey Area.

3.5 General Wildlife

The Survey Area contains habitat suitable for commonly occurring wildlife species. Wildlife observed during the surveys included bird species such as California towhee (*Melozone crissalis*), common raven (*Corvus corax*), and California scrub-jay (*Aphelocoma californica*). Other wildlife species observed include western fence lizard (*Sceloporus occidentalis*), monarch butterfly (*Danaus plexippus*), and California brush rabbit (*Sylvilagus bachmani*). A complete list of all the plant and wildlife species observed in the Survey Area during the biological field survey is presented as Appendix B.

4 Sensitive Biological and Jurisdictional Resources

Local, state, and federal agencies regulate special status species and other sensitive biological resources. This section discusses sensitive biological resources observed in the Survey Area and evaluates the potential for the Survey Area to support additional sensitive biological resources. Assessments for the potential occurrence of special status species are based upon known ranges, habitat preferences for the species, literature research, and the results of the field survey. The potential for each special status species to occur in the Survey Area was evaluated according to the following criteria:

- **Not Expected.** Habitat on and adjacent to the Survey Area is clearly unsuitable for the species requirements (foraging, breeding, cover, substrate, elevation, hydrology, plant community, Survey Area history, disturbance regime), or the species would have been identified in the Survey Area if present (e.g., oak trees).
- **Low Potential.** Few of the habitat components meeting the species requirements are present, and/or the majority of habitat on and adjacent to the workspace is unsuitable or of very poor quality. The species is not likely to be found in the Survey Area.
- **Moderate Potential**. Some of the habitat components meeting the species requirements are present, and/or only some of the habitat in or adjacent to the Survey Area is unsuitable. The species has a moderate probability of being found in the Survey 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 Survey Area is highly suitable. The species has a high probability of being found in the Survey Area.
- **Present.** Species was observed in the Survey Area or has been recorded (e.g., CNDDB, other reports) in the Survey Area recently (i.e., within the last 5 years).

4.1 Special Status Species

4.1.1 Special Status Plant Species

Based on the database and literature review, as well as the field surveys, 14 special status plant species have potential to occur in the Survey Area. Eleven special status plant species have low potential to occur within the Survey Area, two have moderate potential, and one has high potential (Table 2). No special status plants were observed in the Survey Area during the biological field survey. Habitat suitability analysis for all species evaluated based on the literature review is included in Appendix C.

Table 2 Special Status Plant Species with Potential to Occur in the Survey Area

Species	Low Potential	Moderate Potential	High Potential	Present
Catalina mariposa lily (*Calochortus catalinae*); CRPR 4.2		X		
Slender mariposa lily (*Calochortus clavatus* var. *gracilis*); CRPR 1B.2			X	
Plummer's mariposa lily (*Calochortus plummerae*); CRPR 4.2		X		
Peirson's morning-glory (*Calystegia peirsonii*); CRPR 4.2	X			
Parry's spineflower (*Chorizanthe parryi* var. *parryi*); CRPR 1B.1	X			
Santa Susana tarplant (*Deinandra minthornii*); CRPR 1B.2	X			
Slender-horned spineflower (*Dodecahema leptoceras*); FE; SCE; CRPR 1B.2	X			
Fragrant pitcher sage (*Lepechinia fragrans*); CRPR 4.2	X			
Payne's bush lupine (*Lupinus paynei*); CRPR 1B.1	X			
California spineflower (*Mucronea californica*); CRPR 4.2	X			
Piute Mountains navarretia (*Navarretia setiloba*); CRPR 1B.1	X			
Short-joint beavertail (*Opuntia basilaris* var. *brachyclada*); CRPR 1B.2	X			
Mojave phacelia (*Phacelia mohavensis*); CRPR 4.3	X			
White rabbit-tobacco (*Pseudognaphalium leucocephalum*); CRPR 2B.2	X			

CRPR (California Rare Plant Rank)
1B = Rare, Threatened, or Endangered in California and elsewhere
2B= Rare, Threatened, or Endangered in California, but more common elsewhere
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 threatened in California (less than 20% of occurrences threatened / low degree and immediacy of threat or no current threats known)

Federal and California Endangered Species Act
FE = Federal Endangered
SCE = State Candidate Endangered

Below is a discussion of all federally and state-listed threatened and endangered plant species and special status plant species with a moderate or high potential to occur in the Survey Area. The remaining special status plant species not discussed below are not expected to occur based on habitat requirements and Survey Area conditions.

Catalina Mariposa Lily

Catalina mariposa lily (*Calochortus catalinae*; CRPR 4.2) is a perennial bulb in the lily family (Liliaceae). This plant has linear basal leaves which generally grow up to 30 centimeters (cm) long. The central stem may be branched and bears between one and four flowers, which are cup-shaped with three petals which are white to pale pink or purple. Each petal is about 2-5 cm in size and has a dark purple spot at its base. Catalina mariposa lily generally flowers between March and June. The fruit is composed of a narrow capsule between 2-5 cm long and contains many seeds (Jepson Flora Project 2022). Catalina mariposa lily is endemic to coastal southern California, including the Channel Islands. This plant is generally found in heavy soils and grows in a variety of vegetation types, including open grasslands, scrub, chaparral, and woodlands. This species has moderate potential to occur in the Survey Area, but was not observed during field surveys.

Plummer's Mariposa Lily

Plummer's mariposa lily (*Calochortus plummerae*; CRPR 4.2) is a perennial bulb in the lily family. The plant's linear basal leaves generally grow up to 40 cm long. The central stem is usually branched and bears between two and six flowers. The flowers are widely bell-shaped and composed of three petals which are yellow and hairy near the base and pink near the tip. Plummer's mariposa lily generally flowers between May and July. The fruit is composed of a narrow capsule 4-8 cm long and contains many seeds (Jepson Flora Project 2022).

Plummer's mariposa lily is endemic to southern California and is typically found in chaparral, cismontane woodland, coastal scrub, lower montane coniferous forest, or valley and foothill grassland habitats. The soil may be granitic and rocky. Multiple CNDDB occurrences of Plummer's mariposa lily from 2009 are located within two miles of the Survey Area. This species has moderate potential to occur in the Survey Area, but was not observed during field surveys.

Slender Mariposa Lily

Similar to Catalina mariposa lily, slender mariposa lily (*Calochortus clavatus* var. *gracilis*; CRPR 1B.2) is a perennial bulb in the lily family. This plant has linear basal leaves approximately 10-20 cm long and a stem approximately 20-30 cm tall. Slender mariposa lily generally flowers between March and June. The flowers are cup-shaped and composed of three petals, each of which are between 3-4 cm in size. The petals are yellow and sparsely hairy, with variable dark red or brown lines. The fruit is a narrow capsule which contains many seeds (Jepson Flora Project 2022).

Slender mariposa lily is endemic to coastal southern California and is often found in chaparral, coastal scrub, and on grassy slopes in shaded foothill canyons. Multiple CNDDB occurrences of slender mariposa lily have been recorded within five miles of the Survey Area. This species has a high potential to occur in the Survey Area, but was not observed during field surveys.

4.1.2 Special Status Wildlife Species

Based on the database and literature review, 23 special status wildlife species are known or have the potential to occur in the Survey Area. Eleven special status wildlife species have low potential to occur, four have moderate potential, five have high potential, and three are present in the Survey Area (Table 3). Habitat suitability analysis for all species evaluated based on the literature review is included in Appendix C.

Table 3 Special Status Wildlife Species with Potential to Occur in the Survey Area

Species	Low Potential	Moderate Potential	High Potential	Present
Insects				
Crotch bumble bee (*Bombus crotchii*); SCE	X			
Fish				
Santa Ana sucker (*Catostomus santaanae*); FT		X		
Unarmored threespine stickleback (*Gasterosteus aculeatus williamsoni*); FE, SE, FP		X		
Arroyo chub (*Gila orcuttii*); SSC		X		
Amphibians and Reptiles				
Arroyo toad (*Anaxyrus californicus*); FE, SSC		X		

Species	Low Potential	Moderate Potential	High Potential	Present
Western spadefoot (*Spea hammondii*); SSC		X		
California legless lizard (*Anniella* spp.); SSC			X	
California glossy snake (*Arizona elegans occidentalis*); SSC	X			
Coastal whiptail (*Aspidoscelis tigris stejnegeri*); SSC				X
Coast horned lizard (*Phrynosoma blainvillii*); SSC			X	
Birds				
Cooper's hawk (*Accipiter cooperii*); WL			X	
Southern California rufous-crowned sparrow (*Aimophila ruficeps canescens*); WL			X	
Bell's sage sparrow (*Artemisiospiza belli belli*); WL		X		
Burrowing owl (*Athene cunicularia*); SSC	X			
Turkey vulture (*Cathartes aura*); SBL				X
White-tailed kite (*Elanus leucurus*); FP	X			
California horned lark (*Eremophila alpestris actia*); WL	X			
Loggerhead shrike (*Lanius ludovicianus*); SSC	X			
California towhee (*Melozone crissalis*); BW				X
Coastal California gnatcatcher (*Polioptila californica californica*); FT, SSC		X		
Least Bell's vireo (*Vireo bellii pusillus*); FE, SE		X		
Mammals				
Western mastiff bat (*Eumops perotis californicus*); SSC	X			
San Diego black-tailed jackrabbit (*Lepus californicus bennettii*); SV		X		

FE = Federally Endangered; FT = Federally Threatened; SE = State Endangered; SCE = State Candidate Endangered; ST = State Threatened; SV = State Vulnerable; FP = State Fully Protected; SSC = CDFW Species of Special Concern; WL = Watch List; SBL = Los Angeles County Sensitive Bird List; BW = Los Angeles County Bird Watchlist

Below is a discussion of all federally and state-listed threatened and endangered wildlife species, special status wildlife species with a moderate or high potential to occur in the Survey Area, and the species that were documented in the Survey Area. The remaining special status wildlife species not discussed below are not expected to occur based on habitat requirements and Survey Area conditions. The birds on the Los Angeles County sensitive bird list and bird watchlist are considered common in the Santa Clarita area and are not described further below.

Fish

Arroyo Chub

The arroyo chub (*Gila orcuttii*) is a CDFW Species of Special Concern (SSC). The historic native range of the species includes the Los Angeles, San Gabriel, San Luis Rey, Santa Ana, and Santa Margarita rivers and Malibu and San Juan creeks. They are typically found in habitats characterized by slow-moving water, mud or sand substrate, and depths greater than 40 centimeters (Wells and Diana 1975). They are most common in streams with gradients of less than 2.5 percent slope, where water temperatures range from 50 to 82°F (Feeney and Swift 2008). Most spawning occurs in habitats with low velocity, such as pools or edge waters, at temperatures of 57 to 72°F. Juveniles spend their first

3 to 4 months in the water column, usually in habitats with still water and vegetation or other submerged cover (Tres 1992). While native to the southern California region, arroyo chub have been introduced into several watersheds outside their native range, including the Santa Clara River where they have become common (Moyle 2002). The species is described as occurring in the lower elevation portions of the Santa Clara River (i.e., the Survey Area) as recently as 2022 (O'Brien and Barabe 2022). In addition, according to previous studies completed by The Nature Conservancy, arroyo chub occur along the Santa Clara River, primarily west of the confluence with San Francisquito Creek (The Nature Conservancy 2006). Therefore, this species has a moderate potential to occur in flowing portions of the river.

Santa Ana Sucker

The Santa Ana sucker (*Catostomus santaanae*) is a federally threatened species. The species has a historical distribution extending from upper watershed areas to the Pacific Ocean; hence, they are capable of occupying habitats as diverse as mountain streams and rivers in alluvial floodplains. The streams that the Santa Ana sucker inhabits are generally perennial streams with water ranging in depth from a few inches to several feet and with currents ranging from slight to swift (Smith 1966). Periodic high-flow events are essential to Santa Ana sucker ecology because they deliver new, coarse substrate to currently occupied areas and reshape the channel to create the complex habitat needed to support all life history. Additionally, perennial flows with suitable water quality and substrate are needed to support breeding, feeding, and sheltering. Santa Ana sucker are most abundant in clear water at temperatures that are typically less than 72 °F.

Per the Southern California Coastal Water Research Project, Santa Ana sucker tend to occur in flashier streams, showing a preference for streams with a high number of high flow events, rapid recessions, and fewer no disturbance days (Taylor et al. 2019). They also occurred in streams that had more recent two-year storms, tending to occur in intermittent streams. In addition, according to previous studies completed by the Nature Conservancy, Santa Ana sucker occur along the Santa Clara River, primarily west of the confluence with San Francisquito Creek (The Nature Conservancy 2006). Therefore, this species has a moderate potential to occur in flowing portions of the river.

Unarmored Threespine Stickleback

The unarmored threespine stickleback (*Gasterosteus aculeatus williamsoni*; UTS) is a federally and state endangered and state fully protected species. The species is a small, scaleless, freshwater fish approximately two inches in length. The species typically inhabits slow-moving reaches in streams or rivers, usually shaded by dense and abundant vegetation. Reproduction occurs throughout the year with less breeding activity occurring from October to January. Males build a nest of fine plant debris and algal strands in adequate aquatic vegetated areas and court all females that enter the male's territory. The UTS is a short-lived species; the lifespan of most individuals appears to be approximately one year (USFWS 2009). The UTS populations were first described from populations collected in the upper Santa Clara River in Soledad Canyon (Girard 1854). Populations were found through much larger areas but were extirpated due to the effects of urbanization (e.g., dewatering of streams, habitat alteration, introduction of exotic predators, and pollution). Populations are currently restricted to three areas today, the Santa Clara River and its tributaries, a landlocked cluster of small populations in the San Bernardino Mountains, and in San Antonio Creek north of Point Conception. San Felipe Creek in San Diego County is another area that supports transplanted UTS (Richmond et al. 2014). Therefore, this species has a moderate potential to occur in flowing portions of the river.

Amphibians and Reptiles

Arroyo Toad

Arroyo toad is federally endangered and a CDFW SSC typically found in washes, arroyos, sandy riverbanks, and riparian areas with willows, sycamores, oaks, and cottonwoods. They have extremely specialized habitat needs that include exposed sandy streamsides with stable terraces for burrowing and scattered vegetation for shelter, and areas of quiet water or pools free of predatory fishes. The species breeds and deposits eggs in shallow sandy/gravely pools along low gradient sections of streams usually bordered by sand-gravel terraces below 4,400 feet of elevation. The flood terraces and other upland terraces are typically used for foraging and overwintering sites. Inhabited streams may be ephemeral, but the largest populations are found in wide, shallow streams (Nafis 2020). Healthy populations of arroyo toad can be found in the main stem of the Santa Clara River near the confluences of Aqua Dulce and San Francisquito, in upper Castaic Creek above the Castaic Lake, and in upper Piru Creek above Lake Piru Dam. Historically, populations also existed near Aliso Canyon at the eastern end of the watershed and in upper San Francisquito Canyon (The Nature Conservancy 2006). The Santa Clara River watershed provides some of the best remaining habitat they need to survive (Anderson et al. 2022). In addition, Hitchcock et al. conducted collaborative surveys for arroyo toads at historical locations, surveying 88 of the 115 total sites having historical records and confirmed that the arroyo toad is currently extant in at least 61 of 88 sites and 20 of 25 historically occupied watersheds, including within portions of the Santa Clara River watershed (Hitchcock et al. 2022). Therefore, arroyo toad has moderate potential to occur in the Survey Area.

Western Spadefoot

Western spadefoot (*Spea hammondii*) is a CDFW SSC typically found in sandy washes and flood plains of the Central Valley and the central and southern coast ranges of California (Stebbins 2003). The species prefers open areas with sandy or gravelly soils and is found in a variety of habitats, including mixed woodlands, grasslands, sandy washes, foothills, and mountains. The species spends most of the year in underground burrows which they construct themselves, although some individuals may use small mammal burrows.

Vernal pools or other temporary ponds are required for breeding and larval development. Pools that are suitable for breeding do not contain bullfrogs, fish, or crayfish and hold water for at least thirty days to support successful completion of larval development (Morey and Reznick 2004). Breeding and egg laying occur almost exclusively in vernal pool habitat; however, they may also utilize prolonged ponded water within natural drainages. The western spadefoot is an opportunistic species and is able to exploit short lived pools of water, therefore this species is able to survive in areas where other highly aquatic species could not (Nafis 2020).

Though vernal pools are not present in the Survey Area, this species may forage or transit through the Survey Area. Twenty nine CNDDB occurrences have been recorded within five miles of the Survey Area. Western spadefoot has moderate potential to occur in the Survey Area.

California Legless Lizard

California legless lizard (*Anniella* spp.) is a CDFW SSC that occurs in coastal dune scrub, valley-foothill grassland, chaparral, oak woodland, and coastal scrub wherever there are sandy or loose organic soils with high amounts of leaf litter. It is a fossorial species and uses its head and body movement to burrow into the sand. It forages beneath the leaf litter and moist soil for burrowing.

Areas disturbed by agriculture or other human uses are not suitable habitat for the species (Zeiner 1990). California legless lizard can be found from Contra Costa County to the Mexican border.

Multiple CNDDB occurrences have been recorded within five miles of the Survey Area, the most recent of which are from 2019. This species has a high potential to occur in the Survey Area.

Coastal Whiptail

Coastal whiptail (*Aspidoscelis tigris stejnegeri*) is a CDFW SSC species 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 1990).

During the August 2022 field survey, one adult coastal whiptail was observed near the northern boundary of the Santa Clara River (Figure 6).

Coast Horned Lizard

Coast horned lizard (*Phrynosoma blainvillii*) is a CDFW SSC which occurs in grasslands, coniferous forests, woodlands, and chaparral with open areas and patches of loose soil. Horned lizard diets are specialized and almost exclusively consist of native ants (>94% 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 2020).

Multiple CNDDB coast horned lizard occurrences have been recorded within five miles of the Survey Area, the most recent of which is from 2008. This species has a high potential to occur in the Survey Area.

Birds

Cooper's Hawk

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, the Cooper's hawks utilize a wider variety of habitats for foraging including open fields and grasslands. Nests are constructed 25- 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 2021).

One CNDDB Cooper's hawk occurrence from 2005 is located approximately 2.5 miles west of the Survey Area. This species has a high potential to occur in the Survey Area.

Southern California Rufous-crowned Sparrow

Southern California rufous-crowned sparrow (*Aimophila ruficeps canescens*) is a WL species which is a resident in Southern California coastal sage scrub and sparse mixed chaparral. This small songbird frequents relatively steep, often rocky hillsides with grass and forb patches. The species prefers

south- or west-facing slopes with scattered scrub cover interspersed with grasses and forbs or rock outcrops. Their diet is not well known but includes grasses, forb seeds, and insects, depending on the season, locality, and availability (Collins 2020).

Three CNDDB southern California rufous-crowned sparrow occurrences from 2006-2008 have been recorded within five miles of the Survey Area. This species has a high potential to occur in the Survey Area.

Bell's Sage Sparrow

Bell's sage sparrow (*Artemisiospiza belli belli*) is a WL species. This is a small songbird which is typically found in dry chaparral in interior foothills and sagebrush. Semi-open chaparral areas unencumbered by leafy litter may be preferred. The species nests primarily in shrubs but will occasionally nest on the ground early in the breeding season (USDA 2018).

Four CNDDB Bell's sage sparrow occurrences have been recorded within five miles of the Survey Area, the most recent of which is from 2015. This species has moderate potential to occur in the Survey Area.

Coastal California Gnatcatcher

Coastal California gnatcatcher (*Polioptila californica californica*) is a FT species and a CDFW SSC that is a non-migratory songbird found on the coastal slopes of southern California. It ranges from Ventura County south to northwest Baja California, Mexico (Atwood et al. 1999). It is strongly associated with coastal sage scrub habitat below 820 feet in coastal areas and between 820 and 1,640 feet in inland areas; however, not all types of coastal sage scrub communities are used or preferred (Atwood and Bolsinger 1992). This species appears to be most abundant in areas dominated by California sagebrush and California buckwheat. The breeding season extends from late February through August with peaks nesting in mid-March to mid-May (USFWS 2010).

Multiple CNDDB coastal California gnatcatcher occurrences have been recorded within five miles of the Survey Area, the most recent of which is from 2019. Protocol-level surveys conducted in 2023 determined the species was absent.

Least Bell's Vireo

Least Bell's vireo (*Vireo bellii pusillus*); federally endangered and state endangered species. The species formerly nested through 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 continued existence of this species include dense cover within six feet of the ground for nesting and a dense, stratified canopy for foraging. Ideal habitat consists of a well-developed overstory with a dense shrub understory, often characterized as an early successional stage. Typical breeding habitat consists of an understory of dense riparian sub-shrub or shrub thickets, with a mature riparian overstory. While willow-dominated habitat is often used by least Bell's vireo for nesting, plant species composition does not appear to be as important as the structure of the habitat (Griffith and Griffith 2000).

Two CNDDB least Bell's vireo occurrences have been recorded within five miles of the Survey Area, the most recent of which is from 2016. Protocol-level surveys conducted downstream in 2020

determined the species was absent. In addition, the species was not observed during field surveys or the protocol coastal California gnatcatcher surveys. Therefore, least Bell's vireo is considered absent from the Survey Area.

Mammals

San Diego Black-tailed Jackrabbit

San Diego black-tailed jackrabbit (*Lepus californicus bennettii*); is a state vulnerable (SV) species that inhabits a wide range of habitats including desert shrublands, sagebrush, chaparral, oak woodland with an herb mosaic component. This species occurs from coastal southern California to Baja California. The species requires a mix of grasses, forbs and shrubs for foraging and prefers predominantly open areas without dense understory (Howard 1995).

The only CNDDB San Diego black-tailed jackrabbit occurrence within five miles of the Survey Area is from 2015 and is located approximately three miles east of the Survey Area. This species has moderate potential to occur in the Survey Area.

4.1.3 Other Protected Species

Nesting Birds

The Survey Area contains habitat that can support nesting birds, including raptors, protected under CFGC § 3503 and the federal Migratory Bird Treaty Act (MBTA) (16 United States Code §§ 703–712). Potential nesting locations for raptors were limited in the Survey Area with the most suitable locations being native and mature trees located within and outside of the Survey Area. No nests or birds exhibiting nesting behaviors were observed during the field survey.

4.2 Critical Habitat

The USFWS Critical Habitat Portal and IPaC databases (USFWS 2023a, 2023b) were queried for critical habitat designations in the vicinity of the Survey Area. No critical habitat designations are located within the Survey Area, therefore critical habitat is not addressed further in this report.

4.3 Wildlife Movement

Wildlife movement 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 providing a linkage between foraging and denning areas, or they may be regional in nature. 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.

The habitats in the link do not necessarily need to be the same as the habitats that are being linked. Rather, the link 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, though 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 Santa Clara River Enhancement and Management Plan Study (SCREMP) identified several key movement corridors within the area covered by the General Plan. The corridors include the Santa Clara River and additional undisturbed canyon and ravine stream habitat areas within the 500-year floodplain limits of the Santa Clara River (Ventura County Watershed Protection District 2005). The preservation of these areas is essential for maintaining the wildlife diversity within the planning area.

Wildlife movement corridors can be both large- and small-scale. At the regional/landscape-level scale, the Survey Area is not included within any mapped landscape models, such as an Essential Connectivity Area or Natural Landscape block in the California Essential Habitat Connectivity Project: A Strategy for Conserving a Connected California (Spencer et al. 2010). Habitat corridors are present within the Survey Area, notably including the Santa Clara River. The Santa Clara River has headwaters in the San Gabriel Mountains and flows westward approximately 84 miles to the Oxnard Plain, where it discharges into the Pacific Ocean. This is the largest river system in southern California that remains in a relatively natural state, and it connects highly diverse habitat types. Therefore, the Santa Clara River provides a valuable movement and migration corridor for many types of wildlife, including terrestrial and semiaquatic species. The ridgeline along the northern boundary of the survey may also provide a local corridor for wildlife traveling between the Santa Clara River and residential developments to the north, east, and west.

4.4 Sensitive Natural Vegetation Communities

Natural vegetation communities are considered sensitive biological resources if they have limited distributions, have high wildlife value, include special status species, or are particularly susceptible to disturbance. Of the vegetation alliances within the Survey Area, three are listed as sensitive on the CDFW's *California Natural Community List*. Red willow riparian woodland and forest (*Salix laevigata* Forest & Woodland Association), scalebroom – California buckwheat scrub (*Lepidospartum squamatum – Eriogonum fasciculatum* Shrubland Association), and Fremont cottonwood forest and woodland (*Populus fremontii* Forest & Woodland Association) are classified as CDFW sensitive natural communities.

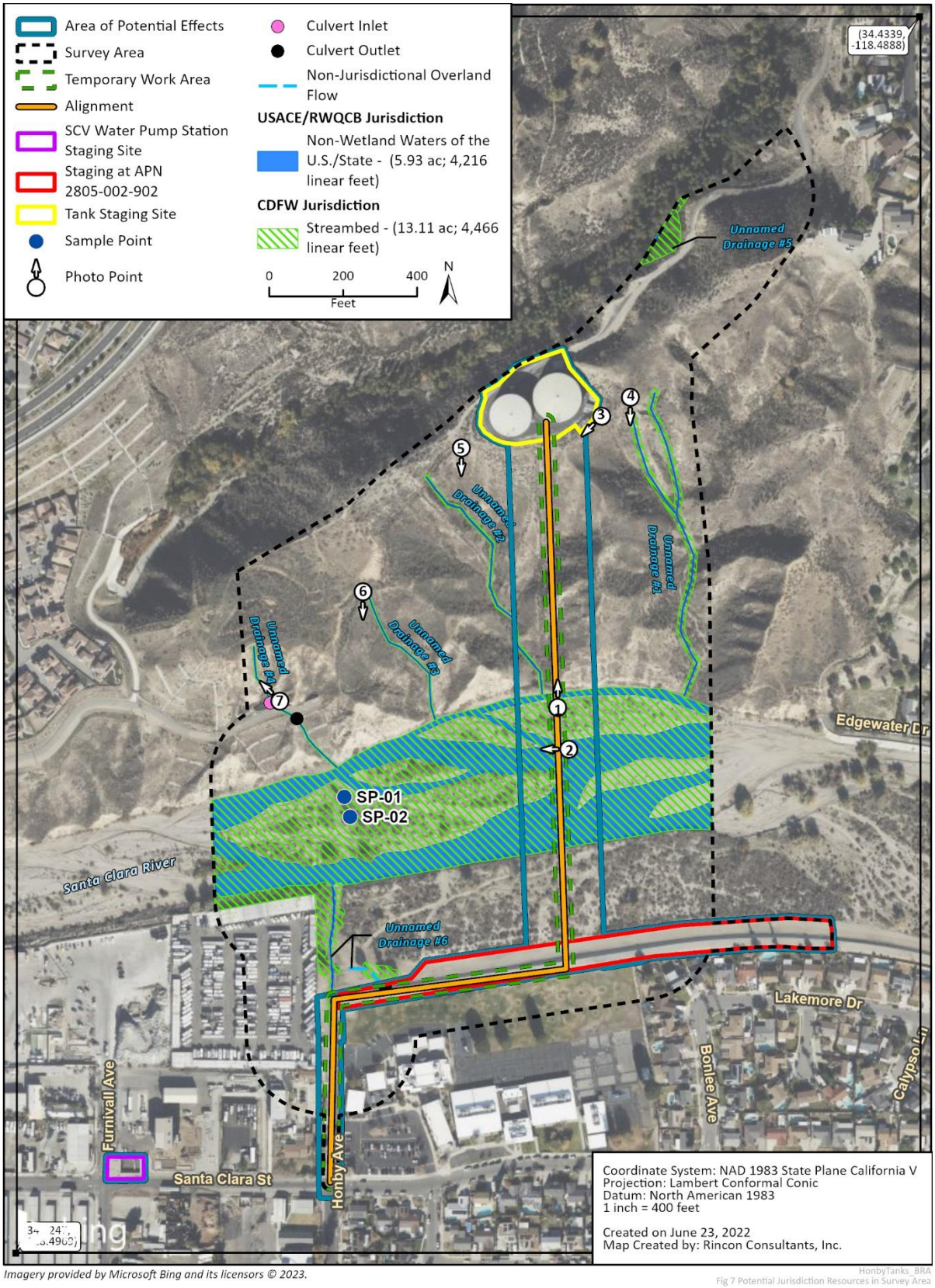
4.5 Jurisdictional Resources

Based on the results of the jurisdictional delineation, seven features (the Santa Clara River and six unnamed drainages) are potentially subject to USACE, RWQCB, and/or CDFW jurisdiction (Figure 7; Table 4). Representative photographs are included in Appendix D. For a more detailed description of the applicable jurisdictional regulations, see Appendix A. Two wetland determination data forms and one OHWM form were completed and are included in Appendix E.

