THE METROPOLITAN WATER DISTRICT OF SOUTHERN CALIFORNIA

Board Action

- **Board of Directors**
  One Water and Adaptation Committee

4/14/2026 Board Meeting

7-2

Subject

Adopt the Mitigated Negative Declaration and take related CEQA actions for the Casa Loma Siphon No. 1 and San Jacinto Pipeline Protection Project, and approve the project for CEQA purposes

Executive Summary

The Colorado River Aqueduct (CRA), after crossing through the San Jacinto mountains, branches into three separate conduits at the San Jacinto diversion structure: Casa Loma Siphon No. 1, Casa Loma Siphon No. 2, and the San Jacinto Pipeline. At the diversion structure, untreated water is distributed among the three conduits to supply the downstream CRA system and the San Diego Canal. To the west of the diversion structure, all three conduits cross underneath the San Jacinto River. Over the years, soil has eroded around the Casa Loma Siphon No. 1 and the San Jacinto Pipeline within the San Jacinto River. The Casa Loma Siphon No. 1 and San Jacinto Pipeline Protection Project involves installing concrete encasements over the Casa Loma Siphon No. 1 and San Jacinto Pipeline to protect the pipelines from flotation and erosion within the San Jacinto River channel.

This action proposes the adoption of a Mitigated Negative Declaration (MND) for the Casa Loma Siphon No. 1 and San Jacinto Pipeline Protection Project in accordance with the California Environmental Quality Act (CEQA). See **Attachment 1** for the Location Map, **Attachment 2** for the Initial Study (IS) and MND, **Attachment 3** for the comment letter received during the public review period and Metropolitan's response to those comments, and **Attachment 4** for the Mitigation Monitoring and Reporting Program (MMRP). This action also approves the Casa Loma Siphon No. 1 and San Jacinto Pipeline Protection Project for CEQA purposes.

Expenditure of approximately $2.5 million in capital funds for this project is included in Metropolitan's Capital Investment Plan and current biennium budget. Staff will return to the Board for future contract authorizations or other project approvals not within the General Manager's authority.

Proposed Action(s)/Recommendation(s) and Options

Staff Recommendation: Option #1

Option #1

Adopt the Mitigated Negative Declaration and take related CEQA actions for the Casa Loma Siphon No. 1 and San Jacinto Pipeline Protection Project, and approve the project for CEQA purposes.

Fiscal Impact: None
Business Analysis: Adoption of the Mitigated Negative Declaration allows Metropolitan to proceed with obtaining additional project clearances and approvals.

Option #2

Do not adopt the Mitigated Negative Declaration or approve the project for CEQA purposes at this time.
Fiscal Impact: None
Business Analysis: This option would forego the opportunity to obtain additional project clearances and approvals.

Alternatives Considered

Not applicable

Applicable Policy

Not applicable

Related Board Action(s)/Future Action(s)

Spring 2027 – Board action to award construction contract for the Casa Loma Siphon No. 1 and San Jacinto Pipeline Protection Project.

California Environmental Quality Act (CEQA)

CEQA determination for Option #1:

Acting as the Lead Agency, Metropolitan conducted an IS for the proposed action. The IS indicated that, with the incorporation of appropriate mitigation measures, the proposed action would not have a significant impact on the environment. Accordingly, Metropolitan prepared an MND, which together with the IS was circulated for a 30-day public review beginning on December 22, 2025. Metropolitan also prepared a program for reporting on and monitoring the changes that are required to mitigate or avoid significant environmental effects (MMRP).

Attachment 2 includes the IS and MND. **Attachment 3** includes the comment letter received during the public review period and Metropolitan's response to those comments, and **Attachment 4** includes the MMRP. These documents, as well as any other materials that constitute the record of proceedings upon which the Lead Agency decision is based, are on file at Metropolitan's headquarters located at 700 North Alameda Street, Los Angeles, CA 90012.

The Board has reviewed and considered all the materials described above. Based on the whole record before it, the Board finds that there is no substantial evidence that the proposed action will have a significant impact on the environment and that the MND reflects the Lead Agency's independent judgment and analysis. Therefore, the Board adopts the MND and MMRP for the proposed action. (State CEQA Guidelines Sections 15070-15075.)