Santa Clara River

The Santa Clara River enters the Survey Area from the east and flows westward, crossing the Survey Area (Figure 7). The Santa Clara River is an intermittent system; the riverbed surface is dry for most of the year, except during storm events and for a period thereafter.

Figure 7 Potential Jurisdictional Resources in the Survey Area



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HonbyTanks_BRA
Fig 7 Potential Jurisdiction Resources in Survey Area

The riverbed is wide and characterized by a system of braided active channels and historic secondary channels along with low floodplain terraces. The channels are characterized by scour, sediment sorting, change in vegetation, and drift deposits. Historic aerial photography indicates that the flow of water varies greatly from year to year and season to season. During times of heavy rain rising waters may flood the terraces and alter the size and position of active channels. No surface water was present in the Santa Clara River at the time of the survey. The section of riverbed in the Survey Area is approximately 300 to 400 feet wide from bank to bank, and approximately 2 to 4 feet below the surrounding land.

The riverbed is natural bottomed riverwash. Outside the active channels, the sandy soils host a variety of vegetation communities, including mulefat – tamarisk thickets, mulefat thickets, arroyo willow – mulefat thickets, and scalebroom – California buckwheat scrub. Some of the commonly observed plant species are mulefat, scalebroom, arroyo willow, Fremont cottonwood, and California buckwheat.

Table 4 Potential USACE, RWQCB, and CDFW Jurisdiction within the Survey Area

	USACE Jurisdiction		RWQCB Jurisdiction		CDFW Jurisdiction
Feature	Non-Wetland Waters of the U.S. (acres/ linear feet)	Wetland Waters of the U.S. (acres/ linear feet)	Non-Wetland Waters of the State (acres/ linear feet)	Wetland Waters of the State (acres/ linear feet)	Streambed and Associated Riparian Habitat (acres/ linear feet)
Santa Clara River	5.76/1,360	0/0	5.76/1,360	0/0	11.38/1,360
Unnamed Drainage 1	0.05/866	0/0	0.05/866	0/0	0.54/875
Unnamed Drainage 2	0.03/719	0/0	0.03/719	0/0	0.20/724
Unnamed Drainage 3	0.02/415	0/0	0.02/415	0/0	0.08/418
Unnamed Drainage 4	0.02/424	0/0	0.02/424	0/0	0.08/427
Unnamed Drainage 5	0/0	0/0	0/0	0/0	0.18/236
Unnamed Drainage 6	0.05/426	0/0	0.05/426	0/0	0.58/426
Total	**5.93/4,210**	**0/0**	**5.93/4,210**	**0/0**	**13.04/4,460**

Sample Point 1

Sample Point 1 was evaluated in a low-flow channel near the center of the Santa Clara River (Appendix D, Photograph 8) (Table 5). The sample point is located within the arroyo willow – mulefat thickets vegetation community. Dominant plant species were Fremont cottonwood, mulefat, black sage (*Salvia mellifera*), red brome, and cheatgrass (*Bromus tectorum*). Hydrophytic vegetation was not dominant. The soil was sandy and no indicators of hydric soils were observed. Two hydrology indicators were present at Sample Point 1: riverine drift deposits and drainage patterns. Based on these factors, it was determined that Sample Point 1 is not located in a wetland.

Sample Point 2

Sample Point 2 was evaluated on a low terrace near the center of the Santa Clara River (Appendix D, Photograph 9) (Table 5). The sample point is located within the arroyo willow – mulefat thickets vegetation community. Dominant plant species were Fremont cottonwood, basin big sagebrush, and summer mustard. Hydrophytic vegetation was not dominant. The soil was sand and loamy sand. No indicators of hydric soil were observed. Only one secondary hydrology indicator was observed at Sample Point 2: riverine drift deposits. Therefore, Sample Point 2 is not located in a wetland.

Table 5 Summary of Hydrophytic Vegetation, Hydric Soils, and Wetlands Hydrology Indicator Status by Sample Point

Sampling Point	Meets Hydrophytic Vegetation Criterion	Meets Hydric Soils Criterion	Meets Wetland Hydrology Criterion	Wetland Waters of the U.S.	Wetland Waters of the State
1	No	No	Yes	No	No
2	No	No	No	No	No

Unnamed Drainages

Unnamed Drainage 1

Unnamed Drainage 1 is located on the steep hillside north of the Santa Clara River, near the eastern boundary of the Survey Area. This is a convergent hillside drainage characterized by a branching headwaters. The drainage flows southward into the Santa Clara River. The drainage has steep earthen banks which are approximately 10 feet wide and 6 feet deep. The channel bottom contains an OHWM defined by the break in slope. The OHWM is approximately 1-2 feet wide and 1-2 feet deep. The vegetation in Unnamed Drainage 1 is similar to that of the surrounding uplands and consists of California sagebrush, California buckwheat, and annual bromes. Near the southern extent of the drainage, the topography is flatter, and there is an accumulation of trash and several dirt trails. Unnamed Drainage 1 appears to receive flows only during storm events and is ephemeral.

Unnamed Drainage 2

Unnamed Drainage 2 is a convergent hillside drainage located on the steep hillside north of the Santa Clara River, to the west of Unnamed Drainage 1. The drainage flows southward into the Santa Clara River. This drainage has steep earthen banks which are approximately 6 feet wide and 3 feet deep. The channel bottom contains an OHWM defined by the break in slope which is approximately 1-2 feet wide and 1-2 feet deep. The drainage becomes flatter near its confluence with the Santa Clara River. The vegetation in Unnamed Drainage 2 is similar to that of the surrounding uplands and includes California sagebrush, California buckwheat, and annual bromes. One Fremont cottonwood tree is located at the point where Unnamed Drainage 2 enters the Santa Clara River. Unnamed Drainage 2 appears to receive flows only during storm events and is ephemeral.

Unnamed Drainage 3

Unnamed Drainage 3 is a convergent hillside drainage located on the steep hillside north of the Santa Clara River, to the west of Unnamed Drainage 2. The morphology is similar to Unnamed Drainages 1 and 2. This drainage has steep earthen banks which are approximately 3 feet wide and 2 feet deep. This drainage conveys flows southward into the Santa Clara River. The channel bottom contains an OHWM defined by the break in slope which is approximately 1-2 feet wide and 1-2 feet deep. The drainage becomes flatter near its confluence with the Santa Clara River. The vegetation in

Unnamed Drainage 3 is similar to that of the surrounding uplands and includes California sagebrush, California buckwheat, and annual bromes. Unnamed Drainage 3 appears to receive flows only during storm events and is ephemeral.

Unnamed Drainage 4

Unnamed Drainage 4 is a convergent hillside drainage located on the steep hillside north of the Santa Clara River, along the western boundary of the Survey Area. This drainage conveys flows southward into the Santa Clara River. The northern portion of the drainage has steep earthen banks which are approximately 3 feet wide and 1 foot deep. The channel bottom contains an OHWM defined by the break in slope which is approximately 1-2 feet wide and 1-2 feet deep. In this portion of the drainage, upland vegetation including California buckwheat, annual bromes, and Russian thistle are dominant.

Approximately halfway down the hillside, Unnamed Drainage 4 intersects with the Santa Clara River Trail, a paved multi-use trail. Water is able to pond before being conveyed under the trail via culvert. This area of ponding is approximately 55 x 20 feet across and is characterized by scattered mulefat and one emergent Mexican fan palm (*Washingtonia robusta*). Unnamed Drainage 4 is conveyed under the trail by a 1.5-foot-wide corrugated metal pipe culvert. The culvert outlets south of the trail and flows are conveyed downhill by a 2-foot-wide concrete ditch to the Santa Clara River. Unnamed Drainage 4 appears to receive flows only during storm events and is ephemeral.

Unnamed Drainage 5

Unnamed Drainage 5 flows in a southwest direction, adjacent to the northern boundary of the Survey Area. This drainage is largely outside the boundary of the Survey Area, however a portion of the riparian habitat associated with the drainage is within the Survey Area. Unnamed Drainage 5 was not part of the formal jurisdictional delineation for this project. Only the portion within the Survey Area was assessed. This portion consists of dense red willow riparian woodland and forest characterized by a continuous tree canopy of red willow.

Unnamed Drainage 6

Unnamed Drainage 6 is located in the southwestern corner of the Survey Area. This drainage flows northward into the Santa Clara River and is characterized by a main channel and a non-jurisdictional side channel. The main channel of Unnamed Drainage 6 has an OHWM which is approximately 2-10 feet wide and 2-6 inches deep, and is defined by a change in vegetation and break in break. The drainage is characterized by riparian vegetation including sandbar willow, red willow, and Fremont cottonwood trees. The riparian vegetation generally extends between 10-75 feet across. Surface water originating from urban runoff was present during the April 2021 survey, however the channel was dry during the August 2022 field survey. The hydrologic regime of this feature is augmented by urban runoff, which creates an intermittent flow regime. In the absence of urban runoff, the feature would likely be ephemeral.

Unnamed Drainage 6 also includes an area of non-jurisdictional overland flow which conveys water from a pipe culvert outlet northwest into the main channel. This non-jurisdictional feature does not contain an OHWM or natural streambed characteristics. No surface water was present in the feature during the April 2021 or August 2022 field surveys. Water flows are provided from the culvert and consist of urban runoff. This non-jurisdictional portion of Unnamed Drainage 6 is ephemeral.

Waters of the U.S.

The U.S. Supreme Court on May 25, 2023, issued its opinion in *Sackett v. Environmental Protection Agency, 598 U.S*. The opinion addresses the definition of "Waters of the United States" (WOTUS) pursuant to the Clean Water Act (CWA), 33 U.S.C. Section 1251 et seq. The definition of WOTUS defines the geographic reach of the USACE and the U.S. Environmental Protection Agency's (EPA) authority in regulating streams, wetlands and other water bodies under the CWA. The USACE has paused issuing Approved Jurisdictional Determinations, pending review and interpretation of the Supreme Court's decision. This report takes a conservative approach and assumes that the ephemeral drainages within the survey area would be considered WOTUS subject to USACE jurisdiction pursuant to Regulatory Guidance Letter 16-01.

Santa Clara River

The Santa Clara River may be navigable-in-fact under some flow conditions and is a tributary to the Pacific Ocean which is also navigable. However, within the Survey Area, the Santa Clara River would be considered a Relatively Permanent Water (RPW). RPWs are those features that flow perennially or seasonally (e.g., at least three months of the year). As such, the river is a WOTUS regulated by USACE. An OHWM was present along the active channel; therefore, USACE non-wetland waters are potentially present. USACE wetland waters of the U.S. were not present along the mainstem as no areas exhibited a dominance of hydrophytic vegetation and hydric soils were not present at Sample Points 1 and 2. Wetland hydrology was present at Sample Point 1, with indicators including drainage patterns and riverine drift deposits.

Unnamed Drainages

There are six unnamed drainages within the Survey Area. These drainages have the potential to affect the water quality and biological attributes of the Santa Clara River, which is a WOTUS. Drainages such as these had been considered WOTUS pursuant to the CWA; however, *Sackett v. Environmental Protection Agency*, 598 U.S. held that the "significant nexus" test is "inconsistent with the CWA's text." For the purpose of this analysis, however, these features are assumed jurisdictional in the absence of additional guidance from the USACE.

USACE wetland WOTUS are not present within any of the Unnamed Drainages due to the absence of hydrophytic vegetation, hydric soils. Or wetland hydrology indicators.

Unnamed Drainages 1-4 are ephemeral tributaries which provide surface flow to the Santa Clara River (an RPW) in a typical year. Unnamed Drainages 1-4 are not RPWs, but may transport sediment, pollutants, water flow, and seeds downstream to Santa Clara River and the Pacific Ocean. These inputs have the potential to affect the water quality and biological attributes of the Santa Clara River.

A potentially jurisdictional culvert is present in Unnamed Drainages 4; in this case, non-wetland waters of the U.S. were potentially present and were determined to be defined by the width of the culvert. In the culverted areas, wetland waters of the U.S. were not present due to the lack of hydrology indicators, hydrophytic vegetation, and hydric soils.

Only the portion of Unnamed Drainage 5 within the Survey Area was evaluated during the field survey. The channel of the feature was not located within the Survey Area, therefore no USACE jurisdictional waters are present. It is likely that USACE jurisdictional waters are present in Unnamed Drainage 5 outside the Survey Area, however this area was not formally surveyed.

Unnamed Drainage 6 is an intermittent tributary which provides surface flow to the Santa Clara River in a typical year. The flows in Unnamed Drainage 6 are largely provided by urban runoff, and the feature is not an RPW. The feature may transport sediment, pollutants, water flow, and seeds downstream to Santa Clara River and the Pacific Ocean. These inputs have the potential to affect the water quality and biological attributes of the Santa Clara River.

Waters of the State

The Santa Clara River is potentially regulated by RWQCB under CWA Section 401 and the Porter-Cologne Water Quality Control Act. Non-wetland waters were potentially present and determined to be coterminous with the USACE non-wetland WOTUS. Wetland waters of the state were not present along the mainstem as no areas exhibited a dominance of hydrophytic vegetation and hydric soils were not present, as determined by Sample Points 1 and 2.

Due to the presumed presence of surface water within Unnamed Drainages 1-4 during the rainy season, these features are potentially regulated by RWQCB under the Porter-Cologne Water Quality Control Act and possibly CWA Section 401. Potential non-wetland waters of the State were determined to be present and were determined to be coterminous with limits of potential USACE jurisdiction. Wetland waters of the State were not present in any of these drainages due to the lack of hydrology indicators, hydric soils, and limited presence of hydrophytic vegetation. Scattered hydrophytic vegetation is present in Unnamed Drainage 4 in the form of mulefat and a Mexican fan palm, however it is not present in sufficient quantity or density to indicate a dominance of hydrophytic vegetation. No hydrophytic or riparian vegetation is present in Unnamed Drainages 1-3.

A potentially jurisdictional culvert is present in Unnamed Drainages 4; in this case, non-wetland waters of the State were potentially present and were determined to be defined by the width of the culvert. In the culverted areas, wetland waters of the State were not present due to the lack of hydrology indicators, hydrophytic vegetation, and hydric soils.

As described above, only the portion of Unnamed Drainage 5 within the Survey Area was evaluated during the field survey. The channel of the feature was not located within the Survey Area, therefore no RWQCB jurisdictional waters are present in the Survey Area. It is likely that RWQCB jurisdictional waters are present in Unnamed Drainage 5 outside the Survey Area, however this area was not formally surveyed.

Due to the presence of surface water within Unnamed Drainage 6 during the April 2021 field survey and presumed presence of surface water during the rainy season, this feature is potentially regulated by RWQCB under the Porter-Cologne Water Quality Control Act and possibly CWA Section 401. Potential non-wetland waters of the State were determined to be present and were determined to be coterminous with limits of USACE jurisdiction. Wetland waters of the State were not present due to the lack of hydrology indicators, hydric soils, and limited presence of hydrophytic vegetation. Scattered hydrophytic vegetation is present in Unnamed Drainage 6 (e.g., sandbar willow, Fremont cottonwood, rabbitsfoot grass); however, it is not present in sufficient quantity or density to indicate a dominance of hydrophytic vegetation.

CDFW Jurisdictional Streambeds

Since the Santa Clara River contains defined bed and banks, as well as riparian vegetation, it is potentially subject to CDFW jurisdiction pursuant to CFGC Section 1600 et seq. The CDFW jurisdictional streambed was largely defined by the top of bank, with a few areas of riparian vegetation (e.g., mulefat, Fremont cottonwood) that extended jurisdiction beyond the top of bank.

Since Unnamed Drainages 1-6 contain defined bed and banks, these features are potentially subject to CDFW jurisdiction pursuant to CFGC Section 1600 et seq. The CDFW-jurisdictional streambed was defined by the extent of the top of bank in cases where no riparian vegetation is present (i.e., Unnamed Drainages 1-3). Riparian vegetation is present in the form of mulefat thickets in Unnamed Drainage 4, red willow riparian woodland and forest in Unnamed Drainage 5, and Fremont cottonwood forest and woodland and sandbar willow / mesic graminoids thickets in Unnamed Drainage 6. Therefore, in these areas the extent of CDFW-jurisdictional streambed was defined by the extent of riparian vegetation.

4.6 Resources Protected by Local Policies and Ordinances

The proposed project is subject to City of Santa Clarita established environmental protection guidelines. Special status species resources are protected through the City's Municipal Codes and the General Plan.

City of Santa Clarita General Plan

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

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

- *Policy CO 3.1.1*: On the Land Use Map and through the development review process, concentrate development into previously developed or urban areas to promote infill development and prevent sprawl and habitat loss, to the extent feasible.
- *Policy CO 3.1.2*: Avoid designating or approving new development that will adversely impact wetlands, floodplains, threatened or endangered species and habitat, and water bodies supporting fish or recreational uses, and establish an adequate buffer area as deemed appropriate through site specific review.
- *Policy CO 3.1.3*: On previously undeveloped sites ("greenfields"), identify biological resources and incorporate habitat preservation measures into the site plan, where appropriate. (This policy will generally not apply to urban infill sites, except as otherwise determined by the reviewing agency).
- *Policy CO 3.1.4*: For new development on sites with degraded habitat, include habitat restoration measures as part of the project development plan, where appropriate.
- *Policy CO 3.1.5*: Promote the use of site-appropriate native or adapted plant materials, and prohibit use of invasive or noxious plant species in landscape designs.
- *Policy CO 3.1.6*: On development sites, preserve and enhance natural site elements including existing water bodies, soil conditions, ecosystems, trees, vegetation and habitat, to the extent feasible.
- *Policy CO 3.1.7*: Limit the use of turf-grass on development sites and promote the use of native or adapted plantings to promote biodiversity and natural habitat.

- *Policy CO 3.1.8*: On development sites, require tree planting to provide habitat and shade to reduce the heat island effect caused by pavement and buildings.
- *Policy CO 3.1.9*: During construction, ensure preservation of habitat and trees designated to be protected through use of fencing and other means as appropriate, so as to prevent damage by grading, soil compaction, pollution, erosion or other adverse construction impacts.
- *Policy CO 3.1.10*: To the extent feasible, encourage the use of open space to promote biodiversity.
- *Policy CO 3.1.11*: Promote use of pervious materials or porous concrete on sidewalks to allow for planted area infiltration, allow oxygen to reach tree roots (preventing sidewalk lift-up from roots seeking oxygen), and mitigate tree-sidewalk conflicts, in order to maintain a healthy mature urban forest.

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

- *Policy CO 3.2.3*: Ensure protection of any endangered or threatened species or habitat, in conformance with State and federal laws.
- *Policy CO 3.2.4*: Protect biological resources in the designated Significant Ecological Areas (SEAs) through the siting and design of development which is highly compatible with the SEA resources. Specific development standards should be identified to control the types of land use, density, building location and size, roadways and other infrastructure, landscape, drainage, and other elements to assure the protection of the critical and important plant and animal habitats of each SEA. In general, the principle should be to minimize the intrusion and impacts of development in these areas with sufficient controls to adequately protect the resources.

Objective CO 3.3. Protect significant wildlife corridors from encroachment by development that would hinder or obstruct wildlife movement.

- *Policy CO 3.3.1*: Protect the banks and adjacent riparian habitat along the Santa Clara River and its tributaries, to provide wildlife corridors.

Objective CO 3.5. Maintain, enhance, and manage the urban forest throughout developed portions of the Santa Clarita Valley to provide habitat, reduce energy consumption, and create a more livable environment.

- *Policy CO 3.5.1*: Continue to plant and maintain trees on public lands and within the public right-of-way to provide shade and walkable streets, incorporating measures to ensure that roots have access to oxygen at tree maturity, such as use of porous concrete.
- *Policy CO 3.5.2*: Where appropriate, promote planting of trees that are native or climactically appropriate to the surrounding environment, emphasizing oaks, sycamores, maple, walnut, and other native species in order to enhance habitat, and discouraging the use of introduced species such as eucalyptus, pepper trees, and palms except as ornamental landscape features.

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

- *Policy CO 3.6.1*: Minimize light trespass, sky-glow, glare, and other adverse impacts on the nocturnal ecosystem by limiting exterior lighting to the level needed for safety and comfort;

reduce unnecessary lighting for landscaping and architectural purposes, and encourage reduction of lighting levels during nonbusiness nighttime hours.

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

Significant Ecological Areas

The City's General Plan and Municipal Code (Section 17.38.080) includes treatment of the Significant Ecological Areas (SEAs) Overlay Zone as among the habitat types within the City. SEAs are "defined as ecologically important land and water systems that are valuable as plant or animal communities, often important to the preservation of threatened and endangered species, and conversation of biological diversity in the County" (City of Santa Clarita 2011). The City of Santa Clarita's Municipal Code Section 17.38.080 requires a conformance review for development within the SEA Overlay Zone.

The Survey Area is located partially within the Santa Clara River SEA. The Santa Clara River SEA covers the length of the river and with the watershed extensions, encompasses a wide variety of topographic features and habitat types. The orientation and extent of the SEA extends from the river's headwater tributaries and watershed basin to the point at which it exits Los Angeles County.

Protected Trees

Within the City, there is currently an Oak Tree Preservation Ordinance (Section 17. 51.040) under the City's Unified Development Code. This Ordinance focuses on the preservation of oak trees within the City's limits, requiring an oak tree permit for removal, cutting, pruning, relocation damage or encroachment of healthy oak trees measuring six inches in circumference or larger at 4.5-feet above grade. No oak trees were observed during field surveys.

4.7 Habitat Conservation Plans

The Survey Area is not located in an area with any Habitat Conservation Plans, Natural Community Conservation Plans, or other approved local, regional, or state habitat conservation plans. Therefore, conservation plans are not addressed further within this analysis.

5 Impact Analysis and Mitigation Measures

This section discusses potential adverse impacts to biological resources that may occur from implementation of the proposed project, within the project footprint, and includes recommended avoidance, minimization, and mitigation measures that would reduce impacts to less than significant levels.

5.1 Special Status Species

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 or U.S. Fish and Wildlife Service.

5.1.1 Special Status Plant Species

Fourteen special status plant species are known to occur or have the potential to occur within the Survey Area. Of the 14 plant species evaluated, two have moderate potential to occur (Catalina mariposa lily and Plummer's mariposa lily), and one has high potential to occur (slender mariposa lily). Ground disturbance from project construction could directly result in the damage or removal of special status plants if present on the site. Should special status species be encountered within the project site, direct impacts could occur through injury or mortality to individuals by heavy equipment during construction. Indirect impacts could result from habitat modifications, such as by the introduction of invasive plants disseminated from construction equipment, contamination of soils, and habitat degradation due to accidental fuel spills during construction.

Catalina mariposa lily, Plummer's mariposa lily, and slender mariposa lily were not observed within the Survey Area during reconnaissance surveys, but they have a moderate to high potential to occur. Given the proposed open cut trenching construction method, individuals of these species if present could be removed, damaged, or disturbed by the project. Impacts to these species would be significant, but mitigable through implementation of Best Management Practices (BMPs), a worker education program, pre-project botanical surveys, avoidance measures, and compensatory mitigation requirements (if applicable) as prescribed under **avoidance and minimization measures (AMM) BIO-1 through BIO-5**.

AMM BIO-1 General Best Management Practices

General requirements which should be followed by construction personnel are listed below.

- The contractor should clearly delineate the construction limits and prohibit any construction-related traffic outside those boundaries.
- 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 proposed 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.
- If vehicle or equipment maintenance is necessary, it should be performed in the designated staging areas.
- If construction must occur at night (between dusk and dawn), all lighting will be shielded and directed downward to minimize the potential for glare or spillover onto adjacent properties and to reduce impacts on local wildlife.
- 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 any 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. The construction foreman or biological monitor should immediately notify SCV Water. SCV Water should follow up with written notification to USFWS and/or CDFW within five working days of the incident. All observations of federally listed species should be recorded on CNDDB field sheets and sent to CDFW by SCV Water or the biological monitor.

AMM BIO-2 Worker Environmental Awareness Program

A lead biological monitor should also conduct a pre-project environmental education program for all personnel working at the site, which should be focused on conditions and protocols necessary to avoid and minimize potential impacts to biological resources. Prior to initiation of construction activities (including staging and mobilization), all personnel associated with project construction should attend a Worker Environmental Awareness Program (WEAP) training, conducted by a qualified biologist, to aid workers in recognizing special status biological resources potentially occurring in the project area. This training will include information about the special status species with potential to occur in the project area. The specifics of this program should include identification of special status species and habitats, a description of the regulatory status and general ecological characteristics of special status resources, and 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 crew foreman should be responsible for ensuring crew members adhere to the guidelines and restrictions designed to avoid impacts to special status species.

AMM BIO-3 Special Status Plant Surveys

To avoid impacts to special status plants, surveys for special status plants should be completed prior to any vegetation removal, grubbing, or other construction activity within this area. The surveys should be floristic in nature, seasonally timed to coincide with the blooming period of the target

species identified in this BRA as having a potential to occur, and be conducted by a qualified biologist.

Special status plant species identified on-site should be mapped onto a site-specific aerial photograph and topographic map. Surveys should be conducted in accordance with the most current protocols established by the CDFW and USFWS. A report of the survey results should be submitted to SCV Water for review and approval.

AMM BIO-4 Special Status Plant Avoidance Measures

If special status plants are detected during special status plant surveys, avoidance of the special status plants should occur where feasible and vegetation clearing within 50 feet of any identified rare plant will be conducted by hand, if practicable. Any rare plant occurrences should have bright orange protective fencing installed at least 50 feet beyond their extent, or other distance as approved by a qualified biologist, to protect them from harm.

If avoidance is not feasible, SCV Water should offset the proposed loss of individual plants at a minimum 1:1 ratio by on-site restoration (salvage, replanting, and propagation). The open scrub and grassland habitats in the Survey Area would be a suitable location for on-site restoration. Compensation for impacts to these species may be accomplished by preservation of on-site populations or off-site populations in the vicinity of the site at a minimum of a 1:1 ratio if present.

AMM BIO-5 Special Status Plant Mitigation and Monitoring Plan

If special status plants are detected and would be impacted by project construction, a Special Status Plant Mitigation and Monitoring Plan that provides for the replacement of the species impacted by the project should be developed by a qualified restoration specialist.

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 area;
- 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 in the event that 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 lost to project construction, and

- Restoration will be considered successful after the success criteria have been met for a period of at least 2 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 development of the project and should be implemented over a five-year period. It can also be combined with the Habitat Revegetation, Restoration, and Monitoring Program described under AMM BIO-10, below.

Annual reports discussing the implementation, monitoring, and management of the Special Status Plant Mitigation and Monitoring Plan should be submitted to SCV Water. Five years after the start of the mitigation project, a final report should be submitted, which should at a minimum discuss the implementation, monitoring, 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 established performance standards. Should the success criteria be met before Year Five, the mitigation effort can be deemed complete.

5.1.2 Special Status Wildlife Species

Based on the database and literature review, 23 special status wildlife species are known or have the potential to occur in the Survey Area. Of the 23 wildlife species evaluated, 7 special status wildlife species have low potential to occur, 9 have moderate potential, 4 have high potential, and 3 were present in the Survey Area during the field survey. Coastal whiptail, turkey vulture, and California towhee were present on the project site during the survey. California legless lizard, coast horned lizard, Cooper's hawk, and the southern California rufous-crowned sparrow have a high potential to occur on the project site. Santa Ana sucker, unarmored threespine stickleback, arroyo chub, Bell's sage sparrow, coastal California gnatcatcher, least Bell's vireo, western spadefoot, arroyo toad, and San Diego black-tailed jackrabbit have a moderate potential to occur on the project site. While Los Angeles County lists turkey vulture and California towhee as sensitive bird species, they are common in the project area. With implementation of the AMMs described further below, potential direct and indirect impacts to special status wildlife species would be reduced to less than significant.

Special Status Amphibians and Reptiles

Most of the special status wildlife species that may potentially occur within the project footprint are capable of escaping harm during project construction, while others are potentially vulnerable to direct impacts, including injury and mortality. Special status species that could be directly impacted include potentially occurring land dwelling animals, including the coastal whiptail, silvery legless lizard, coast (San Diego) horned lizard as well as aquatic and semi-aquatic species such as arroyo toad and western spadefoot.

The project's use of open cut trenching to replace the existing line across the Santa Clara River has the potential to directly impact these special status species. Open trench excavation consists of digging down to below the river scour level, installing a new pipe or a section of new pipe, and then backfilling the trench. Implementation of **AMMs BIO-6 and BIO-7** would require implementation of pre-construction surveys for special status wildlife species and construction monitoring. Potential impacts to federally- and state-listed wildlife species, if present, would require incidental take authorizations from the USFWS and CDFW.

Coastal California Gnatcatcher and Least Bell's Vireo

Protocol-level surveys conducted in 2023 determined that coastal California gnatcatcher was absent, and least Bell's vireo was not observed during any surveys. Similarly, protocol-level surveys for least Bell's vireo conducted downstream of the study area by Rincon in May 2020 determined this species was absent from that area. Given the survey findings and the temporary duration and limited size of project impacts, direct and indirect impacts to these species are not expected.

Special Status Fish Species

There are documented occurrences of unarmored threespine stickleback, Santa Ana Sucker, and arroyo chub within 5 miles of the project area. The project's use of open cut trenching to replace the existing line across the Santa Clara River has the potential to directly impact these special status species should flowing or standing water be present during construction. Implementation of **AMM BIO-8** would restrict the construction window to avoid impacts to these species, as well as arroyo toad and western spadefoot.

Special Status and Nesting Birds

The nests of most native birds and raptors are state and federally protected. It is likely birds use the Survey Area for nesting (generally from early February through late August) given the mix of native and non-native vegetation, as well as the number of bird species and individuals observed during the survey. Implementation of the proposed project could result in direct or indirect impacts to nesting birds, through the direct removal or trimming of vegetation. Project-related noise, vibration, and increased lights can lead to the disturbance of nesting birds which may have a negative impact on the animals. Although temporary, such disturbance can lead to the abandonment of a bird nest.

The project has potential to result in direct and indirect impacts to nesting birds, including SSC species such as southern California rufous-crowned sparrow, Bell's sage sparrow, and Cooper's hawk, and species protected under the MBTA and CFGC 3503, if they are nesting within the project site and/or immediate vicinity during construction activities. Construction would occur where ruderal vegetation, coastal sage scrub, and ornamental trees are present. Direct impacts from construction activities include ground disturbance, which could potentially contain birds' nests. Indirect impacts include construction noise, lighting, and fugitive dust. These impacts could lead to individual mortality or harassment that might reduce nesting success. Therefore, **AMM BIO-9** would require a pre-construction nesting bird survey and protective buffers if nesting birds are located.

BIO-6 Pre-activity Survey

Prior to commencement of ground or vegetation disturbing activities at the project site, a qualified biologist should conduct two surveys for special status wildlife species. The first survey should be conducted no more than fourteen (14) days prior to commencement of project activities and the second survey should be conducted no more than three (3) days prior to the commencement of project activities. The survey should incorporate methods to detect the special status wildlife species that could potentially occur at the site. To the extent feasible, special status species should be avoided. If avoidance is not feasible, the species should be captured and transferred to an appropriate habitat and location on-site where it would not be harmed by project activities. The biologist should hold the requisite permits for the capture and handling of the species, if applicable. Prior to commencement of the proposed activity, the methods and results of the surveys and, if a special status species is found, the measures to be employed to avoid impacts to the species should be presented in a letter report to SCV Water.

AMM BIO-7 Qualified Biological Monitor

A qualified biological monitor familiar with special status species with potential to occur in the project site will be present during initial ground disturbance or vegetation removal activities. The biological monitor should have the authority to temporarily stop work if one or more special status amphibian, reptile, or mammals are observed; the monitor will then relocate these individuals to suitable undisturbed habitat, outside the areas directly and indirectly affected by ground disturbance activities. Relocation of a federally or state-listed species may require incidental take authorization from CDFW and/or USFWS.

The monitor will recommend measures to ensure compliance with all avoidance and minimization measures, applicable permit conditions, and any conditions required by SCV Water. When the biological monitor is present on site, they will be responsible for:

- Ensuring procedures for verifying compliance with environmental mitigation are followed;
- Lines of communication and reporting methods;
- Daily and weekly reporting of compliance;
- Construction crew WEAP training;
- Authority to stop work; and
- Action to be taken in the event of non-compliance.

AMM BIO-8 Dry Season Construction

To eliminate the potential for impacts to the unarmored threespine stickleback, arroyo toad, western spadefoot and other sensitive aquatic species and to minimize impacts to wildlife movement corridors, construction within the Santa Clara River will 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 is present. In addition, surface elevations within the River will be returned to preconstruction conditions prior to the end of the dry season.

AMM BIO-9 Nesting Birds

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

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

If nests are found, their locations should be flagged. An appropriate avoidance buffer ranging in size from 25 to 50 feet for passerines, and up to 300 feet for raptors depending upon the species and the proposed work activity, should be determined and demarcated by a qualified biologist with bright orange construction fencing or other suitable flagging. Active nests should be monitored at a minimum of once per week until it has been determined the nest is no longer being used by either

the young or adults. No ground or vegetation disturbance should occur within this buffer until the qualified biologist confirms the breeding/nesting is completed and all the young have fledged. 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.

5.2 Sensitive Natural Vegetation Communities and Jurisdictional Resources

The proposed project would have a significant effect on biological resources if it would:

b) Have a substantial adverse impact on any riparian habitat or other sensitive natural community identified in local or regional plans, policies, regulations or by the California Department of Fish and Wildlife or US Fish and Wildlife Service.

As shown in Figure 6, none of the three CDFW-designated sensitive natural vegetation communities (red willow riparian woodland and forest, scalebroom - California buckwheat scrub, and Fremont cottonwood forest and woodland) would be impacted by project activities. The project would temporarily impact approximately 0.42 acre of vegetation communities and land cover types classified as riparian habitat, and 0.81 acre of native scrub habitat comprised of big sagebrush scrub, California sagebrush – California buckwheat scrub, and thick-leaved yerba santa scrub (Table 6).

Table 6 Summary of Vegetation and Land Cover Types in the Survey Area[1]

Vegetation Community or Land Cover Type	Approximate Acreage	Temporary Project Impact (Acres)	Habitat Type	CDFW Sensitive Natural Community (Yes/No)
Arroyo Willow Thickets Shrubland Alliance	-	-	Riparian	G4S4; No
Arroyo Willow – Mulefat Thickets Association	2.8	0.02	Riparian	G4S4; No
Big Sagebrush Shrubland Alliance	-	-	Upland	G5S5; No
Big Sagebrush Association	2.8	0.13	Upland	Unranked; No
California Sagebrush – (Purple Sage) Scrub Shrubland Alliance	-	-	Upland	G5S5; No
California Sagebrush – California Buckwheat Scrub Association	20.9	0.58	Upland	G4S4; No
Chamise Chaparral Shrubland Alliance	-	-	Upland	G5S5; No
Chamise – Buck Brush Chaparral Association	1.2	-	Upland	G4?; No
Chamise – California Buckwheat Chaparral Association	1.7	-	Upland	G4S4; No
Fremont Cottonwood Forest and Woodland Alliance	-	-	Riparian	G4S3; Yes

Vegetation Community or Land Cover Type	Approximate Acreage	Temporary Project Impact (Acres)	Habitat Type	CDFW Sensitive Natural Community (Yes/No)
Fremont Cottonwood Forest and Woodland Association	0.1	-	Riparian	G2Q; Yes
Mulefat Thickets Shrubland Alliance	-	-	Riparian	G4S4; No
Mulefat Thickets Association	0.7	-	Riparian	G5S5; No
Mulefat – Tamarisk Thickets Association	1.4	0.10	Riparian	Unranked; No
Goodding's Willow – Red Willow Riparian Woodland and Forest Alliance	-	-	Riparian	G4S3; Yes
Red Willow Riparian Woodland and Forest Association	0.2	-	Riparian	GNR; Yes
Sandbar Willow Thickets Shrubland Alliance	-	-	Riparian	G5S4; No
Sandbar Willow / Mesic Graminoids Thickets Association	0.3	0.03	Riparian	Unranked; No
Scalebroom Scrub Shrubland Alliance	-	-	Riparian	G3S3; Yes
Scalebroom – California Buckwheat Scrub Association	0.6	-	Riparian	Unranked; Yes
Deerweed - Silver Lupine - Yerba Santa Scrub Shrubland Alliance	-	-	Upland	G5S5; No
Thick Leaved Yerba Santa Scrub Association	3.0	0.10	Upland	Unranked; No
Wild Oats and Annual Brome Grasslands Herbaceous Semi-Natural Alliance	-	-	Upland	GNASNA; No
Wild Oats and Annual Brome Grasslands Association	1.9	0.04	Upland	GNASNA; No
Riverwash	6.1	0.27	Riparian	N/A
Disturbed/Developed	10.1	1.15	N/A	N/A
Total	**53.8**	**2.42**	**N/A**	**N/A**

[1] Vegetation community ranks are from CDFW (2022). Associations are indicated in *italics*. CDFW sensitive natural communities are indicated in **bold**.

Construction activities would directly affect 0.42 acre of riparian habitat and 0.81 acre of native scrub habitat. In addition, potential indirect impacts from construction, such as erosion, runoff, dust from excavation and construction equipment may have the potential to result in indirect impacts to riparian habitat. Potential impacts associated with runoff would be minimized through

implementation of appropriate BMPs, including, but not limited to, straw wattles, silt fencing, and plastic covers for soil spoils. Implementation of AMM BIO-1, BIO-2, BIO-7, BIO-8, and **BIO-10** would further reduce potential impacts to sensitive habitats to less than significant.

AMM BIO-10 Habitat Revegetation, Restoration, and Monitoring Program

SCV Water will develop a Habitat Revegetation, Restoration, and Monitoring Program for implementation in all native habitat areas directly affected by construction activities. The program will include the following measures:

- **Invasive Species Control**
  - Where appropriate and feasible, the area to be disturbed will be treated to kill invasive exotic species and limit their seed production prior to initiating any earthmoving activity with the objectives of (1) preventing invasive species from spreading from the disturbance area, and (2) removing weed sources from the salvaged topsoil. Herbicides will be used only by a licensed herbicide applicator and may require notification to property owners or resource agencies. The treatment will be completed in advance of the earthmoving in order for this mitigation to have its intended effect (e.g., the treatment would need to occur prior to target species setting seed).
- **Topsoil Salvage and Replacement**
  - In areas where vegetation and soil are to be removed, the topsoil will be salvaged and replaced. This may be accomplished using two lifts, the first to salvage the seed bank, and the second to salvage soil along with soil biota in the root zone. Soil will be stockpiled in two areas near the project site, with the seed bank labeled to identify it. Topsoil will be replaced in the proper layers after final reconfiguration of disturbed areas. Stockpiles will be covered if the soil is to be left for an extended period of time to prevent losses due to erosion and invasion of weeds.
- **Habitat Rehabilitation and Revegetation**
  - Plans and specifications for replanting areas disturbed by the project will be developed with native species propagated from locally collected seed or cuttings, and, if applicable, will include seed of sensitive species that would be impacted during construction activities.
  - Monitoring procedures and performance criteria will be developed to address revegetation and erosion control. The performance criteria will consider the level of disturbance and the condition of adjacent habitats. Monitoring will continue for 3-5 years, or until performance criteria have been met, specifically the restoration/revegetation of disturbed native habitat at a 1:1 ratio. Appropriate remedial measures, such as replanting, erosion control, or weed control, will be identified and implemented if it is determined that performance criteria are not being met.

5.3 Jurisdictional Waters and Wetlands

The proposed project would have a significant effect on biological resources if it would:

c) Have a substantial adverse effect on state or federally protected wetlands (including, but not limited to, marsh, vernal pool, coastal, etc.) through direct removal, filling, hydrological interruption, or other means.

No state or federally protected wetlands occur on the project site, but the Survey Area includes seven potentially jurisdictional features consisting of 5.93 acres of jurisdictional non-wetland WOTUS that may be regulated by the USACE, 5.93 acres of non-wetland waters of the State that may be regulated by the RWQCB, and 13.04 acres of potentially jurisdictional CDFW streambed.

Project construction would involve open cut trenching across the Santa Clara River and portions of Unnamed Drainage 6 (Table 7).

Table 7 Impacts to USACE, RWQCB, and CDFW Jurisdiction

	USACE Jurisdiction		RWQCB Jurisdiction		CDFW Jurisdiction
Feature	Non-Wetland Waters of the U.S. (acres/ linear feet)	Wetland Waters of the U.S. (acres/ linear feet)	Non-Wetland Waters of the State (acres/ linear feet)	Wetland Waters of the State (acres/ linear feet)	Streambed and Associated Riparian Habitat (acres/ linear feet)
Santa Clara River	0.26/40	0/0	0.26/40	0/0	0.39/40
Unnamed Drainage 6	0.01/132	0/0	0.01/132	0/0	0.03/132
Total	**0.27/172**	**0/0**	**0.27/172**	**0/0**	**0.42/172**

The proposed project would temporarily impact 0.26 acre of jurisdictional waters of the U.S. and waters of the State and 0.42 acre of CDFW jurisdictional habitat.

Prior to ground disturbance activities that could impact these features, 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 is anticipated to require a Lake and Streambed Alteration Agreement from the CDFW, a Water Quality Certification under Clean Water Act Section 401 from the Los Angeles RWQCB, and verification from the USACE under Nationwide Permit 58. Based on such consultation, any required permits must be obtained prior to disturbance of jurisdictional resources. With implementation of AMM BIO-10 and **AMM BIO-11** and adherence to agency permits and existing regulations, potential direct and indirect impacts to jurisdictional habitat would be reduced to a less than significant level.

AMM BIO-11 Jurisdictional Habitat Best Management Practices

To avoid and/or minimize potential indirect impacts to jurisdictional waters and water quality, the following Best Management Practices should be implemented within 50 feet of a jurisdictional feature:

- Materials should be stored on impervious surfaces or plastic ground covers to prevent any spills or leakage and should be at least 50 feet from drainage features. Construction materials and spoils should be protected from stormwater runoff using temporary perimeter sediment barriers such as berms, silt fences, fiber rolls, covers, sand/gravel bags, and straw bale barriers, as appropriate.
- All vehicles and equipment should be in good working condition and free of leaks. The contractor should prevent oil, petroleum products, or any other pollutants from contaminating the soil or entering a watercourse (dry or otherwise). When vehicles or equipment are stationary, mats or drip pans should be placed below vehicles to contain fluid leaks.

- All re-fueling, cleaning, and maintenance of equipment will occur at least 50 feet from potentially jurisdictional waters.
- Adequate spill prevention and response equipment should be maintained on-site and readily available to implement to ensure minimal impacts to the aquatic and marine environments.

5.4 Wildlife Movement

The proposed project would have a significant effect on biological resources if it would:

d) Interfere substantially with the movement of any resident or migratory fish or wildlife species or with established resident or migratory wildlife corridors, or impede the use of wildlife nursery sites.

Wildlife movement corridors can be both large- and small-scale. At the regional/landscape-level scale, the Survey Area is not included within any mapped landscape models, such as an Essential Connectivity Area or Natural Landscape block in the California Essential Habitat Connectivity Project: A Strategy for Conserving a Connected California (Spencer et al. 2010). Habitat corridors are present within the Survey Area, notably including the Santa Clara River. The Santa Clara River has headwaters in the San Gabriel Mountains and flows westward approximately 84 miles to the Oxnard Plain, where it discharges into the Pacific Ocean. This is the largest river system in southern California that remains in a relatively natural state, and it connects highly diverse habitat types.

The Santa Clara River provides a valuable movement and migration corridor for many types of wildlife, including terrestrial, semi-aquatic, and aquatic species. The ridgeline along the northern boundary of the project site may also provide a local corridor for wildlife traveling between the Santa Clara River and residential developments to the north, east, and west.

Construction activities would be temporary, short-term, and would only occur during the daytime. Project construction would result in a temporary decrease in the function of the corridor for wildlife movement. Although the optimal path for wildlife movement (i.e., Santa Clara River) would be temporarily affected by the project, the wildlife can, and would likely, traverse around the work area (e.g., north of the tanks or south along the levee access road) during construction. In addition, implementation of BMPs, including measures to prevent wildlife entrapment (e.g., wildlife escape ramps) would reduce potentially significant impacts to wildlife movement to a less than significant level.

With implementation of AMM BIO-8, construction within the riverbed will occur when the river is dry (i.e., no flowing water). Therefore, impacts to resident or migratory fish would be less than significant.

Project operation would not increase activities that could impact wildlife movement beyond existing conditions. The project would be located below ground and would not interfere substantially with the movement of any native resident or migratory fish or wildlife species or with established native resident or migratory wildlife corridors or impede the use of native wildlife nursery sites. Impacts would be less than significant.

5.5 Local Policies and Ordinances

The proposed project would have a significant effect on biological resources if it would:

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

City of Santa Clarita General Plan

The City of Santa Clarita's General Plan land use designation and zoning designation for the project site is: Non-Urban 5 (NU5), Urban Residential 2 (UR2), and Business Park (BP). The City's General Plan Conservation and Open Space Element (2011) contains objectives and policies for biological resources relevant to the proposed project given its location and/or proposed activities. These objectives and policies focus on conservation of existing natural areas; restoration of damaged natural vegetation; protection of wetlands, oak trees and other indigenous woodlands, and endangered or threatened species and habitat; and protection of biological resources in significant ecological areas and significant wildlife corridors.

Per the General Plan Policies CO 3.1.3, 3.1.6, and 3.1.9, on previously undeveloped sites, natural site elements are to be preserved and biological resources are to be identified and habitat preservation measures and construction best management practices (i.e., ensure preservation of habitat and trees designated to be protected through use of fencing and other means as appropriate, so as to prevent damage by grading, soil compaction, pollution, erosion or other adverse construction impacts) are to be incorporated into the site plan, where appropriate. In addition, several special status species, as described above in threshold a) are expected to occur within the project area.

As identified above, these objectives and policies focus on conservation of existing natural areas; restoration of damaged natural vegetation; protection of wetlands, oak trees and other indigenous woodlands and endangered or threatened species and habitat; and protection of biological resources in SEAs and significant wildlife corridors. With implementation of AMMs BIO-1 through BIO-11, impacts to biological resources would be less than significant and the project would not conflict with policies protecting biological resources in the City of Santa Clarita General Plan. Impacts would therefore be less than significant with mitigation.

Santa Clara River Significant Ecological Area

The project site is located partially within the Santa Clara River Significant Ecological Area (SEA). The Santa Clara River SEA covers the length of the river and with the watershed extensions, encompasses a wide variety of topographic features and habitat types. The orientation and extent of the SEA extends from the river's headwater tributaries and watershed basin to the point at which it exits Los Angeles County. Project construction would potentially affect the SEA and its biological resources due to construction activity in the project area. With implementation of AMMs BIO-1 through BIO-11, impacts to biological resources within the SEA would be less than significant. During operation, the project would be entirely below ground, and the site would return to its existing condition. No operational impacts to SEAs would occur.

Protected Trees

Within the city, there is currently an Oak Tree Preservation Ordinance (Section 17.51.040) under the City's Unified Development Code. This Ordinance focuses on the preservation of oak trees within the City's limits, requiring an oak tree permit for removal, cutting, pruning, relocation damage or encroachment of healthy oak trees measuring six inches in circumference or larger at 4.5-feet above grade. No oak trees were observed during the field surveys, and no tree removal is proposed as part of the project. Therefore, no impacts to protected oak trees would occur.

5.6 Adopted or Approved Plans

The proposed project would have a significant effect on biological resources if it wd:

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

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.

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Appendix A

Regulatory Setting

Regulatory Framework

The following is a brief summary of the regulatory context under which biological resources are managed at the federal, State, and local levels. A number of federal and State statutes provide a regulatory structure which guide the protection of jurisdictional features. Agencies with the responsibility for protection of jurisdictional features within the project site include:

- United States Army Corps of Engineers (non-wetland waters and wetlands of the United States)
- Regional Water Quality Control Board (waters of the State)
- California Department Fish and Wildlife (riparian areas, streambeds, and lakes)
- California Coastal Commission (coastal wetlands)

United States Army Corps of Engineers Jurisdiction

The United States Army Corps of Engineers (USACE) is responsible for administering several federal programs related to ensuring the quality and navigability of the nation's waters.

Clean Water Act Section 404

Congress enacted the Clean Water Act (CWA) "to restore and maintain the chemical, physical, and biological integrity of the Nation's waters." Section 404 of the CWA authorizes the Secretary of the Army, acting through the USACE, to issue permits regulating the discharge of dredged or fill materials into the "navigable waters at specified disposal sites."

Section 502 of the CWA further defines "navigable waters" as "waters of the United States, including the territorial seas." "Waters of the United States" are broadly defined at 33 CFR Part 328.3 to include navigable waters, perennial and intermittent streams, lakes, rivers, ponds, as well as wetlands, marshes, and wet meadows. In recent years the USACE and US Environmental Protection Agency (USEPA) have undertaken several efforts to modernize their regulations defining "waters of the United States" (e.g., the 2015 Clean Water Rule and 2020 Navigable Waters Protection Rule), but these efforts have been frustrated by legal challenges which have invalidated the updated regulations. Thus, the agencies' longstanding definition of "waters of the United States," which dates from 1986, remains in effect albeit with supplemental guidance interpreting applicable court decisions as described below.

Waters of the U.S.

In summary, USACE and USEPA regulations define "waters of the United States" as follows:

(1) Waters which are:
   a. Currently used, or were used in the past, or may be susceptible to use in interstate or foreign commerce, including all waters which are subject to the ebb and flow of the tide;
   b. The territorial seas; or
   c. Interstate waters, including interstate wetlands;

(2) Impoundments of waters otherwise defined as waters of the United States under the definition, other than impoundments of waters identified under paragraph (5);

(3) Tributaries of waters identified in paragraph (1) or (2) of the definition:
   a. That are relatively permanent, standing or continuously flowing bodies of water; or
   b. That either alone or in combination with similarly situated waters in the region, significantly affect the chemical, physical, or biological integrity of waters identified in paragraph (1) of the definition;

(4) Wetlands adjacent to the following waters:
   a. Waters identified in paragraph (1) of the definition; or
   b. Relatively permanent, standing or continuously flowing bodies of water identified in paragraph (2) or (3)(a) of the definition and with a continuous surface connection to those waters; or
   c. Waters identified in paragraph (2) or (3) of this section when the wetlands either alone or in combination with similarly situated waters in the region, significantly affect the chemical, physical, or biological integrity of waters identified in paragraph (1) of the definition;

(5) Intrastate lakes and ponds, streams, or wetlands not identified in paragraphs (1) through (4) of the definition:
   a. That are relatively permanent, standing or continuously flowing bodies of water with a continuous surface connection to the waters identified in paragraph (1) or (3)(a) of the definition; or
   b. That either alone or in combination with similarly situated waters in the region, significantly affect the chemical, physical, or biological integrity of waters identified in paragraph (1) of the definition.

Current regulations also specify several types of aquatic features that are not waters of the United States, even if they meet the definition above. These are enumerated at 33 CFR 328.3(b) and generally include waste treatment systems, prior converted cropland, certain ditches, artificially irrigated areas, artificial lakes and ponds, artificial reflecting or swimming pools, waterfilled depressions incidental to construction or sand/gravel harvesting, and swales and erosional features.

The lateral limits of USACE jurisdiction in non-tidal waters is defined by the "ordinary high-water mark" (OHWM) unless adjacent wetlands are present. The OHWM is a line on the shore or edge of a channel established by the fluctuations of water and indicated by physical characteristics such as a clear, natural line impressed upon the bank, shelving, changes in the character of soil, destruction of vegetation, or the presence of debris (33 CFR 328.3(e)). As such, waters are recognized in the field by the presence of a defined watercourse with appropriate physical and topographic features. If wetlands occur within, or adjacent to, waters of the United States, the lateral limits of USACE jurisdiction extend beyond the OHWM to the outer edge of the wetlands (33 CFR 328.4 (c)). The upstream limit of jurisdiction in the absence of adjacent wetlands is the point beyond which the OHWM is no longer perceptible (33 CFR 328.4; see also 51 FR 41217).

Wetlands

The USACE defines wetlands as “those areas that are inundated or saturated by surface or groundwater at a frequency and duration sufficient to support, and that under normal circumstances do support, a prevalence of vegetation typically adapted for life in saturated soil

conditions" (33 CFR 328.3). The USACE's delineation procedures identify wetlands in the field based on indicators of three wetland parameters: hydrophytic vegetation, hydric soils, and wetland hydrology. The following is a discussion of each of these parameters.

Hydrophytic Vegetation

Hydrophytic vegetation dominates areas where frequency and duration of inundation or soil saturation exerts a controlling influence on the plant species present. Plant species are assigned wetland indicator status according to the probability of their occurring in wetlands. More than fifty percent of the dominant plant species must have a wetland indicator status to meet the hydrophytic vegetation criterion. The USACE published the National Wetland Plant List (USACE 2018), which separates vascular plants into the following four basic categories based on plant species frequency of occurrence in wetlands:

- **Obligate Wetland (OBL).** Almost always occur in wetlands
- **Facultative Wetland (FACW).** Usually occur in wetlands, but occasionally found in non-wetlands
- **Facultative (FAC).** Occur in wetlands or non-wetlands
- **Facultative Upland (FACU).** Usually occur in non-wetlands, but may occur in wetlands
- **Obligate Upland (UPL).** Almost never occur in wetlands

The USACE considers OBL, FACW and FAC species to be indicators of wetlands. An area is considered to have hydrophytic vegetation when greater than 50 percent of the dominant species in each vegetative stratum (tree, shrub, and herb) fall within these categories. Any species not appearing on the United States Fish and Wildlife Service's list is assumed to be an upland species, almost never occurring in wetlands. In addition, an area needs to contain at least 5% vegetative cover to be considered as a vegetated wetland.

Hydric Soils

Hydric soils are saturated or inundated for a sufficient duration during the growing season to develop anaerobic or reducing conditions that favor the growth and regeneration of hydrophytic vegetation. Field indicators of wetland soils include observations of ponding, inundation, saturation, dark (low chroma) soil colors, bright mottles (concentrations of oxidized minerals such as iron), gleying (indicates reducing conditions by a blue-grey color), or accumulation of organic material. Additional supporting information includes documentation of soil as hydric or reference to wet conditions in the local soils survey, both of which must be verified in the field.

Wetland Hydrology

Wetland hydrology is inundation or soil saturation with a frequency and duration long enough to cause the development of hydric soils and plant communities dominated by hydrophytic vegetation. If direct observation of wetland hydrology is not possible (as in seasonal wetlands), or records of wetland hydrology are not available (such as stream gauges), assessment of wetland hydrology is frequently supported by field indicators, such as water marks, drift lines, sediment deposits, or drainage patterns in wetlands.

Regional Water Quality Control Board Jurisdiction

The State Water Resources Control Board (SWRCB) and nine Regional Water Quality Control Boards (RWQCBs) have jurisdiction over "waters of the State," which are defined as any surface water or groundwater, including saline waters, within the boundaries of the state (California Water Code sec. 13050(e)). These agencies also have responsibilities for administering portions of the CWA.

Clean Water Act Section 401

Section 401 of the CWA requires an applicant requesting a federal license or permit for an activity that may result in any discharge into navigable waters (such as a Section 404 Permit) to provide state certification that the proposed activity will not violate state and federal water quality standards. In California, CWA Section 401 Water Quality Certification (Section 401 Certification) is issued by the RWQCBs and by the SWRCB for multi-region projects. The process begins when an applicant submits an application to the RWQCB and informs the USACE (or the applicable agency from which a license or permit was requested) that an application has been submitted. The USACE will then determine a "reasonable period of time" for the RWQCB to act on the application; this is typically 60 days for routine projects and longer for complex projects but may not exceed one year. When the period has elapsed, if the RWQCB has not either issued or denied the application for Section 401 Certification, the USACE may determine that Certification has been waived and issue the requested permit. If a Section 401 Certification is issued it may include binding conditions, imposed either through the Certification itself or through the requested federal license or permit.

Porter-Cologne Water Quality Control Act

The Porter-Cologne Water Quality Control Act (Porter-Cologne Act) is the principal law governing water quality regulation in California. It establishes a comprehensive program to protect water quality and the beneficial uses of water. The Porter-Cologne Act applies to surface waters, wetlands, and ground water and to both point and nonpoint sources of pollution. Pursuant to the Porter-Cologne Act (California Water Code section 13000 et seq.), the policy of the State is as follows:

- The quality of all the waters of the State should be protected
- All activities and factors affecting the quality of water should be regulated to attain the highest water quality within reason
- The State must be prepared to exercise its full power and jurisdiction to protect the quality of water in the State from degradation

The Porter-Cologne Act established nine RWQCBs (based on watershed boundaries) and the SWRCB, which are charged with implementing its provisions and which have primary responsibility for protecting water quality in California. The SWRCB provides program guidance and oversight, allocates funds, and reviews RWQCB decisions. In addition, the SWRCB allocates rights to the use of surface water. The RWQCBs have primary responsibility for individual permitting, inspection, and enforcement actions within each of nine hydrologic regions. The SWRCB and RWQCBs have numerous nonpoint source related responsibilities, including monitoring and assessment, planning, financial assistance, and management.

Section 13260 of the Porter-Cologne Act requires any person discharging or proposing to discharge waste that could affect the quality of waters of the State to file a Report of Waste Discharge with

the appropriate RWQCB. The RWQCB may then authorize the discharge, subject to conditions, by issuing Waste Discharge Requirements (WDRs). While this requirement was historically applied primarily to outfalls and similar point source discharges, the SWRCB's *State Wetland Definition and Procedures for Discharges of Dredged or Fill Material to Waters of the State*, effective May 2020, make it clear that the agency will apply the Porter-Cologne Act's requirements to discharges of dredge and fill material as well. The *Procedures* state that they are to be used in issuing CWA Section 401 Certifications and WDRs, and largely mirror the existing review requirements for CWA Section 404 Permits and Section 401 Certifications, incorporating most elements of the USEPA's *Section 404(b)(1) Guidelines*. Following issuance of the *Procedures*, the SWRCB produced a consolidated application form for dredge/fill discharges that can be used to obtain a CWA Section 401 Water Quality Certification, WDRs, or both.

Non-Wetland Waters of the State

The SWRCB and RWQCBs have not established regulations for field determinations of waters of the state except for wetlands currently. In many cases the RWQCBs interpret the limits of waters of the State to be bounded by the OHWM unless isolated conditions or ephemeral waters are present. However, in the absence of statewide guidance each RWQCB may interpret jurisdictional boundaries within their region and the SWRCB has encouraged applicants to confirm jurisdictional limits with their RWQCB before submitting applications. As determined by the RWQCB, waters of the State may include riparian areas or other locations outside the OHWM, leading to a larger jurisdictional area over a given water body compared to the USACE.

Wetland Waters of the State

Procedures for defining wetland waters of the State pursuant to the SWRCB's *State Wetland Definition and Procedures for Discharges of Dredged or Fill Material to Waters of the State* went into effect May 28, 2020. The SWRCB defines an area as wetland if, under normal circumstances:

(i) the area has continuous or recurrent saturation of the upper substrate caused by groundwater, or shallow surface water, or both;

(ii) the duration of such saturation is sufficient to cause anaerobic conditions in the upper substrate; and

(iii) the area's vegetation is dominated by hydrophytes or the area lacks vegetation.

The SWRCB's *Implementation Guidance for the Wetland Definition and Procedures for Discharges of Dredge and Fill Material to Waters of the State* (2020), states that waters of the U.S. and waters of the State should be delineated using the standard USACE delineation procedures, taking into consideration that the methods should be modified only to allow for the fact that a lack of vegetation does not preclude an area from meeting the definition of a wetland.

California Department of Fish and Wildlife Jurisdiction

California Fish and Game Code section 1602 states that it is unlawful for any person to "substantially divert or obstruct the natural flow of, or substantially change or use any material from the bed, channel, or bank of, any river, stream, or lake" without first notifying the California Department of Fish and Wildlife (CDFW) of that activity. Thereafter, if CDFW determines and informs the entity that the activity will not substantially adversely affect any existing fish or wildlife resources, the entity may commence the activity. If, however, CDFW determines that the activity may substantially

adversely affect an existing fish or wildlife resource, the entity may be required to obtain from CDFW a Streambed Alteration Agreement (SAA), which will include reasonable measures necessary to protect the affected resource(s), before the entity may conduct the activity described in the notification. Upon receiving a complete Notification of Lake/Streambed Alteration, CDFW has 60 days to present the entity with a Draft SAA. Upon review of the Draft SAA by the applicant, any problematic terms are negotiated with CDFW and a final SAA is executed.

The CDFW has not defined the term "stream" for the purposes of implementing its regulatory program under Section 1602, and the agency has not promulgated regulations directing how jurisdictional streambeds may be identified, or how their limits should be delineated. However, four relevant sources of information offer insight as to the appropriate limits of CDFW jurisdiction as discussed below.

- **The plain language of Section 1602 of CFGC** establishes the following general concepts:
  - References "river," "stream," and "lake"
  - References "natural flow"
  - References "bed," "bank," and "channel"

- **Applicable court decisions**, in particular *Rutherford v. State of California* (188 Cal App. 3d 1276 (1987), which interpreted Section 1602's use of "stream" to be as defined in common law. The Court indicated that a "stream" is commonly understood to:
  - Have a source and a terminus
  - Have banks and a channel
  - Convey flow at least periodically, but need not flow continuously and may at times appear outwardly dry
  - Represent the depression between the banks worn by the regular and usual flow of the water
  - Include the area between the opposing banks measured from the foot of the banks from the top of the water at its ordinary stage, including intervening sand bars
  - Include the land that is covered by the water in its ordinary low stage
  - Include lands below the OHWM

- **CDFW regulations** defining "stream" for other purposes, including sport fishing (14 CCR 1.72) and streambed alterations associated with cannabis production (14 CCR 722(c)(21)), which indicate that a stream:
  - Flows at least periodically or intermittently
  - Flows through a bed or channel having banks
  - Supports fish or aquatic life
  - Can be dry for a period of time
  - Includes watercourses where surface or subsurface flow supports or has supported riparian vegetation

- **Guidance documents**, *including A Field Guide to Lake and Streambed Alteration Agreements* (CDFG 1994) and *Methods to Describe and Delineate Episodic Stream Processes on Arid Landscapes for Permitting Utility-Scale Solar Power Plants* (Brady and Vyverberg 2013), which suggest the following:

- A stream may flow perennially or episodically
- A stream is defined by the course in which water currently flows, or has flowed during the historic hydrologic course regime (approximately the last 200 years)
- Width of a stream course can reasonably be identified by physical or biological indicators
- A stream may have one or more channels (single thread vs. compound form)
- Features such as braided channels, low-flow channels, active channels, banks associated with secondary channels, floodplains, islands, and stream-associated vegetation, are interconnected parts of the watercourse
- Canals, aqueducts, irrigation ditches, and other means of water conveyance can be considered streams if they support aquatic life, riparian vegetation, or stream-dependent terrestrial wildlife
- Biologic components of a stream may include aquatic and riparian vegetation, all aquatic animals including fish, amphibians, reptiles, invertebrates, and terrestrial species which derive benefits from the stream system
- The lateral extent of a stream can be measured in different ways depending on the particular situation and the type of fish or wildlife resource at risk

The tenets listed above, among others, are applied to establish the boundaries of streambeds in various environments. The importance of each factor may be weighted based on site-specific considerations and the applicability of the indicators to the streambed at hand.

City of Santa Clarita

The City of Santa Clarita (City) has guidelines for evaluations of biological impacts and significant thresholds for projects within the City and are described in the City's Environmental Guidelines (City of Santa Clarita 2011).

Appendix B

Floral and Faunal Compendium

Plant Species Observed Within the Survey Area

Scientific Name	Common Name	Status	Native or Introduced [1, 2]
Trees			
Ficus carica	common fig	–	Introduced; Cal-IPC Moderate
Nicotiana glauca	tree tobacco	–	Introduced; Cal-IPC Moderate
Populus fremontii	Fremont cottonwood	–	Native
Quercus lobata	valley oak	–	Native
Salix exigua	sandbar willow	–	Native
Salix laevigata	red willow	–	Native
Tamarix ramosissima	tamarisk	–	Introduced; Cal-IPC High
Washingtonia robusta	Mexican fan palm	–	Introduced; Cal-IPC Moderate
Shrubs			
Adenostoma fasciculatum	chamise	–	Native
Artemisia californica	California sagebrush	–	Native
Artemisia tridentata ssp. *tridentata*	basin big sagebrush	–	Native
Arundo donax	giant reed	–	Introduced; Cal-IPC High
Atriplex canescens	fourwing saltbush	–	Native
Baccharis pilularis	coyotebrush	–	Native
Baccharis salicifolia ssp. *salicifolia*	mulefat	–	Native
Ceanothus cuneatus	buck brush	–	Native
Ceanothus leucodermis	chaparral whitethorn	–	Native
Cylindropuntia sp.	cholla	–	Native
Encelia californica	California bush sunflower	–	Native
Encelia farinosa	brittlebush	–	Native
Ericameria nauseosa	rubber rabbitbrush	–	Native
Eriodictyon crassifolium	thick leaved yerba santa	–	Native
Eriogonum fasciculatum	California buckwheat	–	Native
Hesperoyucca whipplei	chaparral yucca	–	Native
Heteromeles arbutifolia	toyon	–	Native
Isocoma menziesii	Menzies' goldenbush	–	Native
Lepidospartum squamatum	scalebroom	–	Native
Malacothamnus fasciculatus	chaparral bush mallow	–	Native
Opuntia sp.	beavertail	–	Native
Peritoma arborea	bladderbush	–	Native
Rhus ovata	sugar bush	–	Native
Ribes sp.	currant	–	Native
Salvia apiana	white sage	–	Native
Salvia mellifera	black sage	–	Native
Sambucus nigra ssp. caerulea	blue elderberry	–	Native
Herbs			
Ambrosia acanthicarpa	annual bursage	–	Native

Scientific Name	Common Name	Status	Native or Introduced [1, 2]
Avena sp.	wild oats	–	Introduced; Cal-IPC Moderate
Bromus diandrus	ripgut brome	–	Introduced; Cal-IPC Moderate
Bromus rubens	red brome	–	Introduced; Cal-IPC High
Bromus tectorum	cheatgrass	–	Introduced; Cal-IPC High
Centaurea melitensis	tocalote	–	Invasive Introduced
Corethrogyne filaginifolia	California sandaster	–	Native
Corethrogyne filaginifolia	California sand aster	–	Native
Cyperus eragrostis	tall flatsedge	–	Native
Datura wrightii	Jimsonweed	–	Native
Deinandra fasciculatus	clustered tarweed	–	Native
Descurainia pinnata	western tansy mustard	–	Native
Dittrichia graveolens	stinkwort	–	Introduced; Cal-IPC Moderate
Eriastrum densifolium	giant woollystar	–	Native
Erigeron canadensis	Canada horseweed	–	Native
Erodium cicutarium	red stemmed filaree	–	Introduced; Cal-IPC Limited
Eulobus californicus	California primrose	–	Native
Helianthus annus	common sunflower	–	Native
Heterotheca grandiflora	telegraphweed	–	Native
Hirschfeldia incana	shortpod mustard	–	Introduced; Cal-IPC Moderate
Lactuca serriola	prickly lettuce	–	Introduced
Lobularia maritima	sweet alyssum	–	Introduced; Cal-IPC Limited
Lupinus hirsutissimus	stinging lupine	–	Native
Melilotus albus	white sweetclover	–	Introduced
Persicaria sp.	persicaria	–	–
Petalonyx thurberi ssp. *thurberi*	Thurber's sandpaper plant	–	Native
Phacelia ramosissima	branching phacelia	–	Native
Plantago erecta	dwarf plantain	–	Native
Polypogon monspeliensis	rabbitsfoot grass	–	Introduced; Cal-IPC Limited
Ricinus communis	castor bean	–	Introduced; Cal-IPC Limited
Salsola tragus	Russian thistle	–	Introduced; Cal-IPC Limited
Schismus sp.	schismus	–	Introduced; Cal-IPC Limited
Sisymbrium sp.	tumble mustard	–	Introduced
Stephanomeria sp.	stephanomeria	–	Native
Tribulus terrestris	puncture vine	–	Introduced; Cal-IPC Limited

[1] Cal-IPC 2022

Cal-IPC – Limited; these species are invasive with ecological amplitude and distribution being generally limited, but these species may be locally persistent and problematic.

Cal-IPC – Moderate; these species have substantial and apparent-but generally not severe-ecological impacts on physical processes, plant and animal communities, and vegetation structure. Their reproductive biology and other attributes are conducive to moderate to high rates of dispersal.

Scientific Name	Common Name	Status	Native or Introduced [1, 2]

Cal-IPC – High; These species have severe ecological impacts on physical processes, plant and animal communities, and vegetation structure. Their reproductive biology and other attributes are conducive to moderate to high rates of dispersal and establishment. Most are widely distributed ecologically.

[2] Calflora 2022, Jepson Flora Project 2022

Wildlife Species Observed Within the Survey Area

Scientific Name	Common Name	Status[1]	Native or Introduced[2]
Birds			
Corvus corax	common raven	–	Native
Calypte anna	Anna's hummingbird	–	Native
Aphelocoma californica	California scrub-jay	–	Native
Buteo jamaicensis	red-tailed hawk	–	Native
Cathartes aura	turkey vulture	SBL	Native
Haemorhous mexicanus	house finch	–	Native
Melozone crissalis	California towhee	BW	Native
Mimus polyglottos	northern mockingbird	–	Native
Thryomanes bewickii	Bewick's wren	–	Native
Reptiles			
Aspidoscelis tigris stejnegeri	coastal whiptail	SSC	Native
Sceloporus occidentalis	western fence lizard	–	Native
Invertebrates			
Danaus plexippus	monarch butterfly	–	Native
Mammals			
Sylvilagus bachmani	California brush rabbit	–	Native

[1] SBL = Los Angeles County Sensitive Bird List

BW = Los Angeles County Bird Watchlist

[2]Rodewald 2015, Nafis 2020.

Appendix C

Special Status Species Evaluation Table

Special Status Species in the Regional Vicinity of the Survey Area[1]

Scientific Name Common Name	Status Federal/ State[2]	Habitat Requirements	Potential to Occur in Survey Area	Habitat Suitability/ Observations
Plants				
Berberis nevinii Nevin's barberry	FE/SCE G1/S1 1B.1	Perennial evergreen shrub. Chaparral, cismontane woodland, coastal scrub, riparian scrub. Gravelly (sometimes), sandy (sometimes). Elevations: 230-2705ft. (70-825m.) Blooms (Feb)Mar-Jun.	Not expected	Potentially suitable chaparral, coastal scrub, and riparian scrub with sandy soils are present in the Survey Area. However, the only CNDDB occurrence within 5 miles of the Survey Area is from 1965 and is believed to originate from a transplanted population. This occurrence is considered possibly extirpated, and the species was not found during a 1987 follow-up survey.
Calochortus catalinae Catalina mariposa lily	None/None G3G4/S3S4 4.2	Perennial bulbiferous herb. Chaparral, cismontane woodland, coastal scrub, valley and foothill grassland. In heavy soils, open slopes, openings in brush. Elevations: 50-2295ft. (15-700m.) Blooms (Feb)Mar-Jun.	Moderate potential	Potentially suitable chaparral, woodland, coastal scrub, and grassland habitats are present in the Survey Area, though soils are generally sandy rather than clay. This species is not tracked in CNDDB.
Calochortus clavatus var. *avius* Pleasant Valley mariposa lily	None/None G4T2/S2 1B.2	Perennial bulbiferous herb. Lower montane coniferous forest. Josephine silt loam and volcanically derived soil; often in rocky areas. Elevations: 1000-5905ft. (305-1800m.) Blooms May-Jul.	Not expected	No suitable coniferous forest is present in the Survey Area. No CNDDB occurrences have been documented within 5 miles of the Survey Area.
Calochortus clavatus var. *clavatus* club-haired mariposa lily	None/None G4T3/S3 4.3	Perennial bulbiferous herb. Chaparral, cismontane woodland, coastal scrub, valley and foothill grassland. Clay, Rocky, serpentinite (usually). Elevations: 100-4265ft. (30-1300m.) Blooms (Mar)May-Jun.	Not expected	Potentially suitable chaparral, woodland, coastal scrub, and grassland habitats are present in the Survey Area. However, clay and serpentine soils are generally absent. No CNDDB occurrences have been documented within 5 miles of the Survey Area.
Calochortus clavatus var. *gracilis* slender mariposa lily	None/None G4T2T3/S2S3 1B.2	Perennial bulbiferous herb. Chaparral, coastal scrub, valley and foothill grassland. Shaded foothill canyons; often on grassy slopes within other habitat. Elevations: 1050-3280ft. (320-1000m.) Blooms Mar-Jun(Nov).	High potential	Potentially suitable chaparral, coastal scrub, and grassland habitats are present in the Survey Area. Multiple CNDDB occurrences have been recorded within 5 miles of the Survey Area.

Scientific Name Common Name	Status Federal/ State[2]	Habitat Requirements	Potential to Occur in Survey Area	Habitat Suitability/ Observations
Calochortus palmeri var. *palmeri* Palmer's mariposa lily	None/None G3T2/S2 1B.2	Perennial bulbiferous herb. Chaparral, lower montane coniferous forest, meadows and seeps. Mesic. Elevations: 2330-7840ft. (710-2390m.) Blooms Apr-Jul.	Not expected	Potentially suitable chaparral and seasonally mesic habitats are present in the Survey Area. However, the Survey Area is outside the elevation range for this species. The only CNDDB occurrence recorded within 5 miles of the Survey Area is from 1989 and the exact location is unknown.
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.	Moderate potential	Potentially suitable chaparral, woodland, coastal scrub, and grassland habitats are present in the Survey Area. Multiple CNDDB occurrences from 2009 are located within 2 miles of the Survey Area.
Calystegia peirsonii Peirson's morning-glory	None/None G4/S4 4.2	Perennial rhizomatous herb. Chaparral, chenopod scrub, cismontane woodland, coastal scrub, lower montane coniferous forest, valley and foothill grassland. Often in disturbed areas or along roadsides or in grassy, open areas. Elevations: 100-4920ft. (30-1500m.) Blooms Apr-Jun.	Low potential	Potentially suitable chaparral, woodland, coastal scrub, and grassland habitats are present in the Survey Area. These habitats include areas disturbed by human use. The only CNDDB occurrence within 5 miles of the Survey Area is from 1982 and is located approximately 5 miles north of the Survey Area.
Canbya candida white pygmy-poppy	None/None G3G4/S3S4 4.2	Annual herb. Joshua tree woodland, Mojavean desert scrub, pinyon and juniper woodland. Granitic, gravelly, sandy. Elevations: 1970-4790ft. (600-1460m.) Blooms Mar-Jun.	Not expected	No potentially suitable habitats are present in the Survey Area. The Survey Area is outside the elevation range for this species. No CNDDB occurrences have been recorded within 5 miles of the Survey Area.
Centromadia parryi ssp. *australis* southern tarplant	None/None G3T2/S2 1B.1	Annual herb. Marshes and swamps, valley and foothill grassland, vernal pools. Often in disturbed sites near the coast at marsh edges; also in alkaline soils sometimes with saltgrass. Sometimes on vernal pool margins. Elevations: 0-1575ft. (0-480m.) Blooms May-Nov.	Not expected	Potentially suitable grassland and seasonally mesic habitats are present in the Survey Area, though vernal pools are absent. No CNDDB occurrences have been recorded within 5 miles of the Survey 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	Potentially suitable chaparral habitats are present in the Survey Area. However, no CNDDB occurrences have been recorded within 5 miles of the Survey Area.

Scientific Name Common Name	Status Federal/ State[2]	Habitat Requirements	Potential to Occur in Survey Area	Habitat Suitability/ Observations
Chorizanthe parryi var. *fernandina* San Fernando Valley spineflower	None/SCE G2T1/S1 1B.1	Annual herb. Coastal scrub, valley and foothill grassland. Sandy soils. Elevations: 490-4005ft. (150-1220m.) Blooms Apr-Jul.	Not expected	Potentially suitable coastal scrub and grassland habitats with sandy soils are present in the Survey Area. No CNDDB occurrences have been recorded within 5 miles of the Survey Area.
Chorizanthe parryi var. *parryi* Parry's spineflower	None/None G3T2/S2 1B.1	Annual herb. Chaparral, cismontane woodland, coastal scrub, valley and foothill grassland. Openings, Rocky (sometimes), sandy (sometimes). Elevations: 900-4005ft. (275-1220m.) Blooms Apr-Jun.	Low potential	Potentially suitable chaparral, woodland, coastal scrub, and grassland habitats with sandy soils are present in the Survey Area. No CNDDB occurrences have been recorded within 5 miles of the Survey Area.
Deinandra minthornii Santa Susana tarplant	None/SCR G2/S2 1B.2	Perennial deciduous shrub. Chaparral, coastal scrub. On sandstone outcrops and crevices, in shrubland. Elevations: 920-2495ft. (280-760m.) Blooms Jul-Nov.	Low potential	Potentially suitable chaparral and coastal scrub habitats with sandstone substrate are present in the Survey Area. No CNDDB occurrences have been recorded within 5 miles of the Survey Area.
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	Potentially suitable coastal scrub and grassland habitats are present in the Survey Area, however vernal pools are absent. No CNDDB occurrences have been documented within 5 miles of the Survey Area.
Delphinium parryi ssp. *purpureum* Mt. Pinos larkspur	None/None G4T4/S4 4.3	Perennial herb. Chaparral, Mojavean desert scrub, pinyon and juniper woodland. Elevations: 3280-8530ft. (1000-2600m.) Blooms May-Jun.	Not expected	Potentially suitable chaparral habitat is present in the Survey Area. However, the Survey Area is outside the elevation range for this species. No CNDDB occurrences have been documented within 5 miles of the Survey Area.
Diplacus johnstonii Johnston's monkeyflower	None/None G4/S4 4.3	Annual herb. Lower montane coniferous forest. On scree, in rocky or gravelly sites. Also in disturbed areas. Elevations: 3200-9580ft. (975-2920m.) Blooms May-Aug.	Not expected	No suitable habitats are present in the Survey Area, and the Survey Area is outside the elevation range for this species. No CNDDB occurrences have been documented within 5 miles of the Survey Area.

Scientific Name Common Name	Status Federal/ State[2]	Habitat Requirements	Potential to Occur in Survey Area	Habitat Suitability/ Observations
Dodecahema leptoceras slender-horned spineflower	FE/SCE 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	Potentially suitable chaparral, woodland, coastal scrub, and alluvial terraces and washes with sandy soils are present in the Survey Area. The only two CNDDB occurrences located within 5 miles of the Survey Area were last observed in 1893 and 1937. More recent surveys in 2003 and 1979 (respectively) did not find the species. Both occurrences are considered possibly extirpated.
Dudleya densiflora San Gabriel Mountains dudleya	None/None G2/S2 1B.1	Perennial herb. Chaparral, cismontane woodland, coastal scrub, lower montane coniferous forest, riparian woodland. In crevices and on decomposed granite on cliffs and canyon walls. Elevations: 800-2000ft. (244-610m.) Blooms Mar-Jul.	Not expected	Potentially suitable chaparral, woodland, and coastal scrub habitats are present in the Survey Area. However, granitic soils are not present. No CNDDB occurrences have been recorded within 5 miles of the Survey Area.
Harpagonella palmeri Palmer's grapplinghook	None/None G4/S3 4.2	Annual herb. Chaparral, coastal scrub, valley and foothill grassland. Clay soils; open grassy areas within shrubland. Elevations: 65-3135ft. (20-955m.) Blooms Mar-May.	Not expected	Potentially suitable chaparral, coastal scrub, and grassland habitats are present in the Survey Area. However, the only CNDDB occurrence within 5 miles of the Survey Area is an undated observation from before 1993.
Helianthus inexpectatus Newhall sunflower	None/None G1/S1 1B.1	Perennial rhizomatous herb. Marshes and swamps, riparian woodland. Freshwater marshes, and seeps. Elevations: 1000-1000ft. (305-305m.) Blooms Aug-Oct.	Not expected	Potentially suitable seasonally mesic habitats are present in the Survey Area, though no marshes or seeps are present. No CNDDB occurrences have been recorded within 5 miles of the Survey Area.
Heuchera caespitosa urn-flowered alumroot	None/None G3/S3 4.3	Perennial rhizomatous herb. Cismontane woodland, lower montane coniferous forest, riparian forest, upper montane coniferous forest. Rocky sites. Elevations: 3790-8695ft. (1155-2650m.) Blooms May-Aug.	Not expected	Potentially suitable woodland habitat is present in the Survey Area. However, the Survey Area is outside the elevation range for this species. No CNDDB occurrences have been documented within 5 miles of the Survey Area.
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	Potentially suitable coastal scrub and grassland habitats are present in the Survey Area, however vernal pools, saline streambeds, and alkaline flats are absent. No CNDDB occurrences have been documented within 5 miles of the Survey Area.

Scientific Name Common Name	Status Federal/ State[2]	Habitat Requirements	Potential to Occur in Survey Area	Habitat Suitability/ Observations
Horkelia cuneata var. *puberula* mesa horkelia	None/None G4T1/S1 1B.1	Perennial herb. Chaparral, cismontane woodland, coastal scrub. Sandy or gravelly sites. Elevations: 230-2660ft. (70-810m.) Blooms Feb-Jul(Sep).	Not expected	Potentially suitable chaparral, woodland, and coastal scrub habitats with sandy soils are present in the Survey Area. No CNDDB occurrences have been recorded within 5 miles of the Survey Area.
Hulsea vestita ssp. *gabrielensis* San Gabriel Mountains sunflower	None/None G5T3/S3 4.3	Perennial herb. Lower montane coniferous forest, upper montane coniferous forest. Rocky sites. Elevations: 4920-8205ft. (1500-2500m.) Blooms May-Jul.	Not expected	No suitable habitats are present in the Survey Area, and the Survey Area is outside the elevation range for this species. No CNDDB occurrences have been documented within 5 miles of the Survey Area.
Imperata brevifolia California satintail	None/None G4/S3 2B.1	Perennial rhizomatous herb. Chaparral, coastal scrub, meadows and seeps, Mojavean desert scrub, riparian scrub. Mesic sites, alkali seeps, riparian areas. Elevations: 0-3985ft. (0-1215m.) Blooms Sep-May.	Not expected	Potentially suitable chaparral, coastal scrub, riparian scrub, and seasonally mesic habitats are present in the Survey Area. No CNDDB occurrences have been recorded within 5 miles of the Survey 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	Potentially suitable chaparral, woodland, coastal scrub, and alluvial habitats are present in the Survey Area. This species is not tracked in CNDDB. This perennial tree species was not observed during the field surveys.
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	No suitable habitats are present in the Survey Area. No CNDDB occurrences have been documented within 5 miles of the Survey Area.
Lepechinia fragrans fragrant pitcher sage	None/None G3/S3 4.2	Perennial shrub. Chaparral. Elevations: 65-4300ft. (20-1310m.) Blooms Mar-Oct.	Low potential	Potentially suitable chaparral habitat is present in the Survey Area. No CNDDB occurrences have been documented within 5 miles of the Survey Area.
Lepechinia rossii Ross' pitcher sage	None/None G1/S1 1B.2	Perennial shrub. Chaparral. Soil derived from fine-grained, reddish sedimentary rock. Elevations: 1000-2590ft. (305-790m.) Blooms May-Sep.	Not expected	Potentially suitable chaparral habitat is present in the Survey Area. Suitable soils are not present. No CNDDB occurrences have been recorded within 5 miles of the Survey Area.
Lepidium virginicum var. *robinsonii* Robinson's pepper-grass	None/None G5T3/S3 4.3	Annual herb. Chaparral, coastal scrub. Dry soils, shrubland. Elevations: 5-2905ft. (1-885m.) Blooms Jan-Jul.	Not expected	Potentially suitable chaparral and coastal scrub habitats are present in the Survey Area. No CNDDB occurrences have been documented within 5 miles of the Survey Area.

Scientific Name Common Name	Status Federal/ State[2]	Habitat Requirements	Potential to Occur in Survey Area	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	Potentially suitable chaparral, woodland, and coastal scrub habitats are present in the Survey Area. No CNDDB occurrences have been documented within 5 miles of the Survey 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).	Low potential	Potentially suitable coastal scrub, riparian scrub, and grassland habitats with sandy soils are present in the Survey Area. No CNDDB occurrences have been recorded within 5 miles of the Survey Area.
Malacothamnus davidsonii Davidson's bush-mallow	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	Potentially suitable chaparral, riparian woodland, coastal scrub, and sandy wash habitats are present in the Survey Area. No CNDDB occurrences have been recorded within 5 miles of the Survey Area.
Mucronea californica California spineflower	None/None G3/S3 4.2	Annual herb. Chaparral, cismontane woodland, coastal dunes, coastal scrub, valley and foothill grassland. Sandy soil. Elevations: 0-4595ft. (0-1400m.) Blooms Mar-Jul(Aug).	Low potential	Potentially suitable chaparral, woodland, coastal scrub, and grassland habitats are present in the Survey Area, and sandy soils are present. No CNDDB occurrences have been documented within 5 miles of the Survey 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 surrounded by other habitat types. Elevations: 100-2150ft. (30-655m.) Blooms Apr-Jun.	Not expected	No vernal pools are present in the Survey Area. Three CNDDB occurrences from 2003, 2017, and 2019 have been recorded within 5 miles of the Survey Area.
Navarretia setiloba Piute Mountains navarretia	None/None G2/S2 1B.1	Annual herb. Cismontane woodland, pinyon and juniper woodland, valley and foothill grassland. Red clay soils, or on gravelly loam. Elevations: 935-6890ft. (285-2100m.) Blooms Apr-Jul.	Low potential	Potentially suitable woodland and grassland habitats are present in the Survey Area. Three CNDDB occurrences from 2005 and 2010 have been recorded within 5 miles of the Survey Area.
Opuntia basilaris var. *brachyclada* short-joint beavertail	None/None G5T3/S3 1B.2	Perennial stem. Chaparral, Joshua tree woodland, Mojavean desert scrub, pinyon and juniper woodland. Sandy soil or coarse, granitic loam. Elevations: 1395-5905ft. (425-1800m.) Blooms Apr-Jun(Aug).	Low potential	Potentially suitable chaparral habitat and sandy soils are present in the Survey Area. Four CNDDB occurrences have been recorded within 5 miles of the Survey Area, including one in 2018.

Scientific Name Common Name	Status Federal/ State[2]	Habitat Requirements	Potential to Occur in Survey Area	Habitat Suitability/ Observations
Orcuttia californica California Orcutt grass	FE/SCE G1/S1 1B.1	Annual herb. Vernal pools. Elevations: 50-2165ft. (15-660m.) Blooms Apr-Aug.	Not expected	No vernal pools are present in the Survey Area. Three CNDDB occurrences from 2001, 2003 and 2005 have been recorded within 5 miles of the Survey Area.
Phacelia mohavensis Mojave phacelia	None/None G4Q/S4 4.3	Annual herb. Cismontane woodland, lower montane coniferous forest, meadows and seeps, pinyon and juniper woodland. Sandy or gravelly soils, dry streambeds. Elevations: 4595-8205ft. (1400-2500m.) Blooms Apr-Aug.	Low potential	Potentially suitable woodland habitats and sandy soils are present in the Survey Area. However, the Survey Area is outside the elevation range for this species. No CNDDB occurrences have been documented within 5 miles of the Survey Area.
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).	Low potential	Potentially suitable coastal scrub and riparian woodland habitats with sandy soils are present in the Survey Area. No CNDDB occurrences have been recorded within 5 miles of the Survey Area.
Quercus durata var. *gabrielensis* San Gabriel oak	None/None G4T3/S3 4.2	Perennial evergreen shrub. Chaparral, cismontane woodland. Elevations: 1475-3280ft. (450-1000m.) Blooms Apr-May.	Not expected	Potentially suitable chaparral and woodland habitats are present in the Survey Area. No CNDDB occurrences have been documented within 5 miles of the Survey Area.
Senecio aphanactis chaparral ragwort	None/None G3/S2 2B.2	Annual herb. Chaparral, cismontane woodland, coastal scrub. Drying alkaline flats. Elevations: 50-2625ft. (15-800m.) Blooms Jan-Apr(May).	Not expected	Potentially suitable chaparral, woodland, and coastal scrub habitats are present in the Survey Area. The only CNDDB occurrence located within 5 miles of the Survey Area is from 1901 and the exact location is unknown.
Streptanthus campestris southern jewelflower	None/None G3/S3 1B.3	Perennial herb. Chaparral, lower montane coniferous forest, pinyon and juniper woodland. Open, rocky areas. Elevations: 2955-7545ft. (900-2300m.) Blooms (Apr)May-Jul.	Not expected	Potentially suitable chaparral habitats are present in the Survey Area. However, the Survey Area is outside the elevation range for this species. No CNDDB occurrences have been recorded within 5 miles of the Survey Area.
Symphyotrichum greatae Greata's aster	None/None G2/S2 1B.3	Perennial rhizomatous herb. Broadleafed upland forest, chaparral, cismontane woodland, lower montane coniferous forest, riparian woodland. Mesic canyons. Elevations: 985-6595ft. (300-2010m.) Blooms Jun-Oct.	Not expected	Potentially suitable chaparral and riparian woodland habitats are present in the Survey Area. No CNDDB occurrences have been recorded within 5 miles of the Survey Area.

Scientific Name Common Name	Status Federal/ State[2]	Habitat Requirements	Potential to Occur in Survey Area	Habitat Suitability/ Observations
Invertebrates				
Bombus crotchii Crotch bumble bee	None/SCE G2/S1S2	Coastal California east to the Sierra-Cascade crest and south into Mexico. Food plant genera include Antirrhinum, Phacelia, Clarkia, Dendromecon, Eschscholzia, and Eriogonum.	Low potential	One occurrence within 5 miles of the Survey Area is historic (1967). The species was not observed during field surveys, the project site is previously disturbed, and potential small mammal burrows are limited.
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	No indicators (i.e., "bathtub ring") of flowering plants delineating the boundary of any pools were observed during the site surveys. No vernal pools or depressions were observed. The only known vernal pool in the region is found at high elevation in the Los Padres National Forest.
Euphydryas editha quino quino checkerspot butterfly	FE/None G5T1T2/S1S2	Sunny openings within chaparral and coastal sage shrublands in parts of Riverside and San Diego counties. Hills and mesas near the coast. Need high densities of food plants *Plantago erecta, P. insularis*, and *Orthocarpus purpurescens*.	Not expected	The only CNDDB occurrence within 5 miles of the Survey Area is from 1920, and this species is considered extirpated from the area.
Fish				
Catostomus santaanae Santa Ana sucker	FT/None G1/S1	Endemic to Los Angeles Basin south coastal streams. Habitat generalists, but prefer sand-rubble-boulder bottoms, cool, clear water, and algae.	Moderate potential	In the Survey Area, the Santa Clara River provides potentially suitable habitat. A CNDDB occurrence from 2007 is located in the Santa Clara River approximately 4 miles downstream of the Survey Area.
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	In the Survey Area, the Santa Clara River provides potentially suitable habitat. A CNDDB occurrence from 2007 is located in the Santa Clara River approximately 4 miles downstream of the Survey Area. Multiple occurrences have been recorded in tributaries to the Santa Clara River within 5 miles of the Survey Area.
Gila orcuttii arroyo chub	None/None G2/S2 SSC	Native to streams from Malibu Creek to San Luis Rey River basin. Introduced into streams in Santa Clara, Ventura, Santa Ynez, Mojave and San Diego river basins. Slow water stream sections with mud or sand bottoms. Feeds heavily on	Moderate potential	In the Survey Area, the Santa Clara River provides potentially suitable habitat. Two CNDDB occurrences from 1999 are located in the Santa Clara River, the closest of which is approximately 1 mile downstream of the Survey Area. The species is described as occurring in the

Scientific Name Common Name	Status Federal/ State[2]	Habitat Requirements	Potential to Occur in Survey Area	Habitat Suitability/ Observations
		aquatic vegetation and associated invertebrates.		lower elevation portions of the Santa Clara River as recently as 2022.
Amphibians				
Anaxyrus californicus arroyo toad	FE/None G2G3/S2S3 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.	Moderate potential	Potentially suitable sandy wash and riparian habitats are present in the Santa Clara River in the Survey Area. The only CNDDB occurrence within 5 miles of the Survey Area is from 1994 and is located in the Santa Clara River approximately 5 miles downstream.
Spea hammondii western spadefoot	None/None G2G3/S3 SSC	Occurs primarily in grassland habitats but can be found in valley-foothill hardwood woodlands. Vernal pools are essential for breeding and egg-laying.	Moderate potential	Potentially suitable grassland and woodland habitats are present in the Survey Area. Vernal pools are not present. 29 CNDDB occurrences have been recorded within 5 miles of the Survey Area.
Reptiles				
Anniella spp. California legless lizard	None/None G3G4/S3S4 SSC	Contra Costa County south to San Diego, within a variety of open habitats. This element represents California records of Anniella not yet assigned to new species within the Anniella pulchra complex. Variety of habitats; generally, in moist, loose soil. They prefer soils with a high moisture content.	High potential	Potentially suitable habitats are present in the Survey Area. Multiple CNDDB occurrences have been recorded within 5 miles of the Survey Area, the most recent of which are from 2019.
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	Potentially suitable scrub and grassland habitats with sandy soils are present in the Survey Area. Multiple CNDDB occurrences have been recorded within 5 miles of the Survey Area, however, the most recent is from 1955.
*Aspidoscelis tigris stejneger*i 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.	Present	One adult individual was observed near the northern boundary of the Santa Clara River in the Survey Area during the August 2022 field survey.
Phrynosoma blainvillii coast horned lizard	None/None G3G4/S3S4 SSC	Frequents a wide variety of habitats, most common in lowlands along sandy washes with scattered low bushes. Open areas for sunning, bushes for cover, patches of loose soil	High potential	Potentially suitable scrub and sandy wash habitats are present in the Survey Area. Multiple CNDDB occurrences have been recorded within 5 miles of the

Scientific Name Common Name	Status Federal/ State[2]	Habitat Requirements	Potential to Occur in Survey Area	Habitat Suitability/ Observations
		for burial, and abundant supply of ants and other insects.		Survey Area, the most recent of which is from 2008.
Thamnophis hammondii two-striped gartersnake	None/None G4/S3S4 SSC	Coastal California from vicinity of Salinas to northwest Baja California. From sea to about 7,000 ft elevation. Highly aquatic, found in or near permanent fresh water. Often along streams with rocky beds and riparian growth.	Not expected	No permanent sources of fresh water are present in or adjacent to the Survey Area.
Birds				
Accipiter cooperii Cooper's hawk	None/None G5/S4 WL	Woodland, chiefly of open, interrupted or marginal type. Nest sites mainly in riparian growths of deciduous trees, as in canyon bottoms on river floodplains; also, live oaks.	High potential	Potentially suitable woodland habitat is present in the Survey Area, including riparian trees along the Santa Clara River. One CNDDB occurrence has been recorded within 5 miles of the Survey Area. It is from 2005 and is located approximately 2.5 miles west of the Survey Area.
Aimophila ruficeps canescens southern California rufous-crowned sparrow	None/None G5T3/S3 WL	Resident in Southern California coastal sage scrub and sparse mixed chaparral. Frequents relatively steep, often rocky hillsides with grass and forb patches.	High potential	Potentially suitable coastal sage and chaparral habitats on rocky hillsides are present in the Survey Area. Three CNDDB occurrences from 2006-2008 have been recorded within 5 miles of the Survey Area.
Artemisiospiza belli belli Bell's sage 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.	Moderate potential	Potentially suitable chaparral and coastal scrub habitats are present in the Survey Area. Four CNDDB occurrences have been recorded within 5 miles of the Survey Area, the most recent of which is from 2015.
Athene cunicularia burrowing owl	None/None G4/S3 SSC	Open, dry annual or perennial grasslands, deserts, and scrublands characterized by low-growing vegetation. Subterranean nester, dependent upon burrowing mammals, most notably, the California ground squirrel.	Low potential	Potentially suitable grassland and shrubland habitats are present in the Survey Area. Two CNDDB occurrences from 2005 and 2007 are located within 5 miles of the Survey Area.
Buteo swainsoni Swainson's hawk	None/ST G5/S3	Breeds in grasslands with scattered trees, juniper-sage flats, riparian areas, savannahs, and agricultural or ranch lands with groves or lines of trees. Requires adjacent suitable foraging areas such as grasslands, or alfalfa or grain fields supporting rodent populations.	Not expected	Potentially suitable grasslands and riparian habitats are present in the Survey Area. However, the only CNDDB occurrence within 5 miles of the Survey Area is from 1898. The breeding population of this species in the transverse ranges region is generally considered to be extirpated.

Scientific Name Common Name	Status Federal/ State[2]	Habitat Requirements	Potential to Occur in Survey Area	Habitat Suitability/ Observations
Elanus leucurus white-tailed kite	None/None G5/S3S4 FP	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.	Low potential	Potentially suitable grasslands and riparian woodland habitats are present in the Survey Area. The only CNDDB occurrence within 5 miles of the Survey Area is from 2005 and is located approximately 5 miles to the west.
Eremophila alpestris actia California horned lark	None/None G5T4Q/S4 WL	Coastal regions, chiefly from Sonoma County to San Diego County. Also, main part of San Joaquin Valley and east to foothills. Short-grass prairie, "bald" hills, mountain meadows, open coastal plains, fallow grain fields, alkali flats.	Low potential	Potentially suitable grasslands are present in the Survey Area. The only CNDDB occurrence within 5 miles of the Survey Area is from 2008 and is located approximately 4.7 miles northwest of the Survey Area.
Lanius ludovicianus loggerhead shrike	None/None G4/S4 SSC	Broken woodlands, savannah, pinyon-juniper, Joshua tree, and riparian woodlands, desert oases, scrub and washes. Prefers open country for hunting, with perches for scanning, and fairly dense shrubs and brush for nesting.	Low potential	Potentially suitable riparian woodland, scrub, and sandy wash habitats are present in the Survey Area. The only CNDDB occurrence within 5 miles of the Survey Area is from 2005 and is located approximately 2.5 miles north of the Survey Area.
Polioptila californica californica coastal California gnatcatcher	FT/None G4G5T3Q/S2 SSC	Obligate, permanent resident of coastal sage scrub below 2500 ft in Southern California. Low, coastal sage scrub in arid washes, on mesas and slopes. Not all areas classified as coastal sage scrub are occupied.	Not expected	Potentially suitable coastal sage scrub is present in the Survey Area. Multiple CNDDB occurrences have been recorded within 5 miles of the Survey Area, the most recent of which is from 2019. Protocol-surveys conducted for the project determined the species is absent.
Vireo bellii pusillus least Bell's vireo	FE/SE G5T2/S2	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.	Not expected	Potentially suitable riparian scrub habitat is present in the Santa Clarita River in the Survey Area. Two CNDDB occurrences have been recorded within 5 miles of the Survey Area, the most recent of which is from 2016. Protocol-level surveys completed downstream indicate this species is not expected in the project area.
Mammals				
Eumops perotis californicus western mastiff bat	None/None G4G5T4/S3S4 SSC	Occurs in open, semi-arid to arid habitats, including coniferous and deciduous woodlands, coastal scrub, grasslands, and chaparral. Roosts in crevices in cliff faces and caves, and buildings. Roosts typically occur high above ground.	Low potential	Potentially suitable woodland and grassland habitats are present in the Survey Area, and nearby cliffs and buildings may support roosting. The only CNDDB occurrence is from 1992 and is located approximately 4 miles south of the Survey Area.

Scientific Name Common Name	Status Federal/ State[2]	Habitat Requirements	Potential to Occur in Survey Area	Habitat Suitability/ Observations
Lepus californicus bennettii San Diego black-tailed jackrabbit	None/None G5T3T4/S3 S4	Occurs in Los Angeles, San Bernardino, Riverside, and San Diego Counties of southern California. Typically found in open shrub habitats. Will also occur in woodland habitats with open understory adjacent to shrublands.	Moderate potential	Potentially suitable scrub and woodland habitats are present in the Survey Area. The only CNDDB occurrence within 5 miles of the Survey Area is from 2015 and is located approximately 3 miles east of the Survey Area.

[1] Regional Vicinity refers to within a 5-mile search radius of site.
[2] FE = Federally Endangered
FT = Federally Threatened
SE = State Endangered
ST = State Threatened
SCE = State Candidate Endangered
FP= State Fully Protected
SSC = CDFW Species of Special Concern
WL = Watch List
SBL = Los Angeles County Sensitive Bird List
BW = Los Angeles County Bird Watchlist

CRPR (California Rare Plant Rank)
1B = Rare, Threatened, or Endangered in California and elsewhere
2B = Plants Rare, Threatened, or Endangered in California, but more common elsewhere
4 = Limited Distribution (Watch List)

CRPR Threat Code Extension
.1 = Seriously endangered in California (over 80% of occurrences threatened/high degree and immediacy of threat)
.2 = Fairly endangered in California (20-80% occurrences threatened)
.3 = Not very threatened in California (less than 20% of occurrences threatened / low degree and immediacy of threat or no current threats known)

Appendix D

Site Photographs

Photograph 1. Photo Point 1. View from Santa Clara River of Unnamed Drainage 2 on hillside characterized by California sagebrush – California buckwheat scrub. Photo taken August 10, 2022, facing north.

Photograph 2. Photo Point 2. Riverwash land cover type in a low flow channel in the Santa Clara River. Low terraces are visible on either side of the image. Photo taken August 10, 2022, facing west.

Photograph 3. Photo Point 3. View of the Santa Clara River and steep hillsides from the water tanks at the ridgeline. Photo taken August 10, 2022, facing southwest.

Photograph 4. Photo Point 4. View of Unnamed Drainage 1, including branching headwaters and outlet into the Santa Clara River. Hillsides characterized by California sagebrush – California buckwheat scrub. Photo taken August 10, 2022, facing south.

Photograph 5. Photo Point 5. View of Unnamed Drainage 2 and Santa Clara River. Photo taken August 10, 2022, facing south.

Photograph 6. Photo Point 6. View of Unnamed Drainage 3 and Santa Clara River. Photo taken August 10, 2022, facing south.

Photograph 7. Photo Point 7. Mulefat thickets community located along Unnamed Drainage 4. Photo taken August 10, 2022, facing northwest.

Photograph 8. Sample Point 1. View of soil profile at Sample Point 1. Photo taken August 10, 2022.

Photograph 9. Sample Point 2. View of soils at Sample Point 2. Photo taken August 10, 2022.

Appendix E

Wetland Determination and Ordinary High Water Mark Forms

WETLAND DETERMINATION DATA FORM – Arid West Region

Project/Site: Honby Tanks Pipeline Project City/County: Santa Clarita/LA County Sampling Date: 8/10/2022

Applicant/Owner: Santa Clarita Valley Water Agency State: CA Sampling Point: SP01

Investigator(s): Kyle Gern, Carolyn Welch Section, Township, Range: S18, T04N, R15W

Landform (hillslope, terrace, etc.): Within Santa Clara River Channel Local relief (concave, convex, none): None Slope (%): 3

Subregion (LRR): C - Mediterranean Lat: 34.4281999 Long: -118.4939466 Datum: NAD83

Soil Map Unit Name: Riverwash NWI classification: RS4BA

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

Are Vegetation _____, Soil _____, or Hydrology _____ significantly disturbed? Are "Normal Circumstances" present? Yes ✔ No _____

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

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

Hydrophytic Vegetation Present?	Yes _____	No ✔	**Is the Sampled Area within a Wetland?** Yes _____ No ✔
Hydric Soil Present?	Yes _____	No ✔	
Wetland Hydrology Present?	Yes ✔	No _____	

Remarks:

Southern California is currently experiencing drought conditions. Sample Point 01 (SP01) is located within the floodplain of the Santa Clara River adjacent to the OHWM of a low-flow channel of the river system. Vegetation is scattered throughout the floodplain of the Santa Clara River, as high-velocity flows uproot vegetation during the winter months. The Santa Clara River is characterized as a braided river channel, and SP01 is situated just south of a low-flow channel adjacent to established Fremont cottonwood (Populus fremontii) trees. SP01 is situated within a natural, relatively undisturbed portion of the river.

VEGETATION – Use scientific names of plants.

Tree Stratum (Plot size: 30 ft. x 30 ft.)	Absolute % Cover	Dominant Species?	Indicator Status
1. Populus fremontii	25	Y	FAC
2.			
3.			
4.			
	25	= Total Cover	
Sapling/Shrub Stratum (Plot size: 15 ft. x 15 ft.)			
1. Baccharis salicifolia	4	Y	FAC
2. Salvia mellifera	4	Y	UPL
3.			
4.			
5.			
	8	= Total Cover	
Herb Stratum (Plot size: 5 ft. x 5 ft.)			
1. Ambrosia acanthicarpa	1	N	UPL
2. Hirschfeldia incana	1	N	UPL
3. Centaurea melitensis	3	N	UPL
4. Bromus rubens	10	Y	UPL
5. Bromus tectorum	8	Y	UPL
6. Bromus diandrus	2	N	UPL
7.			
8.			
	25	= Total Cover	
Woody Vine Stratum (Plot size: 15 ft x 15 ft)			
1. None			
2.			
	0	= Total Cover	

% Bare Ground in Herb Stratum 75 % Cover of Biotic Crust 0

Dominance Test worksheet:

Number of Dominant Species That Are OBL, FACW, or FAC: 2 (A)

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

Percent of Dominant Species That Are OBL, FACW, or FAC: 40 (A/B)

Prevalence Index worksheet:

Total % Cover of:	Multiply by:
OBL species _____	x 1 = _____
FACW species _____	x 2 = _____
FAC species _____	x 3 = _____
FACU species _____	x 4 = _____
UPL species _____	x 5 = _____
Column Totals: _____ (A)	_____ (B)

Prevalence Index = B/A = _____

Hydrophytic Vegetation Indicators:

___ Dominance Test is >50%

___ Prevalence Index is ≤3.0[1]

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

___ Problematic Hydrophytic Vegetation[1] (Explain)

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

Hydrophytic Vegetation Present? Yes _____ No ✔

Remarks:

SP01 is located within the mulefat thickets vegetation community within the Santa Clara River. The mulefat thickets vegetation community is generally dominated by mulefat (Baccharis salicifolia), but also includes Fremont cottonwood as well as non-native herbaceous species in the understory. SP01 is located in a portion of this vegetation community where plants are widely spaced and there is lots of bare ground in between shrubs and trees. Fremont cottonwood dominates the tree layer within SP01, and mulefat is co-dominant in the shrub layer with black sage (Salvia mellifera).

SOIL

Sampling Point: SP01

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

Depth (inches)	Matrix Color (moist)	Matrix %	Redox Features Color (moist)	Redox Features %	Type[1]	Loc[2]	Texture	Remarks
0-2	7.5YR 3/3	100					Sand	
2-24	10YR 3/2	100					Sand	

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

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

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

Indicators for Problematic Hydric Soils[3]:

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

[3]Indicators of hydrophytic vegetation and wetland hydrology must be present, unless disturbed or problematic.

Restrictive Layer (if present):

Type: Concrete

Depth (inches): 0

Hydric Soil Present? Yes ___ No ✔

Remarks:

Soils within SP01 include sand from 0-24 inches below the soil surface. Soil color differed between the first layer (7.5YR 3/3) and the second layer (10YR 3/2). Otherwise, the soils were similar throughout the soil profile. No indicators of problematic hydric soils were observed.

HYDROLOGY

Wetland Hydrology Indicators:

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

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

Secondary Indicators (2 or more required)

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

Field Observations:

Surface Water Present? Yes ___ No ✔ Depth (inches): ___

Water Table Present? Yes ___ No ✔ Depth (inches): ___

Saturation Present? (includes capillary fringe) Yes ___ No ✔ Depth (inches): ___

Wetland Hydrology Present? Yes ✔ No ___

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

Remarks:

Drift deposits were observed within SP01, and included stems and leaf litter. Drainage patterns were observed and were indicated by the lack of litter on the soil surface, indicating that water had flowed and scoured out the area.

WETLAND DETERMINATION DATA FORM – Arid West Region

Project/Site: Honby Tanks Pipeline Project City/County: Santa Clarita/LA County Sampling Date: 8/10/2022

Applicant/Owner: Santa Clarita Valley Water Agency State: CA Sampling Point: SP02

Investigator(s): Kyle Gern, Carolyn Welch Section, Township, Range: S18, T04N, R15W

Landform (hillslope, terrace, etc.): Within Santa Clara River Channel Local relief (concave, convex, none): None Slope (%): 3

Subregion (LRR): C - Mediterranean Lat: 34.4281999 Long: -118.4939466 Datum: NAD83

Soil Map Unit Name: Riverwash NWI classification: RS4BA

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

Are Vegetation _____, Soil _____, or Hydrology _____ significantly disturbed? Are "Normal Circumstances" present? Yes ✔ No _____

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

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

Hydrophytic Vegetation Present?	Yes _____	No ✔	**Is the Sampled Area within a Wetland?** Yes _____ No ✔
Hydric Soil Present?	Yes _____	No ✔	
Wetland Hydrology Present?	Yes _____	No ✔	

Remarks:

Southern California is currently experiencing drought conditions. Sample Point 01 (SP01) is located within the floodplain of the Santa Clara River adjacent to the OHWM of a low-flow channel of the river system. Vegetation is scattered throughout the floodplain of the Santa Clara River, as high-velocity flows uproot vegetation during the winter months. The Santa Clara River is characterized as a braided river channel, and SP01 is situated just south of a low-flow channel adjacent to established Fremont cottonwood (Populus fremontii) trees. SP01 is situated within a natural, relatively undisturbed portion of the river.

VEGETATION – Use scientific names of plants.

Tree Stratum (Plot size: 30 ft. x 30 ft.)	Absolute % Cover	Dominant Species?	Indicator Status
1. Populus fremontii	25	Y	FAC
2.			
3.			
4.			
	25	= Total Cover	
Sapling/Shrub Stratum (Plot size: 15 ft. x 15 ft.)			
1. Baccharis salicifolia	4	Y	FAC
2. Salvia mellifera	4	Y	UPL
3.			
4.			
5.			
	8	= Total Cover	
Herb Stratum (Plot size: 5 ft. x 5 ft.)			
1. Ambrosia acanthicarpa	1	N	UPL
2. Hirschfeldia incana	1	N	UPL
3. Centaurea melitensis	3	N	UPL
4. Bromus rubens	10	Y	UPL
5. Bromus tectorum	8	Y	UPL
6. Bromus diandrus	2	N	UPL
7.			
8.			
	25	= Total Cover	
Woody Vine Stratum (Plot size: 15 ft x 15 ft)			
1. None			
2.			
	0	= Total Cover	

% Bare Ground in Herb Stratum 75 % Cover of Biotic Crust 0

Dominance Test worksheet:

Number of Dominant Species That Are OBL, FACW, or FAC: 2 (A)

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

Percent of Dominant Species That Are OBL, FACW, or FAC: 40 (A/B)

Prevalence Index worksheet:

Total % Cover of:	Multiply by:
OBL species _____	x 1 = _____
FACW species _____	x 2 = _____
FAC species _____	x 3 = _____
FACU species _____	x 4 = _____
UPL species _____	x 5 = _____
Column Totals: _____ (A)	_____ (B)

Prevalence Index = B/A = _____

Hydrophytic Vegetation Indicators:

___ Dominance Test is >50%

___ Prevalence Index is ≤3.0[1]

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

___ Problematic Hydrophytic Vegetation[1] (Explain)

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

Hydrophytic Vegetation Present? Yes _____ No ✔

Remarks:

SP01 is located within the mulefat thickets vegetation community within the Santa Clara River. The mulefat thickets vegetation community is generally dominated by mulefat (Baccharis salicifolia), but also includes Fremont cottonwood as well as non-native herbaceous species in the understory. SP01 is located in a portion of this vegetation community where plants are widely spaced and there is lots of bare ground in between shrubs and trees. Fremont cottonwood dominates the tree layer within SP01, and mulefat is co-dominant in the shrub layer with black sage (Salvia mellifera).

SOIL

Sampling Point: SP02

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

Depth (inches)	Matrix Color (moist)	Matrix %	Redox Features Color (moist)	Redox Features %	Redox Features Type[1]	Redox Features Loc[2]	Texture	Remarks
0-2	7.5YR 3/3	100					Sand	
2-24	10YR 3/2	100					Sand	

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

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

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

Indicators for Problematic Hydric Soils[3]:

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

[3]Indicators of hydrophytic vegetation and wetland hydrology must be present, unless disturbed or problematic.

Restrictive Layer (if present):

Type: Concrete

Depth (inches): 0

Hydric Soil Present? Yes ____ No ✔

Remarks:

Soils within SP01 include sand from 0-24 inches below the soil surface. Soil color differed between the first layer (7.5YR 3/3) and the second layer (10YR 3/2). Otherwise, the soils were similar throughout the soil profile. No indicators of problematic hydric soils were observed.

HYDROLOGY

Wetland Hydrology Indicators:

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

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

Secondary Indicators (2 or more required)

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

Field Observations:

Surface Water Present? Yes ____ No ✔ Depth (inches): ____

Water Table Present? Yes ____ No ✔ Depth (inches): ____

Saturation Present? (includes capillary fringe) Yes ____ No ✔ Depth (inches): ____

Wetland Hydrology Present? Yes ____ No ✔

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

Remarks:

Drift deposits were observed within SP01, and included stems and leaf litter. Drainage patterns were observed and were indicated by the lack of litter on the soil surface, indicating that water had flowed and scoured out the area.

Arid West Ephemeral and Intermittent Streams OHWM Datasheet

Project: SCVWA Honby Tanks Pipeline Project
Project Number: 21-11932
Stream: Santa Clara River
Investigator(s): Kyle Gern, Carolyn Welch

Date: 8/10/2022 **Time:** 1:00 pm
Town: Santa Clarita **State:** California
Photo begin file#: **Photo end file#:**

Y ☐ / N ☒ Do normal circumstances exist on the site?

Y ☐ / N ☒ Is the site significantly disturbed?

Location Details:
Within the Santa Clara River channel

Projection: Mercator **Datum:** NAD83
Coordinates: 34.4281999°N, -118.4939466°W

Potential anthropogenic influences on the channel system:
Homeless encampments, illegal dumping, pollution from industrial development to the south of the project site.

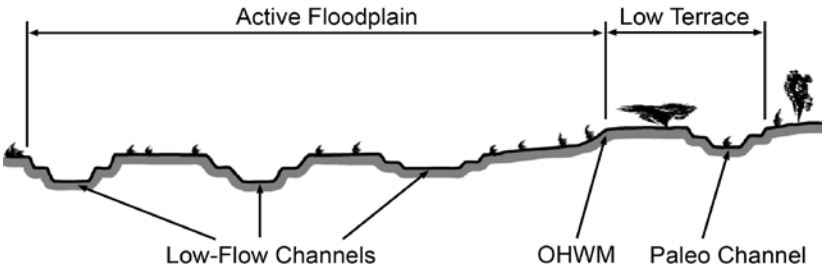
Brief site description:
The study area is situated within the Santa Clara River channel in the City of Santa Clarita. The Santa Clara River (SCR) flows in a westerly direction in the southern portion of the study area. Vegetation/land covers associated with the SCR include mulefat thickets, scale broom scrub, and riverwash. The SCR is a braided river channel within the study area, and includes multiple low-flow channels.

Checklist of resources (if available):

- ☒ Aerial photography
  Dates:
- ☒ Topographic maps
- ☐ Geologic maps
- ☐ Vegetation maps
- ☐ Soils maps
- ☐ Rainfall/precipitation maps
- ☐ Existing delineation(s) for site
- ☒ Global positioning system (GPS)
- ☐ Other studies

- ☐ Stream gage data
  Gage number:
  Period of record:
- ☐ History of recent effective discharges
- ☐ Results of flood frequency analysis
- ☐ Most recent shift-adjusted rating
- ☐ Gage heights for 2-, 5-, 10-, and 25-year events and the most recent event exceeding a 5-year event

Hydrogeomorphic Floodplain Units

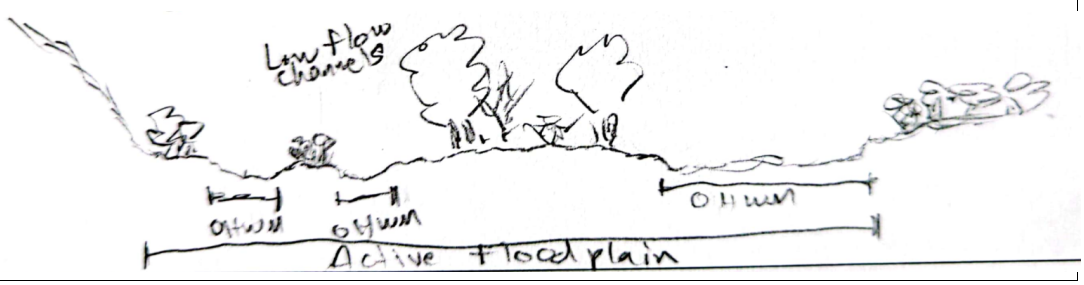


Procedure for identifying and characterizing the floodplain units to assist in identifying the OHWM:

1. Walk the channel and floodplain within the study area to get an impression of the geomorphology and vegetation present at the site.
2. Select a representative cross section across the channel. Draw the cross section and label the floodplain units.
3. Determine a point on the cross section that is characteristic of one of the hydrogeomorphic floodplain units.
   a) Record the floodplain unit and GPS position.
   b) Describe the sediment texture (using the Wentworth class size) and the vegetation characteristics of the floodplain unit.
   c) Identify any indicators present at the location.
4. Repeat for other points in different hydrogeomorphic floodplain units across the cross section.
5. Identify the OHWM and record the indicators. Record the OHWM position via:
   - ☐ Mapping on aerial photograph
   - ☒ GPS
   - ☐ Digitized on computer
   - ☐ Other:

Project ID: 21-11932 **Cross section ID:** OH-1 **Date:** 8/10/2022 **Time:** 1:00 pm

Cross section drawing:



OHWM

GPS point: 34.427660°N, -118.493294°W

Indicators:

- [x] Change in average sediment texture
- [x] Change in vegetation species
- [x] Change in vegetation cover
- [x] Break in bank slope
- [ ] Other: _____
- [ ] Other: _____

Comments:

Sediment within the OHWM consists of sand, and sediment above the OHWM is mostly gravel. Vegetation within the OHWM consists of mostly bare ground void of vegetation, and vegetation above the OHWM consists of mulefat (Baccharis salicifolia), Fremont cottonwood (Populus fremontii), big sagebrush (Artemisia tridentata), and scale broom (Lepidospartum squamatum). Vegetation coverage is lower within the OHWM, and is higher outside the OHWM. A break in bank slope is evident.

Floodplain unit:

- [x] Low-Flow Channel
- [ ] Active Floodplain
- [ ] Low Terrace

GPS point: 34.428194°N, -118.493420°W

Characteristics of the floodplain unit:

Average sediment texture: Sand

Total veg cover: 6 % Tree: 2 % Shrub: 2 % Herb: 2 %

Community successional stage:

- [ ] NA
- [x] Early (herbaceous & seedlings)
- [ ] Mid (herbaceous, shrubs, saplings)
- [ ] Late (herbaceous, shrubs, mature trees)

Indicators:

- [ ] Mudcracks
- [ ] Ripples
- [x] Drift and/or debris
- [x] Presence of bed and bank
- [ ] Benches
- [ ] Soil development
- [ ] Surface relief
- [ ] Other: _____
- [ ] Other: _____
- [ ] Other: _____

Comments:

The low flow channels are mostly unvegetated, but include overhanging Fremont cottonwood and red willow (Salix laevigata), and scattered shrubs such as mulefat. Opportunistic herbaceous non-native plants such as red brome (Bromus rubens) also occur within the low flow channel. This area occurs on the northern end of the SCR active floodplain.

Project ID: 21-11932 **Cross section ID:** OH-1 **Date:** 8/10/2022 **Time:** 1:00 pm

Floodplain unit: ☐ Low-Flow Channel ☒ Active Floodplain ☐ Low Terrace

GPS point: 34.427872°N, -118.493343°W

Characteristics of the floodplain unit:

Average sediment texture: Sand/gravel

Total veg cover: 44 % Tree: 15 % Shrub: 25 % Herb: 5 %

Community successional stage:

- ☐ NA
- ☐ Early (herbaceous & seedlings)
- ☐ Mid (herbaceous, shrubs, saplings)
- ☒ Late (herbaceous, shrubs, mature trees)

Indicators:

- ☐ Mudcracks
- ☐ Ripples
- ☒ Drift and/or debris
- ☒ Presence of bed and bank
- ☐ Benches
- ☒ Soil development
- ☐ Surface relief
- ☐ Other: _____
- ☐ Other: _____
- ☐ Other: _____

Comments:

The active floodplain includes drift deposits that are present along the developed bars in the center of the braided channel of the SCR. Fremont cottonwood, mulefat, and various herbaceous species are present within the active floodplain. This area occurs in the center of the drainage within the study area.

Floodplain unit: ☐ Low-Flow Channel ☐ Active Floodplain ☐ Low Terrace

GPS point: _____

Characteristics of the floodplain unit:

Average sediment texture: _____

Total veg cover: _____ % Tree: _____% Shrub: _____% Herb: _____%

Community successional stage:

- ☐ NA
- ☐ Early (herbaceous & seedlings)
- ☐ Mid (herbaceous, shrubs, saplings)
- ☐ Late (herbaceous, shrubs, mature trees)

Indicators:

- ☐ Mudcracks
- ☐ Ripples
- ☐ Drift and/or debris
- ☐ Presence of bed and bank
- ☐ Benches
- ☐ Soil development
- ☐ Surface relief
- ☐ Other: _____
- ☐ Other: _____
- ☐ Other: _____

Comments:

Appendix C

Cultural Resources Assessment

CONFIDENTIAL APPENDIX

**To protect sensitive information about the location and nature of cultural resources, this appendix is not included in the public draft of this document.

Appendix D

Noise Data and Analyses

Roadway Construction Noise Model (RCNM),Version 1.1

Report date: 6/5/2023
Case Description: Honby Tanks Pipeline

		Baselines (dBA)		---- Receptor #1 ----
Description	Land Use	Daytime	Evening	Night
Residential	Residentia	80	80	80

			Equipment			
	Impact		Spec Lmax	Actual Lmax	Receptor Distance	Estimated Shielding
Description	Device	Usage(%)	(dBA)	(dBA)	(feet)	(dBA)
Backhoe	No	40		77.6	100	0
Crane	No	16		80.6	100	0
Dozer	No	40		81.7	100	0
Tractor	No	40	84		100	0
Generator	No	50		80.6	100	0

Results

	Calculated (dBA)	
Equipment	*Lmax	Leq
Backhoe	71.5	67.6
Crane	74.5	66.6
Dozer	75.6	71.7
Tractor	78	74
Generator	74.6	71.6
Total	78	78.1

*Calculated Lmax is the Loudest value.

Appendix E

Rincon Consultants, Inc.

Environmental Scientists *Planners* *Engineers*

M E M O R A N D U M

■ **Ventura**
180 North Ashwood Avenue
Ventura, California 93003
(805) 644 4455

Carlsbad: (760) 918 9444
Fresno: (559) 228 9925
Los Angeles: (213) 788 4842
Monterey: (831) 333 0310
Oakland: (510) 834 4455
Palm Springs: (760) 203-5120
Riverside: (951) 782-0061
Sacramento: (916) 706 1374
San Diego: (760) 918 9444
San Luis Obispo: (805) 547 0900
Santa Barbara: (805) 319 4092
Ventura: (805) 644 4455

Date: November 9, 2023

To: Wai Lan Lee, PE, Engineer

Project: Honby Tanks Pipeline Project

From: Aileen Mahoney

E-mail: wlee@scvwa.org

cc:

Re: Response to California Department of Transportation Letter Received on the Draft IS-MND for the Honby Tanks Pipeline Project

Comment #1: Traffic Control Plans

Summarized Comment

The commenter suggests the project could slow traffic through the local area and thereby affect implementation of emergency response and emergency evacuation plans. Due to Rio Vista Elementary school being situated along Honby Avenue and Cedar Creek Street, the commenter recommends the incorporation of channelizing devices preceded by approved warning signs to 1) divert traffic in advance of a temporary traffic control zone and 2) define traffic lanes through the work zone to protect motorists, bicyclists, or pedestrians.

Response

Transportation impacts are addressed in Environmental Checklist Section 17, *Transportation*. As described in Section 17, the project would incorporate Mitigation Measure HAZ-6 which would include implementation of a Traffic Control Plan. The requirements of the California Manual on Uniform Traffic

Control Devices (MUTCD) would be incorporated into the project through Mitigation Measure HAZ-6. Section 6F.22 *Lane(s) Closed Signs* of the California MUTCD requires that signage is placed prior to where the lane(s) are closed. Traffic lanes would be defined with channelizing devices as outlined in the California MUTCD. As described in Section 6F.63 *Channelizing Devices* of the California MUTCD, channelizing devices include cones, tubular markers, channelizers, portable delineators, vertical panels, drums, barricades, and longitudinal channelizing devices. Channelizing devices provide for smooth and gradual vehicular traffic flow from one lane to another, onto a bypass or detour, or into a narrower traveled way. They are also used to channelize vehicular traffic away from the workspace, pavement drop-offs, pedestrian or shared-use paths, or opposing directions of vehicular traffic. With incorporation of the measures outlined in California MUTCD as incorporated though Mitigation Measure HAZ-6, the commenter's suggestions would be addressed and no revisions to the Final IS-MND are warranted.

Comment #2: Hazardous Materials Management

Summarized Comment

The commenter acknowledges the project includes Mitigation Measure HAZ-1 which requires the construction contractor develop and implement a Hazardous Materials Management and Spill Control Plan (HMMSCP) that includes a project-specific contingency plan for hazardous materials and waste operations.

Response

As described in Environmental Checklist Section 9, *Hazards and Hazardous Materials*, of the IS-MND and acknowledged by the commenter, the project would implement Mitigation Measure HAZ-1, which would require preparation of a Hazardous Materials Management and Spill Control Plan (HMMSCP). The HMMSCP is required to articulate hazardous materials handling practices to prevent the accidental spill or release of hazardous materials.

Comment #3: Recommended Measures

Summarized Comment

The commenter also recommends the following measures during construction:

1. Construction vehicles should avoid congested state facilities especially during peak hours.
2. Construction vehicles are recommended to transport to and from construction sites during non-peak hours.
3. Cover construction trucks with tarpaulin to avoid debris spillage onto the roadways.

Response

As described in Environmental Checklist Section 17, *Transportation*, of the IS-MND, project construction would result in a maximum of 48 daily trips and would not result in a significant increase in vehicle miles traveled in the project area. This number is significantly lower than the average daily traffic on the affected roadways, indicating the construction's impact on existing traffic patterns would be minimal. Additionally, the commenter recommends construction vehicle transportation to and from the construction sites occur during non-peak hours to minimize disruption to local traffic. As described in Initial Study Section 6, *Project Description,* in the IS-MND, project construction would occur between

7:00 A.M. and 4:00 P.M., Monday through Friday. Construction workers would mostly travel to and from the site during non-peak hours before 7:00 A.M. and after 4:00 P.M. In addition, construction vehicle trips would not exceed 48 daily trips, which would not substantially contribute to congestion on Caltrans roadways as it is minimal compared to existing daily trips on such roadways. SCV Water is amenable to avoiding congested state facilities especially during peak hours and for construction vehicles to transport to and from construction sites during non-peak hours.

Moreover, to mitigate the risk of debris spillage onto the roadways, construction trucks would be required to be covered with tarpaulin during transportation. The project would apply South Coast Air Quality Management District Rule 403 which includes covering haul vehicles prior to exiting the site as a Best Available Control Measure.

DEPARTMENT OF TRANSPORTATION
DISTRICT 7
100 S. MAIN STREET, MS 16
LOS ANGELES, CA 90012
PHONE (213) 266-3574
FAX (213) 897-1337
TTY 711
www.dot.ca.gov

Making Conservation a California Way of Life

October 18, 2023

Wai Lan Lee
PE, Engineer
Santa Clarita Valley Water Agency
25521 Summit Circle
Santa Clarita, CA 91350

RE: Honby Tanks Pipeline Project - MND
SCH #2023090505
GTS #07-LA-2023-04316
Vic. LA-14/PM 29.56

Dear Wai Lan Lee,

Thank you for including the California Department of Transportation (Caltrans) in the environmental review process for the above referenced project. The Santa Clarita Valley Water Agency proposes the construction and operation of a new pipeline to convey water to and from the Honby Tanks and the Honby Booster Station. The proposed pipeline would be buried underground for the entirety of the alignment and would not have any above ground components upon completion. The project would not involve any new operation and maintenance activities, and no new employees would be required.

After reviewing the MND, Caltrans has the following comments:

Construction of the proposed project would require temporary lane closures along Honby Avenue for pipeline installation. The lane closure could slow traffic through the local area and thereby affect implementation of emergency response and emergency evacuation plans. The Lead Agency reports that operational activities associated with the proposed project would occur solely on the project site and would not interfere with emergency response. With implementation of Mitigation Measure HAZ-6, the project contractor(s) shall prepare and implement a traffic control plan to safely redirect traffic, utilize traffic control measures, and give emergency response providers advance notification at least one week prior to the start of work when lane closures are required. As the Rio Vista Elementary school is situated along Honby Avenue and Cedarcreek Street, Caltrans recommends the incorporation of channelizing devices preceded by approved warning signs to 1) divert traffic in advance of a temporary traffic control zone and 2) define traffic lanes through the work zone to protect motorists, bicyclists, or pedestrians. Following implementation of Mitigation Measure HAZ-6 would reduce impacts to emergency access to a less-than-significant level.

Construction of the proposed project would temporarily increase the transport and use of hazardous materials in the project area through the operation of vehicles and equipment. On-site substances would include diesel fuel, oil, solvents, and other similar materials brought onto the construction site for use and storage during the construction period. To reduce potential construction-related impacts, Mitigation Measure HAZ-1 would be required. Before construction begins, the construction contractor shall develop and implement a Hazardous Materials Management and Spill Control Plan (HMMSCP) that includes a project-specific contingency plan for hazardous materials and waste operations.

As the project has less than significant or no Transportation Impact, Caltrans recommends the following during construction:

1. Construction vehicles should avoid congested state facilities especially during peak hours.
2. Construction vehicles are recommended to transport to and from construction sites during non-peak hours.
3. Cover construction trucks with tarpaulin to avoid debris spillage onto the roadways.

The project would involve no new operation and maintenance activities compared to existing conditions, and thus would not generate significant levels of operational VMT. Increases in VMT from construction would be short-term. As a reminder, Senate Bill 743 (2013) has codified into CEQA law and mandated that CEQA review of transportation impacts of proposed development be modified by using VMT as the primary metric in identifying transportation impacts for all future development projects. Caltrans' targets of tripling trips made by bicycle, doubling trips made by walking and public transit, and a 15% reduction in statewide VMT can be achieved through collaborative improvements to the state-wide transportation network.

If you have any questions, please contact project coordinator Anthony Higgins, at anthony.higgins@dot.ca.gov and refer to GTS #07-LA-2023-04316.

Sincerely,

Frances Duong for

MIYA EDMONSON
LDR/CEQA Branch Chief

email: State Clearinghouse

Rincon Consultants, Inc.

Environmental Scientists *Planners* *Engineers*

M E M O R A N D U M

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Date: December 19, 2023

To: Wai Lan Lee, PE, Engineer

Project: Honby Tanks Pipeline Project

From: Aileen Mahoney

E-mail: wlee@scvwa.org

cc:

Re: Response to California Department of Fish and Wildlife Letter Received on the Draft IS-MND for the Honby Tanks Pipeline Project

The commenter states the California Department of Fish and Wildlife's (CDFW) role as a responsible and trustee agency under California Environmental Quality Act (CEQA). The commenter provides a summary of the project description and location. The commenter states they are offering comments and recommendations to assist SCV Water in avoiding and/or mitigating project impacts on biological resources and recommends their suggested measures be included in the project's Mitigation Monitoring and Reporting Program. The commenter also notes that environmental document filing fees will be required upon filing of the Notice of Determination.

Comment #1: Impacts to Arroyo Toad and Western Spadefoot

Summarized Comment

The commenter suggests significant impacts to special status species could result from inadequate avoidance, minimization, and mitigation measures for special status species. Significant impacts from the project could result from substantial adverse direct, indirect, and cumulative effects, either directly or through habitat modifications, on any species identified as a candidate, sensitive, or special-status

species by CDFW or United States Fish and Wildlife Service (USFWS). The commenter suggests if the project may result in potential take, consultation occur with CDFW/USFWS in advance of any ground disturbing activities and/or vegetation removal that may impact arroyo toad. The commenter also recommends the inclusion of arroyo toad and western spadefoot focused surveys for the project. The commenter recommends SCV Water meet with CDFW/USFWS to identify measures such as the use of silt fencing to prevent access into the construction area by either arroyo or spadefoot toads. USFWS will need to determine whether formal or informal consultation is necessary regarding arroyo toads. The commenter recommends the presence of a qualified biologist with appropriate handling permits to capture, temporarily possess, and relocate wildlife be retained to avoid harm or mortality in connection with project construction and activities. If any arroyo toad and/or western spadefoot is harmed during relocation, or if a dead or injured animal is found, the commenter recommends work in the immediate area stop immediately, a qualified biologist be notified, and the dead or injured wildlife be documented. The commenter recommends a report be sent to CDFW/USFWS within three calendar days of the incident or finding.

Response

As described in Environmental Checklist Section 4, *Biological Resources*, of the IS-MND, the project's use of open cut trenching to replace the existing line across the Santa Clara River has the potential to directly impact special status species, including arroyo toad and western spadefoot. Field surveys of the project area were conducted on April 30, 2021, and August 10, 2022, and these species were not observed; nevertheless, the project's Biological Resources Assessment (Appendix B of the IS-MND) indicated there is a moderate potential for them to occur.

Implementation of Mitigation Measures BIO-1, BIO-6, BIO-7, and BIO-10 would require worker environmental awareness training, pre-activity surveys for special status wildlife species, construction monitoring, and habitat rehabilitation and revegetation.

Mitigation Measure BIO-6 requires the pre-activity surveys incorporate methods to detect the special status wildlife species that could potentially occur at the site. As described in the measure, special status species would be avoided to the extent feasible; however, if avoidance is not possible, a qualified biologist, operating under a project-specific incidental take authorization would capture and relocate the individual to an appropriate habitat and location on-site where it would not be harmed by project activities. To clarify and address potentially aestivating arroyo toads, Mitigation Measure BIO-6 has been revised to require arroyo toad focused surveys and the preparation of a Species Protection Plan, if warranted. The arroyo toad survey will also address the presence/absence of aestivating western spadefoot toads.

BIO-6 Pre-Activity Survey

Prior to commencement of ground or vegetation disturbing activities at the project site, a qualified biologist should conduct two surveys for special status wildlife species. The first survey should be conducted no more than fourteen (14) days prior to commencement of project activities and the second survey should be conducted no more than three (3) days prior to the commencement of project activities. The pre-activity survey should incorporate methods to detect the special status wildlife species that could potentially occur at the site. <u>In addition, prior to commencement of project activities, a qualified biologist shall be retained to conduct focused surveys according to the USFWS Survey Protocol for the Arroyo Toad (USFWS 1999).</u>

~~To the extent feasible, special status species should be avoided. If avoidance is not feasible, the species should be captured and transferred to an appropriate habitat and location on-site where it would not be harmed by project activities.~~

If special status species are observed within the project site during pre-activity surveys, a qualified biologist shall draft a "Species Protection Plan" prior to the initiation of construction. At a minimum, the plan shall include avoidance and minimization measures for each observed species. These measures may include, but are not limited to:

- Species-specific Worker Environmental Awareness Program materials;
- Relocation methods including planned relocation areas for the protection of special status species; and,
- Reporting requirements.

~~The biologist should hold the requisite permits for the capture and handling of the species, if applicable. Prior to commencement of the proposed activity, the methods and results of the surveys and, if a special status species is found, the measures to be employed to avoid impacts to the species should be presented in a letter report to SCV Water.~~

CDFW suggested the project may result in the loss of arroyo toad and western spadefoot foraging, burrows, or breeding habitat. Mitigation Measure BIO-10 requires the development of a Habitat Revegetation, Restoration, and Monitoring Program for implementation in all native habitat areas directly affected by construction activities. The Program would detail plans and specifications for replanting areas disturbed by the project with native species propagated from locally collected seed or cuttings, and, if applicable, seed of sensitive species that would be impacted during construction activities.

CDFW also noted the need to coordinate with CDFW/USFWS ahead of project activities. California Fish and Game Code section 1602 states that it is unlawful for any person to "substantially divert or obstruct the natural flow of, or substantially change or use any material from the bed, channel, or bank of, any river, stream, or lake" without first notifying CDFW of that activity. As outlined in Initial Study Section 8, *Other Public Agencies Whose Approval is Required*, of the IS-MND, the project is anticipated to require a Lake and Streambed Alteration Agreement (SAA) from CDFW, a Water Quality Certification under Clean Water Act Section 401 from the Los Angeles RWQCB, and verification from the United States Army Corps of Engineers (USACE) under Nationwide Permit 58. SCV Water will solicit input related to Best Management Practices (BMPs) during the permitting process.

CDFW also recommends a qualified biologist with appropriate handling permits capture, temporarily possess, and relocate wildlife to avoid harm or mortality in connection with project construction activities. Mitigation Measure BIO-7 requires a qualified biologist, which implies the biologist will have the appropriate handling permits or authorization to capture special status species. Nevertheless, in response to this comment and to provide additional clarity, Mitigation Measure BIO-7 has been revised as follows:

BIO-7 Qualified Biological Monitor

A qualified biological monitor familiar with special status species with potential to occur in the project site will be present during initial ground disturbance or vegetation removal activities. The biological monitor should have the authority to temporarily stop work if one

or more special status amphibian, reptile, or mammals are observed; the monitor will then relocate these individuals to suitable undisturbed habitat, outside the areas directly and indirectly affected by ground disturbance activities. The biologist shall hold the requisite incidental take permits or authorizations for the capture and handling of the species, if applicable. ~~Relocation of a federally or state-listed species may require incidental take authorization from CDFW and/or USFWS.~~

The monitor will recommend measures to ensure compliance with all avoidance and minimization measures, applicable permit conditions, and any conditions required by SCV Water. When the biological monitor is present on site, they will be responsible for:

- Ensuring procedures for verifying compliance with environmental mitigation are followed;
- Lines of communication and reporting methods;
- Daily and weekly reporting of compliance;
- Construction crew WEAP training;
- Authority to stop work; and
- Action to be taken in the event of non-compliance.

Finally, CDFW requests if any arroyo toad and/or western spadefoot are harmed during relocation, or a dead or injured animal is found, work in the immediate area stop immediately, the qualified biologist be notified, the dead or injured wildlife be documented, and a report be filed. This comment was addressed under Mitigation Measure BIO-1, which states the following:

"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. The construction foreman or biological monitor should immediately notify SCV Water. SCV Water should follow up with written notification to USFWS and/or CDFW within five working days of the incident. All observations of federally listed species should be recorded on CNDDB field sheets and sent to CDFW by SCV Water or the biological monitor."

With implementation of Mitigation Measures BIO-1, BIO-6, BIO-7, and BIO-10, the project's potential direct, indirect, and cumulative impacts to arroyo toad and western spadefoot and their potential foraging and estivation habitat in the upland areas are addressed.

Comment #2: Impacts on Special Status Plant Species

Summarized Comment

The commenter suggests Mitigation Measure BIO-4, as currently written, would not provide sufficient mitigation for loss of special status plants. The commenter disagrees a 1:1 ratio is sufficient mitigation to offset the loss of special status plants.

Response

Environmental Checklist Section 4, *Biological Resources*, of the Draft IS-MND states Catalina mariposa lily, Plummer's mariposa lily, and slender mariposa lily were not observed within the project site during reconnaissance surveys. Both Plummer's and Catalina mariposa lilies have a moderate potential to occur

whereas slender mariposa lily has a high potential to occur. The analysis acknowledges the proposed open cut trenching construction method could remove, damage or disturb individuals of these species if present. As stated in the Draft IS-MND, impacts to these species would be potentially significant, but mitigable through implementation of BMPs, a worker education program, pre-project botanical surveys, avoidance measures, and compensatory mitigation requirements (if applicable) as prescribed under Mitigation Measures BIO-1 through BIO-5.

CDFW provided recommendations to revise Mitigation Measure BIO-4 to increase the minimum offset restoration ratio for on-site compensation from 1:1 to 2:1 and off-site preservation from 1:1 to 3:1. As outlined in Mitigation Measure BIO-4, on-site compensation for direct impacts to mariposa lily would include a combination of bulb and seed salvage. On-site compensation would include the salvage and translocation of bulbs and seed from within the disturbance area to an appropriate receptor site within the study area where they can be preserved. Preservation of on-site or off-site populations through a land protection instrument (conservation easement or restrictive covenant), preparation of a habitat management plan, and creation of an endowment are not warranted given the limited impacts and temporary nature of the project activities, and relative sensitivity of the species (i.e., not federally or state-listed as endangered or threatened). In response to this comment, Mitigation Measure BIO-4 has been revised as follows:

BIO-4 Special Status Plant Avoidance Measures

If special status plants are detected during special status plant surveys, avoidance of the special status plants shall occur where feasible and vegetation clearing within 50 feet of any identified rare plant will be conducted by hand, if practicable. Any rare plant ~~occurrences~~ occurrence shall have bright orange protective fencing installed at least 50 feet beyond ~~their~~ its extent, or other distance as approved by a qualified biologist, to protect ~~them~~ it from harm.

If avoidance is not feasible, SCV Water shall offset the proposed loss of individual plants at a minimum ~~1:1~~ 2:1 ratio by on-site restoration (salvage, replanting, and propagation). The open scrub and grassland habitats in the Survey Area would be a suitable location for on-site restoration. Compensation for impacts to these species may also be accomplished by preservation of an on-site population~~s~~ or off-site population~~s~~ in the vicinity of the site at a minimum of a ~~1:1~~ 3:1 ratio if present.

Comment #3: Impacts on Nesting Birds and Raptors

Summarized Comment

The commenter recommends SCV Water revise Mitigation Measure BIO-9 by increasing the survey buffer from 25 to 50 feet for passerines to 100 feet and from 300 feet to 500 feet for raptors.

Response

As described in the project's Biological Resources Assessment (Appendix B of the IS-MND), the Survey Area contains habitat that can support nesting birds, including raptors, protected under California Fish and Game Code (CFGC) § 3503 and the federal Migratory Bird Treaty Act (MBTA) (16 United States Code §§ 703–712). Potential nesting locations for raptors were limited with the most suitable locations being native and mature trees located within and outside of the Survey Area. No nests or birds exhibiting nesting behaviors were observed during the field survey.

The project has potential to result in direct and indirect impacts to nesting birds, including Species of Special Concern such as southern California rufous-crowned sparrow, Bell's sage sparrow, and Cooper's hawk, and species protected under the MBTA and CFGC 3503, if they are nesting within the project site and/or immediate vicinity during construction activities. Mitigation Measure BIO-9 states that if project-related activities occur during the breeding bird season, then no more than three days prior to initiation of ground disturbance and/or vegetation removal, a nesting bird pre-construction survey would be conducted and if nests are found, their locations shall be flagged and an appropriate avoidance buffer be determined and demarcated. CDFW recommends SCV Water revise Mitigation Measure BIO-9 by increasing the nest buffer for passerines to 100 feet and to 500 feet for raptors. Based on the proposed project's narrow footprint, construction methodology, and similar measures implemented for other SCV Water projects in the area, the proposed nest buffers are sufficient to avoid or minimize direct and indirect impacts to nesting birds by project construction. No modification to the IS-MND is required.

References

[USFWS] United States Fish and Wildlife Service. 1999. Survey Protocol for the Arroyo Toad. Available at: https://www.fws.gov/sites/default/files/documents/surveyprotocol-for-arroyo-toad.pdf.

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GAVIN NEWSOM, Governor
CHARLTON H. BONHAM, Director

October 24, 2023

Wai Lan Lee
Santa Clarita Valley Water Agency
26521 Summit Circle
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WLee@scvwa.org

SUBJECT: HONBY TANKS PIPELINE PROJECT (PROJECT), MITIGATED NEGATIVE DECLARATION (MND), SCH #2023090505

Dear Wai Lan Lee:

The California Department of Fish and Wildlife (CDFW) received a Notice of Intent to Adopt an MND from the Santa Clarita Valley Water Agency (SCV Water) for the Project pursuant the California Environmental Quality Act (CEQA) and CEQA Guidelines.[1]

Thank you for the opportunity to provide comments and recommendations regarding those activities involved in the Project that may affect California fish and wildlife. Likewise, we appreciate the opportunity to provide comments regarding those aspects of the Project that CDFW, by law, may be required to carry out or approve through the exercise of its own regulatory authority under the Fish and Game Code.

CDFW's Role

CDFW is California's Trustee Agency for fish and wildlife resources and holds those resources in trust by statute for all the people of the State [Fish & G. Code, §§ 711.7, subdivision (a) & 1802; Pub. Resources Code, § 21070; California Environmental Quality Act (CEQA) Guidelines, § 15386, subdivision (a)]. CDFW, in its trustee capacity, has jurisdiction over the conservation, protection, and management of fish, wildlife, native plants, and habitat necessary for biologically sustainable populations of those species (Id., § 1802). Similarly, for purposes of CEQA, CDFW is charged by law to provide, as available, biological expertise during public agency environmental review efforts, focusing specifically on projects and related activities that have the potential to adversely affect State fish and wildlife resources.

CDFW is also submitting comments as a Responsible Agency under CEQA (Pub. Resources Code §21069; CEQA Guidelines, §15381). CDFW expects that it may need to exercise regulatory authority as provided by the Fish and Game Code, including lake and streambed alteration regulatory authority (Fish & G. Code, § 1600 *et seq*.). Likewise, to the extent implementation of the Project as proposed may result in "take", as defined by State law, of any species protected under the California Endangered Species Act (CESA) (Fish & G. Code, § 2050 et seq.), or CESA-listed rare plant pursuant to the Native Plant

[1] CEQA is codified in the California Public Resources Code in section 21000 et seq. The "CEQA Guidelines" are found in Title 14 of the California Code of Regulations, commencing with section 15000.

Protection Act (NPPA; Fish & G. Code, §1900 et seq.), CDFW recommends the Project proponent obtain appropriate authorization under the Fish and Game Code.

Project Description Summary

Proponent: SCV Water

Objective: The Project proposes the construction and operation of a new pipeline to convey water to and from the Honby Tanks and Honby Booster Station. The existing pipeline would be abandoned in place and the new pipeline would be installed via open cut installation. The new pipeline would be constructed of either steel or ductile iron, be upsized from 16 inches in diameter to between 24 to 30 inches, follow the existing pipeline, and be approximately 2,608 feet in length. Prior to abandonment of the existing pipeline, it would be drained of water, filled with grout or cellular concrete, and plugged with concrete. The fence surrounding the Honby Tanks would be removed for access to the existing pipeline. Additionally, installation of the new pipeline across the Santa Clara River and on the north hillside may include treatment of groundwater prior to discharge into a storm drain or into the Santa Clara River. Tight sheet shoring would be installed to protect the trench from potential groundwater and sloughing of alluvial soils. Staging areas for the Project include SCV Water's tank site at the top of the hill, the SCV Water easement behind Rio Vista Elementary School, and SCV Water's pump station. Upon completion of the Project, the new pipeline would be buried underground and would not have any components above ground. No new operation and maintenance activities are proposed. Construction time frame for the Project is anticipated to occur between October 2024 and January 2026.

Location: The Project encompasses 2.4 acres in the City of Santa Clarita, extending from the Honby Tanks in the northern hillside through a section of the Santa Clara River and connecting to an existing pipeline at the intersection of Honby Avenue and Cedarcreek Street. The Project area is bound by residential development to the east, Rio Vista Elementary School to the south, the Santa Clara River to the east and west, and open space to the north. The Assessor's Parcel Numbers associated with the Project area include 2801-001-900, 2805-002-008, 2805-002-902, and 2805-013-900.

Biological Setting: The Santa Clara River is one of the largest natural river systems in southern California remaining in a relatively undeveloped state; it is a braided stream that flows westerly for approximately 84 miles winding through Ventura County to its outlet into the Pacific Ocean. Ground-disturbing activities would impact 11.38 acres of the Santa Clara River and 1.66 acres of unnamed drainages within the Project area.

The river provides habitat for arroyo chub (*Gila orcuttii*; California Species of Special Concern (SSC)), Santa Ana sucker (*Catostomus santaanae*; Endangered Species Act (ESA) listed-threatened species), unarmored threespine stickleback (*Gasterosteus aculeatus williamsoni*; ESA and CESA listed-endangered), arroyo toad (*Anaxyrus* californicus; ESA listed-endangered species), and western spadefoot (*Spea hammondii*; SSC). Wildlife observed during the field surveys include the California towhee (*Melozone*

crissalis), common raven (*Corvus corax*), California scrub-jay (*Aphelocoma californica*), turkey vulture (*Cathartes aura*), western fence lizard (Sceloporus occidentalis), monarch butterfly (*Danas plexippus*; ESA candidate species), California brush rabbit (*Sylvilagus bachmani*), and coastal whiptail (*Aspidoscelis tigris stejnegeri*; SSC).

Vegetation communities that would be impacted from Project activities include: California sagebrush – California buckwheat scrub (0.58 acre); big sagebrush scrub (0.13 acre); arroyo willow – mulefat thickets (0.02 acre); mulefat -tamarisk thickets (0.10 acre); sandbar willow – mesic graminoids thickets (0.03 acre); thick leaved yerba santa scrub (0.10 acre); and wild oats and annual brome grasslands (0.04 acre). Additionally, 0.27 acre of river wash and 1.15 acre of developed/disturbed land cover would be impacted. Three sensitive natural vegetation communities (Fremont cottonwood forest and woodland, scalebroom – California buckwheat scrub, and red willow riparian forest and woodland), are within the Project area but would not be impacted by ground-disturbing activities.

Field surveys of the Project area were conducted on April 30, 2021, and August 10, 2022. No sensitive plant communities were observed during the field surveys; however, there is potential for Catalina mariposa lily (*Calochortus catalinae*; California Rare Plant Rank (CRPR) 4.2), Plummer's mariposa lily (*Calochortus plummerae*; CRPR 4.2), and slender mariposa lily (*Calochortus clavatus var. gracilis*; CRPR 1B.2) to occur.

Comments and Recommendations

CDFW offers the recommendations below to assist SCV Water in adequately identifying the Project's significant, or potentially significant, direct and indirect impacts on fish and wildlife (biological) resources. Editorial comments or other suggestions are also included to improve the environmental document. CDFW recommends the measures or revisions below be included in a science-based monitoring program that contains adaptive management strategies as part of the Project's CEQA mitigation, monitoring, and reporting program (Pub. Resources Code, § 21081.6; CEQA Guidelines, § 15097).

Specific Comments

Comment #1: Impacts on Arroyo Toad and Western Spadefoot

Issue: The Project may impact habitat supporting arroyo toad and western spadefoot.

Specific impacts: Project construction and activities, directly or through habitat modification, may result in direct injury or mortality (e.g., trampling, crushing). Additionally, loss of foraging, burrows, or breeding habitat may occur.

Why impacts would occur: Arroyo toad utilizes watercourses for breeding and both riparian and surrounding upland habitat for foraging; estivation mostly occurs outside of the riparian corridor. Spadefoot toads generally breed in temporary, natural (vernal pools) or artificial (e.g., road rut) pools and also may be found foraging in a variety of habitat types including riparian and uplands; spadefoot often use small mammal burrows but also are

capable of digging into soft substrates. Project activities in the Santa Clara River have the potential to directly impact the habitat occupied by either or both of these species. The MND proposes Mitigation BIO-8 *Dry Season Construction* which states, "[T]o eliminate the potential for impacts to the unarmored threespine stickleback, arroyo toad, western spadefoot, and other sensitive aquatic species and to minimize impacts to wildlife movement corridors, construction within the Santa Clara River will be restricted to the dry season (page 31)."

CDFW appreciates that the Project will work during the dry season to prevent impacts to aquatic species; however, this measure does not address the Project's impacts to potential foraging and estivation habitat in the upland areas. Research has found that burrows of western spadefoot have been recorded with a mean distance of 40 meters from their breeding pools (Baumberger et al. 2019). Similarly, during the dry season, arroyo toads enter aestivation and bury themselves in burrows located in upland areas (USFWS 2023). Focused surveys should be conducted prior to any work in the river and surrounding areas during their respective breeding season for maximum detection of both species.

Evidence impacts would be significant: Arroyo toad is listed as endangered under ESA and western spadefoot is designated a California SSC. CEQA provides protection not only for ESA or CESA listed species, but for any species including but not limited to SSC that can be shown to meet the criteria for State listing. SSC meet the CEQA definition of rare, threatened, or endangered species (CEQA Guidelines, § 15380). Inadequate avoidance, minimization, and mitigation measures for impacts to sensitive or special status species can result in the Project continuing to have a substantial adverse direct, indirect, and cumulative effects, either directly or through habitat modifications, on any species identified as a candidate, sensitive, or special-status species by CDFW or United States Fish and Wildlife Service (collectively, the Wildlife Agencies).

Recommended Potentially Feasible Mitigation Measure(s):

Recommendation #1: Take under the ESA also includes significant habitat modification or degradation that could result in death or injury to a listed species by interfering with essential behavioral patterns such as breeding, foraging, or nesting. CDFW recommends that if the Project may result in potential take, consultation occur with the Wildlife Agencies in order to comply with ESA well in advance of any ground disturbing activities and/or vegetation removal that may impact arroyo toad.

Mitigation Measure #1: Arroyo Toad Focused Surveys – A qualified biologist shall be retained to conduct focused surveys according to USFWS's Survey Protocol for the Arroyo Toad (USFWS 1999). Findings should be submitted to the Wildlife Agencies prior to Project activities for review and approval.

Mitigation Measure #2: Western Spadefoot Focused Surveys – A qualified biologist shall be retained to conduct focused surveys for western spadefoot. Findings should be submitted to the Wildlife Agencies prior to Project activities for review and approval. Surveys for western spadefoot should be conducted between February and May when potential breeding pools retain sufficient water (Fisher 2021). If western spadefoot is

observed, Project activities in their immediate vicinity should cease and individuals be allowed to leave the Project area on their own accord. If occupied burrows are found, a 50-foot no-disturbance buffer shall be delineated around any western spadefoot burrow. If avoidance is not possible, an avoidance, minimization, and mitigation plan shall be developed and submitted to the Wildlife Agencies (jointly CDFW and the U.S. Fish and Wildlife Service (USFWS)) for their approval.

Mitigation Measure #3: CDFW recommends that the project proponents meet with the Wildlife Agencies and identify measures such as use of silt fencing to prevent access into the construction area by either arroyo or spadefoot toads. USFWS will need to determine whether formal or informal consultation is necessary regarding arroyo toads.

Mitigation Measure #4: Presence of a Biological Monitor with a Scientific Collecting Permit – A qualified biologist with appropriate handling permits to capture, temporarily possess, and relocate wildlife shall be retained to avoid harm or mortality in connection with Project construction and activities. CDFW has the authority to issue permits for the take or possession of wildlife, including mammals; birds, nests, and eggs; reptiles; amphibians; fish; plants; and invertebrates (Fish & G. Code, §§ 1002, 1002.5, 1003). Effective October 1, 2018, a Scientific Collecting Permit is required to monitor project impacts on wildlife resources, as required by environmental documents, permits, or other legal authorizations; and, to capture, temporarily possess, and relocate wildlife to avoid harm or mortality in connection with otherwise lawful activities (Cal. Code Regs., tit. 14, § 650). Please visit CDFW's Scientific Collection Permits webpage for information (CDFW 2023a). Pursuant to the California Code of Regulations, title 14, section 650, the Project applicant/qualified biologist must obtain appropriate handling permits to capture, temporarily possess, and relocate wildlife to avoid harm or mortality in connection with Project construction and activities.

Mitigation Measure #5: Injured or Dead Wildlife – If any arroyo toad and/or western spadefoot are harmed during relocation, or a dead or injured animal is found, work in the immediate area shall stop immediately, the qualified biologist shall be notified, and the dead or injured wildlife will be documented. A report shall be sent to the Wildlife Agencies within 3 calendar days of the incident or finding. The report shall include the date, time of the finding or incident (if known), and location of the carcass or injured animal, and circumstances of its death or injury (if known). Work in the immediate area may only resume once the proper notifications have been made and potential additional mitigation measures have been identified to prevent additional injury or death.

Comment #2: Impacts on Special Status Plant Species

Issue: Mitigation Measure BIO-4, as currently written, would not provide sufficient mitigation for loss of special status plants.

Specific impacts: Project ground-disturbing activities such as excavating and installation activities, vegetation removal, and heavy machinery use may result in habitat destruction and/or injury/mortality towards species status plants.

Why impacts would occur: The MND notes that there is a medium potential for Catalina mariposa lily and Plummer's mariposa lily as well as a high potential for slender mariposa lily to be present during Project activities. CDFW appreciates that special status plant surveys, avoidance buffers, and a mitigation and monitoring plan are incorporated as mitigation measures in the MND. Mitigation Measure BIO-4 *Special Status Plant Avoidance Measures* states that, "[I]f avoidance is not feasible, SCV Water shall offset the proposed loss of individual plants at a minimum 1:1 ratio by on-site restoration (salvage, replanting, and propagation) (page 29)". CDFW disagrees that a 1:1 ratio is sufficient mitigation to offset the loss of special status plants. Catalina mariposa lily and Plummer's mariposa lily have a CRPR of 4.2 which means that these plants species are fairly threatened in California and have a limited distribution. Slender mariposa lily has a CRPR of 1B.2 which designates this plant species as endangered, rare, or threatened in California. Given the rapid loss of habitat supporting special status plants in Los Angeles County, it is essential that Projects resulting in temporal and/or permanent impacts to special status plant species provide adequate mitigation.

Evidence impacts would be significant: Impacts to CRPR 1B plant species and their habitat meet the definition of endangered, rare, or threatened species (CEQA Guidelines, § 15380). Some CRPR 3 and 4 species meet the definitions of endangered, rare, or threatened under CEQA. Impacts to CRPR 1B plant species and their habitat may result in a mandatory finding of significance because the Project would have the potential to threaten to eliminate a plant community and substantially reduce the number or restrict the range of an endangered, rare, or threatened species (CEQA Guidelines, § 15065). Insufficient mitigation may result in unmitigated temporal or permanent impacts to a rare plant species.

Recommended Potentially Feasible Mitigation Measure(s):

Mitigation Measure #6: Mitigation Measure BIO-4 - SCV Water shall revise Mitigation Measure BIO-4 by incorporating the underlined language and removing the language with strikethrough:

BIO-4 Special Status Plant Avoidance Measures

If special status plants are detected during special status plant surveys, avoidance of the special status plants shall occur where feasible and vegetation clearing within 50 feet of any identified rare plant will be conducted by hand, if practicable. Any rare plant ~~occurrences~~ occurrence shall have bright orange protective fencing installed at least 50 feet beyond their extent, or other distance as approved by a qualified biologist, to protect them from harm.

If avoidance is not feasible, SCV Water shall offset the proposed loss of individual plants at a minimum ~~1:1~~ 2:1 ratio by on-site restoration (salvage, replanting, and propagation). The open scrub and grassland habitats in the s~~S~~urvey a~~A~~rea would be a suitable location for on-site restoration. Compensation for impacts to these species may also be accomplished by preservation of an on-site population~~s~~ or off-site population~~s~~ in the vicinity of the site at a minimum of a ~~1:1~~3:1 ratio if present. Preservation of on-site or off-site populations must

include a land protection instrument (conservation easement or restrictive covenant), a habitat management plan reviewed and approved by the Wildlife Agencies, and an endowment to ensure management of the mitigation site in-perpetuity.

Additional Recommendations

1. **Nesting Birds and Raptors.** CDFW recommends SCV Water revise Mitigation Measure BIO-9 by incorporating the underlined language and removing the language with strikethrough:

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

   Pre-construction nesting bird surveys shall be conducted during the time of day when birds are active 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, their locations shall be flagged. An appropriate avoidance buffer ranging in size from ~~25 to 50~~ 100 feet for passerines and up to ~~300~~ 500 feet for raptors, depending upon the species and the proposed work activity, shall be determined and demarcated by a qualified biologist with bright orange construction fencing or other suitable flagging. Active nests shall be monitored at a minimum of once per week until it has been determined the nest is no longer being used by either the young or adults. No ground or vegetation disturbance shall occur within this buffer until the qualified biologist confirms the breeding/nesting is completed and all the young have fledged. 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.

Environmental Data. CEQA requires that information developed in environmental impact reports and negative declarations be incorporated into a database (i.e., California Natural Diversity Database) which may be used to make subsequent or supplemental environmental determinations [Pub. Resources Code, § 21003, subd. (e)]. Information on special status species should be submitted to the CNDDB by completing and submitting CNDDB Field Survey Forms (CDFW 2023b). Information on special status native plant populations and sensitive natural communities, the Combined Rapid Assessment and Relevé Form should be completed and submitted to CDFW's Vegetation Classification and Mapping Program (CDFW 2023c).

Mitigation and Monitoring Reporting Plan. CDFW recommends SCV Water update the Project's proposed Biological Resources Mitigation Measures and condition the environmental document to include mitigation measures recommended in this letter. CDFW provides comments to assist SCV Water in developing mitigation measures that are specific, detailed (i.e., responsible party, timing, specific actions, location), and clear in order for a measure to be fully enforceable and implemented successfully via a mitigation monitoring and/or reporting program (CEQA Guidelines, § 15097; Pub. Resources Code, § 21081.6). Per Public Resources Code section 21081.6(a)(1), CDFW has provided SCV Water with a summary of our suggested mitigation measures and recommendations in the form of an attached Draft Mitigation and Monitoring Reporting Plan (MMRP; Attachment A).

Environmental Document Filing Fees

The Project, as proposed, would have an impact on fish and/or wildlife, and assessment of environmental document filing fees is necessary. Fees are payable upon filing of the Notice of Determination by the Lead Agency and serve to help defray the cost of environmental review by CDFW. Payment of the environmental document filing fee is required in order for the underlying Project approval to be operative, vested, and final. (Cal. Code Regs, tit. 14, § 753.5; Fish & G. Code, § 711.4; Pub. Resources Code, § 21089.)

Conclusion

We appreciate the opportunity to comment on the Project to assist SCV Water in adequately analyzing and minimizing/mitigating impacts to biological resources. CDFW requests an opportunity to review and comment on any response that SCV Water has to our comments and to receive notification of any forthcoming hearing date(s) for the Project [CEQA Guidelines, § 15073(e)]. If you have any questions or comments regarding this letter, please contact Julisa Portugal, Environmental Scientist, at Julisa.Portugal@wildlife.ca.gov or (562) 330-7563.

Sincerely,

DocuSigned by:
David Mayer
D700B4520375406...

David Mayer
Environmental Program Manager
South Coast Region

ec: CDFW
Cindy Hailey, San Diego – Cindy.Hailey@wildlife.ca.gov

OPR
State Clearinghouse, Sacramento – State.Clearinghouse@opr.ca.gov

References:

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Attachment A:

CDFW Draft Mitigation, Monitoring, and Reporting Plan and Associated Recommendations

Recommendation	Mitigation Measures	Timing	Responsible Party
MM-BIO-1 – Arroyo Toad Focused Surveys	A qualified biologist shall be retained to conduct focused surveys according to USFWS's Survey Protocol for the Arroyo Toad (USFWS 1999). Findings should be submitted to the Wildlife Agencies prior to Project activities for review and approval.	Prior to and during Project activities	Project proponent/ Qualified Biologist
MM-BIO-2- Western Spadefoot Focused Surveys	A qualified biologist shall be retained to conduct focused surveys for western spadefoot. Findings should be submitted to the Wildlife Agencies prior to Project activities for review and approval. Surveys for western spadefoot should be conducted between February and May when potential breeding pools are present (Fisher 2021). If western spadefoot are observed, Project activities in their immediate vicinity cease and individuals be allowed to leave the Project area on their own accord. If occupied burrows are found, a 50-foot no-disturbance buffer shall be delineated around any western spadefoot burrow. If avoidance is not possible, an avoidance, minimization, and mitigation plan shall be developed and submitted for approval by the Wildlife Agencies.	Prior to and during Project activities	Project proponent/ Qualified Biologist
MM-BIO-3 Consultation	CDFW recommends that the project proponents meet with the Wildlife Agencies and identify measures such as use of silt fencing to prevent access into the construction area by either arroyo or spadefoot toads. USFWS will need to determine whether formal or informal consultation is necessary regarding arroyo toads.	Prior to Project activities	Project proponent

MM-BIO-4-Scientific Collecting Permit	A qualified biologist with appropriate handling permits to capture, temporarily possess, and relocate wildlife shall be retained to avoid harm or mortality in connection with Project construction and activities. CDFW has the authority to issue permits for the take or possession of wildlife, including mammals; birds, nests, and eggs; reptiles; amphibians; fish; plants; and invertebrates (Fish & G. Code, §§ 1002, 1002.5, 1003). Effective October 1, 2018, a Scientific Collecting Permit is required to monitor project impacts on wildlife resources, as required by environmental documents, permits, or other legal authorizations; and, to capture, temporarily possess, and relocate wildlife to avoid harm or mortality in connection with otherwise lawful activities (Cal. Code Regs., tit. 14, § 650). Please visit CDFW's Scientific Collection Permits webpage for information (CDFW 2023a). Pursuant to the California Code of Regulations, title 14, section 650, the Project applicant/qualified biologist must obtain appropriate handling permits to capture, temporarily possess, and relocate wildlife to avoid harm or mortality in connection with Project construction and activities.	Prior to Project activities	Qualified biologist
MM-BIO-5-Injured or Dead Wildlife	If any arroyo toad and/or western spadefoot are harmed during relocation, or a dead or injured animal is found, work in the immediate area shall stop immediately, the qualified biologist shall be notified, and the dead or injured wildlife will be documented immediately. A formal report shall be sent to the Wildlife Agencies within 3 calendar days of the incident or finding. The report shall include the date, time of the finding or incident (if known), and location of the carcass or injured	Prior to and during Project activities	Project applicant/ Qualified biologist

	animal, and circumstances of its death or injury (if known). Work in the immediate area may only resume once the proper notifications have been made and additional mitigation measures have been identified to prevent additional injury or death.		
MM-BIO-6-Mitigation Measure BIO-4	If special status plants are detected during special status plant surveys, avoidance of the special status plants shall occur where feasible and vegetation clearing within 50 feet of any identified rare plant will be conducted by hand, if practicable. Any rare plant occurrence shall have bright orange protective fencing installed at least 50 feet beyond their extent, or other distance as approved by a qualified biologist, to protect them from harm. If avoidance is not feasible, SCV Water shall offset the proposed loss of individual plants at a minimum 2:1 ratio by on-site restoration (salvage, replanting, and propagation). The open scrub and grassland habitats in the survey area would be a suitable location for on-site restoration. Compensation for impacts to these species may also be accomplished by preservation of an on-site population or off-site population in the vicinity of the site at a minimum of a 3:1 ratio if present. Preservation of on-site or off-site populations must include a land protection instrument (conservation easement or restrictive covenant), a habitat management plan reviewed and approved by the Wildlife Agencies, and an endowment to ensure management of the mitigation site in-perpetuity.	Prior to and during Project activities	Project proponent/ Qualified Biologist
MM-BIO-7-Nesting Bird and Raptor Survey	Project-related activities shall occur outside of the bird breeding season (generally February 1 to August 31) to the extent practicable. If	Prior to and during	Project applicant/

	construction must occur within the bird breeding season, then no more than three days prior to initiation of ground disturbance and/or vegetation removal, a nesting bird pre-construction survey shall be conducted by a qualified biologist within the disturbance footprint plus a 100-foot buffer (300-for for raptors), where feasible. If the proposed project is phased or construction activities stop for more than one week, a subsequent preconstruction nesting bird survey shall be required prior to each phase of construction during the nesting season. Pre-construction nesting bird surveys shall be conducted during the time of day when birds are active 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, their locations shall be flagged. An appropriate avoidance buffer ranging in size from 100 feet for passerines and up to 500 feet for raptors, depending upon the species and the proposed work activity, shall be determined and demarcated by a qualified biologist with bright orange construction fencing or other suitable flagging. Active nests shall be monitored at a minimum of once per week until it has been determined the nest is no longer being used by either the young or adults. No ground or vegetation disturbance shall occur within this buffer until the qualified biologist confirms the breeding/nesting is completed and all the young have fledged. If project	Project activities	Qualified biologist

	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.		
REC-1- ESA Consultation	Take under the ESA also includes significant habitat modification or degradation that could result in death or injury to a listed species by interfering with essential behavioral patterns such as breeding, foraging, or nesting. CDFW recommends that if the Project may result in potential take, consult with the Wildlife Agencies, in order to comply with ESA, well in advance of any ground disturbing activities and/or vegetation removal that may impact arroyo toad.	Prior to Project activities	Project proponent
REC-2 – Environmental Data	CEQA requires that information developed in environmental impact reports and negative declarations be incorporated into a database (i.e., California Natural Diversity Database) which may be used to make subsequent or supplemental environmental determinations. Information on special status species should be submitted to the CNDDB by completing and submitting CNDDB Field Survey Forms. Information on special status native plant populations and sensitive natural communities, the Combined Rapid Assessment and Relevé Form should be completed and submitted to CDFW's Vegetation Classification and Mapping Program.	Prior to Project activities	Qualified Biologist

Appendix F

Mitigation Monitoring and Reporting Program

Mitigation Monitoring and Reporting Program

CEQA requires that a reporting or monitoring program be adopted for the conditions of project approval that are necessary to mitigate or avoid significant effects on the environment (Public Resources Code 21081.6). This mitigation monitoring and reporting program is intended to track and ensure compliance with adopted mitigation measures during the project implementation phase. For each mitigation measure recommended in the adopted Initial Study-Mitigated Negative Declaration (IS-MND), specifications are made herein that identify the action required, the monitoring that must occur, and the agency or department responsible for oversight.

Mitigation Measure/ Condition of Approval	Action Required	Monitoring Timing	Monitoring Frequency	Responsible Agency	Compliance Verification Initial	Compliance Verification Date	Compliance Verification Comments
Air Quality							
AQ-1: Construction Particulate Matter Emissions Reduction							
The proposed project's unpaved demolition and construction areas, including unpaved staging areas, shall be wetted at least three times per day during the overlap of Infrastructure Installation and Paving phases.	Include ground wetting requirements in the construction contract for the Infrastructure Installation and Paving phases.	Prior to and during Infrastructure Installation and Paving construction phases.	Once and as needed	Santa Clarita Valley Water Agency (SCV Water)			
Biological Resources							
BIO-1: General Best Management Practices							
General requirements which shall be followed by construction personnel are listed below. ▪ The contractor shall clearly delineate the construction limits and prohibit any construction-related traffic outside those boundaries. ▪ 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 proposed project construction shall be disposed of in closed containers only and removed daily from the project site. ▪ No deliberate feeding of wildlife shall be allowed. ▪ No pets shall be allowed on the project site.	Include general biological resources best management practice requirements in the construction contract.	Prior to and during construction.	Once and as needed	SCV Water			

Mitigation Measure/ Condition of Approval	Action Required	Monitoring Timing	Monitoring Frequency	Responsible Agency	Com-pliance Verifi-cation Initial	Com-pliance Verifi-cation Date	Com-pliance Verifi-cation Comments
▪ No firearms shall be allowed on the project site. ▪ If vehicle or equipment maintenance is necessary, it shall be performed in the designated staging areas. ▪ If construction must occur at night (between dusk and dawn), all lighting shall be shielded and directed downward to minimize the potential for glare or spillover onto adjacent properties and to reduce impacts on local wildlife. ▪ During construction, heavy equipment shall be operated in accordance with standard BMPs. All equipment used on-site shall be properly maintained to avoid leaks of oil, fuel, or residues. Provisions shall be in place to remediate any 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. The construction foreman or biological monitor should immediately notify SCV Water. SCV Water should follow up with written notification to USFWS and/or CDFW within five working days of the incident. All observations of federally listed species should be recorded on CNDDB field sheets and sent to CDFW by SCV Water or the biological monitor.							

Mitigation Measure/ Condition of Approval	Action Required	Monitoring Timing	Monitoring Frequency	Responsible Agency	Compliance Verification Initial	Compliance Verification Date	Compliance Verification Comments
BIO-2 Worker Environmental Awareness Program							
A lead biological monitor shall conduct a pre-project environmental education program for all personnel working at the site, which should be focused on conditions and protocols necessary to avoid and minimize potential impacts to biological resources. Prior to initiation of construction activities (including staging and mobilization), all personnel associated with project construction shall attend a Worker Environmental Awareness Program (WEAP) training, conducted by a qualified biologist, to aid workers in recognizing special status biological resources potentially occurring in the project area. This training shall include information about the special status species with potential to occur in the project area. The specifics of this program shall include identification of special status species and habitats, a description of the regulatory status and general ecological characteristics of special status resources, and 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 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	Require all construction personnel to attend WEAP training led by a lead biological monitor.	Prior to and during construction if new personnel are added.	Once and as needed	SCV Water			

Mitigation Measure/ Condition of Approval	Action Required	Monitoring Timing	Monitoring Frequency	Responsible Agency	Compliance Verification Initial	Compliance Verification Date	Compliance Verification Comments
them. The crew foreman shall be responsible for ensuring crew members adhere to the guidelines and restrictions designed to avoid impacts to special status species.							
BIO-3: Special Status Plant Surveys							
To avoid impacts to special status plants, surveys for special status plants shall be completed prior to any vegetation removal, grubbing, or other construction activity within this area. The surveys shall be floristic in nature, seasonally timed to coincide with the blooming period of the target species (Catalina mariposa lily, Plummer's mariposa lily, and slender mariposa lily), and be conducted by a qualified biologist. Special status plant species identified on-site shall be mapped onto a site-specific aerial photograph and topographic map. Surveys should be conducted in accordance with the most current protocols established by the CDFW and USFWS. A report of the survey results shall be submitted to SCV Water for review and approval.	Retain a qualified biologist to complete surveys for special status plants. Review and approve the report prepared by the qualified biologist.	Seasonally timed and prior to any ground disturbance activities.	Once	SCV Water			
BIO-4: Special Status Plant Avoidance Measures							
If special status plants are detected during special status plant surveys, avoidance of the special status plants shall occur where feasible and vegetation clearing within 50 feet of any identified rare plant will be conducted by hand, if practicable. Any rare plant occurrence shall have bright orange protective fencing installed at least 50 feet beyond its extent, or other distance as	Implement resource relocation or avoidance (if necessary and feasible) as specified in Mitigation Measure BIO-5, including, implementation of a Special Status Plant Mitigation and Monitoring Plan, and performance monitoring.	For installation of protective fencing: prior to ground disturbance activities.	Once	SCV Water			

Mitigation Measure/ Condition of Approval	Action Required	Monitoring Timing	Monitoring Frequency	Responsible Agency	Compliance Verification Initial	Compliance Verification Date	Compliance Verification Comments
approved by a qualified biologist, to protect it from harm. If avoidance is not feasible, SCV Water shall offset the proposed loss of individual plants at a minimum 2:1 ratio by on-site restoration (salvage, replanting, and propagation). The open scrub and grassland habitats in the Survey Area would be a suitable location for on-site restoration. Compensation for impacts to these species may also be accomplished by preservation of an on-site populations or off-site populations in the vicinity of the site at a minimum of a 3:1 ratio if present.							
BIO-5: Special Status Plant Mitigation and Monitoring Program							
If special status plants are detected and would be impacted by project construction, a Special Status Plant Mitigation and Monitoring Plan that provides for the replacement of the species impacted by the project shall be developed by a qualified restoration specialist. 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;	Retain a qualified biologist to prepare a Special Status Plant Mitigation and Monitoring Plan and annually review performance of the Plan over a 5-year period.	Prior to construction and annually for 5 years.	Once and annually	SCV Water			

Mitigation Measure/ Condition of Approval	Action Required	Monitoring Timing	Monitoring Frequency	Responsible Agency	Com-pliance Verifi-cation Initial	Com-pliance Verifi-cation Date	Com-pliance Verifi-cation Comments
▪ Site preparation procedures for the mitigation site; ▪ A schedule and action plan to maintain and monitor the mitigation area; ▪ 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 in the event that 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 should equal the number lost to project construction, and ▪ Restoration will be considered successful after the success criteria have been met for a period of at least 2 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 development of the project and should be implemented over a five-year period. It can also be combined with the Habitat Revegetation, Restoration, and Monitoring							

Mitigation Measure/ Condition of Approval	Action Required	Monitoring Timing	Monitoring Frequency	Responsible Agency	Com-pliance Verifi-cation Initial	Com-pliance Verifi-cation Date	Com-pliance Verifi-cation Comments
Program described under Mitigation Measure BIO-10, below.							
Annual reports discussing the implementation, monitoring, and management of the Special Status Plant Mitigation and Monitoring Plan shall be submitted to SCV Water. Five years after the start of the mitigation project, a final report shall be submitted, which should at a minimum discuss the implementation, monitoring, 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 established performance standards. Should the success criteria be met before Year Five, the mitigation effort can be deemed complete.							
BIO-6: Pre-activity Survey							
Prior to commencement of ground or vegetation disturbing activities at the project site, a qualified biologist shall conduct two surveys for special status wildlife species. The first survey shall be conducted no more than fourteen (14) days prior to commencement of project activities and the second survey shall be conducted no more than three (3) days prior to the commencement of project activities. The survey shall incorporate methods to detect the special status wildlife species that could potentially occur at the site. In addition, prior to commencement of project activities, a qualified biologist shall be	Retain a qualified biologist to complete pre-activity surveys for special status species. Review all findings of each survey and Species Protection Plan (if required), and implement all recommended avoidance or relocation measures, if required.	Prior to any ground or plant disrupting activities.	Once	SCV Water			

Mitigation Measure/ Condition of Approval	Action Required	Monitoring Timing	Monitoring Frequency	Responsible Agency	Com-pliance Verifi-cation Initial	Com-pliance Verifi-cation Date	Com-pliance Verifi-cation Comments
retained to conduct focused surveys according to the USFWS Survey Protocol for the Arroyo Toad (USFWS 1999). If special status species are observed within the project site during pre-activity surveys, a qualified biologist shall draft a "Species Protection Plan" prior to the initiation of construction. At a minimum, the plan shall include avoidance and minimization measures for each observed species. These measures may include, but are not limited to: ▪ Species-specific Worker Environmental Awareness Program materials; ▪ Relocation methods including planned relocation areas for the protection of special status species; and, ▪ Reporting requirements.							
BIO-7: Qualified Biological Monitor							
A qualified biological monitor familiar with special status species with potential to occur in the project site shall be present during initial ground disturbance or vegetation removal activities. The biological monitor shall have the authority to temporarily stop work if one or more special status amphibian, reptile, or mammals are observed; the monitor shall then relocate these individuals to suitable undisturbed habitat, outside the areas directly and indirectly affected by ground disturbance activities. The biologist shall hold the requisite incidental take permits or authorizations for the capture and handling of the species, if applicable.	Retain a qualified biologist to monitor relevant special status species during construction activities.	During all initial ground disturbance or vegetation removal activities of each construction segment.	Once for each constructio n segment	SCV Water			

Mitigation Measure/ Condition of Approval	Action Required	Monitoring Timing	Monitoring Frequency	Responsible Agency	Compliance Verification Initial	Compliance Verification Date	Compliance Verification Comments
The monitor shall recommend measures to ensure compliance with all avoidance and minimization measures, applicable permit conditions, and any conditions required by SCV Water. When the biological monitor is present on site, they shall be responsible for: ▪ Ensuring procedures for verifying compliance with environmental mitigation are followed; ▪ Lines of communication and reporting methods; ▪ Daily and weekly reporting of compliance; ▪ Construction crew WEAP training; ▪ Authority to stop work; and ▪ Action to be taken in the event of non-compliance.							
BIO-8: Dry Season Construction							
To eliminate the potential for impacts to the unarmored threespine stickleback, arroyo toad, western spadefoot and other sensitive aquatic species and to minimize impacts to wildlife movement corridors, construction within the Santa Clara River will 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 is present. In addition, surface elevations within washes will be returned to preconstruction conditions prior to the end of the dry season.	Restrict construction within the Santa Clara River to occur only during dry periods in the construction contract. Confirm that surface elevations return to pre-construction conditions prior to the end of the dry season.	Prior to construction. Upon completion of construction.	Once Once	SCV Water			

Mitigation Measure/ Condition of Approval	Action Required	Monitoring Timing	Monitoring Frequency	Responsible Agency	Com-pliance Verifi-cation Initial	Com-pliance Verifi-cation Date	Com-pliance Verifi-cation Comments
BIO-9: Nesting Birds							
Project-related activities shall occur outside of the bird breeding season (generally February 1 to August 31) to the extent practicable. If construction must occur within the bird breeding season, then no more than three days prior to initiation of ground disturbance and/or vegetation removal, a nesting bird pre-construction survey shall be conducted by a qualified biologist within the disturbance footprint plus a 100-foot buffer (300-for for raptors), where feasible. If the proposed project is phased or construction activities stop for more than one week, a subsequent pre-construction nesting bird survey shall be required prior to each phase of construction during the nesting season. Pre-construction nesting bird surveys shall be conducted during the time of day when birds are active 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, their locations shall be flagged. An appropriate avoidance buffer ranging in size from 25 to 50 feet for passerines and up to 300 feet for raptors, depending upon the species and the proposed work activity, shall be determined and demarcated by a qualified biologist with bright orange construction fencing or other	For construction that occurs during the nesting bird season, retain a qualified biologist to conduct pre-construction nesting bird surveys and establish exclusion zones, as needed, until a qualified biologist has determined that all young have fledged.	Three days prior to initial ground disturbance, or re-initiation of construction following a one-week lapse, between February 1 and August 31.	Once and as needed	SCV Water			

Mitigation Measure/ Condition of Approval	Action Required	Monitoring Timing	Monitoring Frequency	Responsible Agency	Compliance Verification Initial	Compliance Verification Date	Compliance Verification Comments
suitable flagging. Active nests shall be monitored at a minimum of once per week until it has been determined the nest is no longer being used by either the young or adults. No ground or vegetation disturbance shall occur within this buffer until the qualified biologist confirms the breeding/nesting is completed and all the young have fledged. 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-10: Habitat Revegetation, Restoration, and Monitoring Program							
SCV Water shall develop a Habitat Revegetation, Restoration, and Monitoring Program for implementation in all native habitat areas directly affected by construction activities. The program shall include the following measures: ▪ Invasive Species Control ▫ Where appropriate and feasible, the area to be disturbed shall be treated to kill invasive exotic species and limit their seed production prior to initiating any earthmoving activity with the objectives of (1) preventing invasive species from spreading from the disturbance area, and (2) removing weed sources from the salvaged topsoil. Herbicides shall be used only by a licensed herbicide applicator and may require notification to property	Retain a qualified biologist to develop and implement a Habitat Revegetation, Restoration, and Monitoring Program.	Prior to, during, and after construction activities for up to 5 years.	Once and as needed	SCV Water			

Mitigation Measure/ Condition of Approval	Action Required	Monitoring Timing	Monitoring Frequency	Responsible Agency	Com-pliance Verifi-cation Initial	Com-pliance Verifi-cation Date	Com-pliance Verifi-cation Comments
owners or resource agencies. The treatment shall be completed in advance of the earthmoving in order for this mitigation to have its intended effect (e.g., the treatment would need to occur prior to target species setting seed). ▪ Topsoil Salvage and Replacement ▫ In areas where vegetation and soil are to be removed, the topsoil shall be salvaged and replaced. This may be accomplished using two lifts, the first to salvage the seed bank, and the second to salvage soil along with soil biota in the root zone. Soil shall be stockpiled in two areas near the project site, with the seed bank labeled to identify it. Topsoil shall be replaced in the proper layers after final reconfiguration of disturbed areas. Stockpiles shall be covered if the soil is to be left for an extended period of time to prevent losses due to erosion and invasion of weeds. ▪ Habitat Rehabilitation and Revegetation ▫ Plans and specifications for replanting areas disturbed by the project shall be developed with native species propagated from locally collected seed or cuttings, and, if applicable, shall include seed of sensitive species that would be impacted during construction activities.							

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▫ Monitoring procedures and performance criteria shall be developed to address revegetation and erosion control. The performance criteria shall consider the level of disturbance and the condition of adjacent habitats. Monitoring shall continue for 3-5 years, or until performance criteria have been met, specifically the restoration/revegetation of disturbed native habitat at a 1:1 ratio. Appropriate remedial measures, such as replanting, erosion control, or weed control, shall be identified and implemented if it is determined that performance criteria are not being met.							
BIO-11: Jurisdictional Habitat Best Management Practices							
To avoid and/or minimize potential indirect impacts to jurisdictional waters and water quality, the following Best Management Practices shall be implemented within 50 feet of a jurisdictional feature: ▪ Materials shall be stored on impervious surfaces or plastic ground covers to prevent any spills or leakage and should be at least 50 feet from drainage features. Construction materials and spoils shall be protected from stormwater runoff using temporary perimeter sediment barriers such as berms, silt fences, fiber rolls, covers,	Include implementation of jurisdictional habitat Best Management Practices in the construction contract.	Prior to and during construction.	Once and as needed	SCV Water			

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sand/gravel bags, and straw bale barriers, as appropriate. ▪ All vehicles and equipment shall be in good working condition and free of leaks. The contractor shall prevent oil, petroleum products, or any other pollutants from contaminating the soil or entering a watercourse (dry or otherwise). When vehicles or equipment are stationary, mats or drip pans shall be placed below vehicles to contain fluid leaks. ▪ All re-fueling, cleaning, and maintenance of equipment shall occur at least 50 feet from potentially jurisdictional waters. ▪ Adequate spill prevention and response equipment shall be maintained on-site and readily available to implement to ensure minimal impacts to the aquatic and marine environments.							
Cultural Resources							
CR-1: Worker Environmental Awareness Program							
A Worker Environmental Awareness Program (WEAP) training should be conducted by an archaeologist who meets the Secretary of the Interior's *Professional Qualifications Standard*s for Archaeology and a local Native American representative prior to the commencement of any project-related ground disturbances. The WEAP training should include a description of the types of cultural materials that may be encountered, cultural sensitivity issues, the regulatory	Retain an archaeologist meeting the Secretary of Interior's Professional Qualifications Standards for archaeology and local Native American Representative to provide WEAP training to all construction personnel.	Prior to construction activities.	Once	SCV Water			

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environment, and protocols for treatment of the materials in the event of a find.							
CR-2: Unanticipated Discovery of Cultural Resources							
In the unlikely event archaeological resources are unexpectedly encountered during ground-disturbing activities, work in the immediate area should be halted and an archaeologist meeting the Secretary of the Interior's *Professional Qualifications Standards* for archeology (National Park Service 1983) should be contacted immediately to evaluate the find. If the find is prehistoric, then a Native American representative should also be contacted to participate in the evaluation of the find. Impacts to the find shall be avoided to the extent feasible; methods of avoidance may include, but shall not be limited to, capping, fencing, or project redesign. If necessary, the evaluation may require preparation of a treatment plan and archaeological testing for CRHR eligibility. If the discovery proves to be eligible for the CRHR and cannot be avoided by the modified project, additional work, such as data recovery excavation, may be warranted to mitigate significant impacts to historical resources.	Retain an archaeologist meeting the Secretary of Interior's Professional Qualifications Standards for archaeology to monitor all groundbreaking activities within the project site and evaluate unanticipated finds.	During construction.	As needed	SCV Water			
Hazards and Hazardous Materials							
HAZ-1: Hazardous Materials Management and Spill Control Plan							
Before construction begins, the construction contractor shall develop and implement a Hazardous Materials Management and Spill Control Plan (HMMSCP) that includes a	Require the construction contractor to prepare a HMMSCP. Approve the HMMSCP prior to construction and	Prior to and during construction activities.	Once and as needed	SCV Water			

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project-specific contingency plan for hazardous materials and waste operations. 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 United States Department of Labor Occupational Safety and Health Administration and California Division of Occupational Safety and Health regulations. The HMMSCP shall articulate hazardous materials handling practices to prevent the accidental spill or release of hazardous materials.	ensure compliance with the HMMSCP during construction.						
HAZ-2: Soil and Groundwater Management Plan							
Prior to commencement of construction activities at the project site, SCV Water shall retain a qualified consultant (i.e., Professional Geologist [PG] or Professional Engineer [PE]) to prepare a Soil and Groundwater Management Plan (SGMP). The SGMP, or equivalent document, shall be prepared to address on-site handling and management of impacted soils, groundwater, or other impacted wastes, and reduce hazards to construction workers and off-site receptors during construction. The SGMP shall establish remedial measures and/or soil and groundwater management practices to ensure construction worker safety, the health of future workers and visitors, and prevent the off-site migration of contaminants from the site. These measures and practices may include, but are not limited to:	Retain a qualified consultant to prepare a Soil and Groundwater Management Plan (SGMP). Approve the SGMP prior to construction and ensure compliance with the SGMP during construction.	Prior to and during construction activities.	Once and as needed	SCV Water			

Mitigation Measure/ Condition of Approval	Action Required	Monitoring Timing	Monitoring Frequency	Responsible Agency	Compliance Verification Initial	Compliance Verification Date	Compliance Verification Comments
▪ Stockpile management, including stormwater pollution prevention and the installation of Best Management Practices; ▪ Collection of groundwater samples during dewatering; ▪ Proper transportation and disposal procedures of impacted materials in accordance with applicable regulations, including California Code of Regulations (CCR) Title 22; ▪ Monitoring and reporting; and/or ▪ A health and safety plan for contractors working at the site that addresses the safety and health hazards of each phase of site construction activities with the requirements and procedures for employee protection, and outlines proper soil and groundwater handling procedures and health and safety requirements to minimize worker and public exposure to hazardous materials during construction. SCV Water shall review and approve the SGMP, and shall ensure that the construction contractor implements the SGMP prior to and during construction.							
HAZ-3: Subsurface Investigation							
If odorous or visually stained soils or groundwater, other indications of unanticipated piping or equipment (including hydrocarbon piping or equipment), or debris are encountered during ground-disturbing	Require in the construction contract that work be halted in the immediate area of visually stained soils or groundwater, unanticipated piping or equipment, or debris.	Prior to construction.	Once	SCV Water			

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activities, work in the immediate area shall be halted and SCV Water shall retain a qualified consultant (i.e., PG or PE) to conduct a subsurface investigation in the potentially impacted area. Work may continue on other parts of the project while impacted soil or groundwater investigation and/or remediation takes place. The subsurface investigation may include, but is not limited to, completion of soil and/or groundwater sampling and analysis for total petroleum hydrocarbons, volatile organic compounds, semi-volatile organic compounds, organochloride pesticides, and/or metals. The PG or PE shall prepare a subsurface investigation report, which will be submitted to SCV Water for review and approval. As part of the subsurface investigation, analytical results shall be screened against the most recent San Francisco Bay Regional Water Quality Control Board (SFB RWQCB) Environmental Screening Levels (ESL) (SFB RWQCB 2023).1 The ESLs are risk-based screening levels for direct exposure of construction workers, residential land use, and commercial/industrial land use. The subsurface investigation report shall include recommendations to address identified hazards and indicate when to apply those recommended actions in relation to project activities. If contaminants are detected at the project site, SCV Water shall implement the	Retain a qualified consultant to conduct a subsurface investigation. Review and approve the investigation report.	During construction.	As needed				

1 Although established by the SFB RWQCB, the SFB RWQCB ESLs are accepted and used throughout the state by other RWQCBs and state agencies.

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recommendations specified in the subsurface investigation report, and appropriate steps shall be undertaken by SCV Water to protect site workers during project construction. This could include preparation of an updated SGMP (see Mitigation Measure HAZ-2) and/or remediation, if required (see Mitigation Measure HAZ-4).							
HAZ-4: Remediation							
If the subsurface investigation (see Mitigation Measure HAZ-3) identifies that contaminants are present within the construction limits at chemical concentrations exceeding ESLs and/or hazardous waste screening thresholds for contaminants in soil (CCR Title 22, Section 66261.24), SCV Water shall retain a qualified consultant (i.e., PG or PE) to conduct additional analytical testing and recommend soil disposal recommendations, or consider other remedial engineering controls, as necessary.	Retain a qualified consultant to perform additional analytical testing and recommend soils recommendations.	Following completion of subsurface investigation under HAZ-3.	Once	SCV Water, LA RWQCB, DTSC			
	Require the construction contractor to implement disposal recommendations for regulated waste.	Prior to transportation and disposal of impacted soils or other wastes.	As needed				
The qualified consultant (i.e., PG or PE) shall utilize the project site analytical results for waste characterization purposes prior to off-site transportation or disposal of potentially impacted soils or other impacted wastes. The qualified consultant (I.e., PG or PE) shall provide disposal recommendations and arrange for proper disposal of the waste soils or other impacted wastes (as necessary), and/or provide recommendations for remedial engineering controls, if appropriate.							
Remediation of impacted soils and/or implementation of remedial engineering							

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controls may require additional delineation of impacts; additional analytical testing per landfill or recycling facility requirements; soil excavation; and off-site disposal or recycling. Remediation should be conducted within the construction footprint/areas of soil disturbance to screening levels as determined by the qualified consultant (i.e., PG or PE), SCV Water, and/or an oversight agency (e.g., Los Angeles RWQCB [LA RWQCB] or Department of Toxic Substances Control). SCV Water shall review and approve the project site disposal recommendations for regulated waste prior to transportation of impacted soils off-site, and review and approve remedial engineering controls, prior to construction. Subsequently, SCV Water shall review and implement the disposal recommendations for regulated waste prior to transportation of impacted soils off-site, and review and implement the remedial engineering controls, prior to construction.							
HAZ-5: Disposal of Groundwater							
If contaminated groundwater (decontamination water, purge water, dewatering, or underground structures [groundwater leakage into the final structure]) is generated during construction of the project, the LA RWQCB or the City of Santa Clarita and/or Los Angeles County Department of Public Works would be consulted to determine if the treated groundwater can be disposed through one of their waste discharge permits, or through an	Consult with other responsible agencies to determine groundwater disposal options. If required, obtain an NPDES permit.	Prior to disposal of contaminated groundwater.	Once	SVC Water, LA RWQCB, City of Santa Clarita, Los Angeles County Public Works			

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existing SCV Water permit. LA RWQCB may require that an individual National Pollution Discharge Elimination System (NPDES) permit and/or waste discharge requirements be obtained for dewatering activities. The groundwater discharge and disposal requirements vary by agency, location, concentration, and contaminants of concern, and would therefore be developed in consultation with SCV Water and the applicable agency, which could include LA RWQCB, the City of Santa Clarita, and/or the Los Angeles County Department of Public Works.							
HAZ-6: Traffic Control Plan							
SCV Water shall require the project contractor(s) to prepare and implement a traffic control plan that specifies how traffic will be safely and efficiently redirected during lane closures. All work shall comply with the Work Area Traffic Control Handbook, which conforms to the standards and guidance of the California Manual on Uniform Traffic Control Devices. Traffic control measures for lane closures shall be included, and priority access shall be given to emergency vehicles. The traffic control plan shall also include requirements to notify local emergency response providers at least one week prior to the start of work when lane closures are required.	Require the construction contractor to prepare and implement a traffic control plan. Review and approve the traffic control plan.	Prior to construction activities.	Once	SCV Water			

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Tribal Cultural Resources							
TCR-1: Tribal Cultural Resources Construction Monitoring							
SCV Water shall retain a professional Tribal Monitor procured by the Fernandeño Tataviam Band of Mission Indians (FBTMI) to observe all ground-disturbing activities including, but not limited to, excavating, digging, trenching, plowing, drilling, tunneling, quarrying, grading, leveling, clearing, driving posts, auguring, blasting, stripping topsoil or similar activity. If cultural resources are encountered, the Tribal Monitor will have the authority to request that ground-disturbing activities cease within 60 feet of discovery to assess and document potential finds in real time.	Retain a Tribal Monitor to monitor all groundbreaking activities within the project site and document unanticipated finds.	During construction.	As needed	SCV Water			
TCR-2: Unanticipated Discovery of Tribal Cultural Resources							
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.	Consult with FBTMI upon discovery of unanticipated tribal cultural resources.	During construction.	As needed	SCV Water			
TCR-3: Unanticipated Discovery of Human Remains							
If human remains or funerary objects are encountered during any activities associated with the project, work in the immediate vicinity (within a 100-foot buffer of the find) shall cease and the County Coroner shall be contacted pursuant to State Health and Safety Code Section 7050.5 and that code shall be enforced for the duration of the project.	Require in the construction contract that work be halted in the immediate area of unanticipated human remains or funerary objects, and that the contractor notify SCV Water of the find immediately. Contact the County Coroner.	Prior to start of construction During construction.	Once As needed	SCV Water			

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Inadvertent discoveries of human remains and/or funerary object(s) are subject to California State Health and Safety Code Section 7050.5, and the subsequent disposition of those discoveries shall be decided by the Most Likely Descendant (MLD), as determined by the Native American Heritage Commission (NAHC), should those findings be determined as Native American in origin.							