CEQA determination for Option #2:

None required

Details and Background

Background

The CRA, after crossing through the San Jacinto mountains, branches into three separate conduits at the San Jacinto diversion structure: Casa Loma Siphon No. 1, Casa Loma Siphon No. 2, and the San Jacinto Pipeline. At the diversion structure, untreated water is distributed among the three conduits to supply the downstream CRA system and the San Diego Canal. To the west of the diversion structure, all three conduits cross underneath the San Jacinto River.

Over time, soil cover over the conduits has been eroded by river flows, leaving Casa Loma Siphon No. 1 and the San Jacinto Pipeline at risk for potential exposures due to minimal cover in locations along the river crossing alignment. Casa Loma Siphon No. 2 is not considered to be under the same risk due to its location further downstream in the river and having more cover over the top of the conduit. With the reduced soil cover, there is a potential for damage to the pipelines within the river bed from debris impact, vehicle loading, and potentially

flotation when combined with high river flows and lower flows in the pipeline. Damage to either conduit could result in significant disruptions to CRA water deliveries downstream.

Temporary measures have been put in place to reduce the risk of damage to the pipelines. In February 2019, due to observed low cover over the Casa Loma Siphon No. 1 and the San Jacinto Pipeline during a storm event, Metropolitan installed steel plates and concrete barriers over top of the conduits within the riverbed as a temporary emergency protection measure to help secure the pipelines in place. In 2023, modifications to the temporary repairs were made to ensure continued function in place.

As a permanent protection measure, a concrete encasement over each pipeline will be constructed with rip-rap placed around the pipelines for additional erosion protection. The scope of the project includes the construction of a concrete encasement of approximately 320 linear feet over the Casa Loma Siphon No. 1 and approximately 295 linear feet over the San Jacinto Pipeline. The encasement will be constructed of reinforced concrete and will be approximately 16 feet wide and 13 feet deep for Casa Loma Siphon No. 1 and 12.5 feet wide and 11 feet deep for the San Jacinto Pipeline. After construction of the encasements and placement of surrounding rip-rap, the site will be restored to pre-existing conditions.

Adoption of the MND and MMRP and approving the project for the purposes of CEQA will allow Metropolitan to proceed with obtaining additional necessary project clearances and other approvals.

Project Milestone

October 2026 – Completion of final design

4/6/2026
Elizabeth Crosson *Date*
Chief Sustainability, Resilience & Innovation Officer

4/6/2026
John V. Bednarski *Date*
Assistant General Manager

Attachment 1 – Location Map

Attachment 2 – Initial Study and Mitigated Negative Declaration

Attachment 3 – Comment Letter and Responses to Comments

Attachment 4 – Mitigation Monitoring and Reporting Program

Ref# sri12708451

CRA Tunnel
Diversion Structure
Casa Loma Canal
Casa Loma Siphon No. 1
San Jacinto Pipeline
Soboba Rd
Soboba Rd
State St
Foothill Rd
San Jacinto River Park
San Jacinto River
Perris
Hemet
Menifee
Sources: Esri, TomTom, Garmin, FAO, NOAA, USGS, ©
N
0
0.1
Miles
Limits of Work
Access Route
Contractor's Yard
MWD Waterline

Casa Loma Siphon No. 1 and San Jacinto Pipeline Protection Project

Final Initial Study-Mitigated Negative Declaration

The Metropolitan Water District of Southern California
700 North Alameda Street
Los Angeles, CA 90012

March 2026

TABLE OF CONTENTS

Contents Page

1. Project Description 1
   - 1.1 Introduction 1
   - 1.2 Project Background 1
   - 1.3 Project Location and Land Use 2
   - 1.4 Project Objectives 7
   - 1.5 Project Characteristics 7
   - 1.6 Construction Characteristics 7
   - 1.7 Operational Characteristics 10
   - 1.8 Potential Permits and Discretionary Approvals 10
2. Initial Study 12
   - 2.1 Legal Authority and Findings 12
   - 2.2 Impact Analysis and Significance Classification 13
   - 2.3 Initial Study and Environmental Checklist Form 13
   - 2.4 Environmental Factors Potentially Affected 15
   - 2.5 Determination 15
3. Evaluation of Environmental Impacts 16
   - 3.1 Aesthetics 16
   - 3.2 Agricultural Resources 18
   - 3.3 Air Quality 20
   - 3.4 Biological Resources 27
   - 3.5 Cultural Resources 46
   - 3.6 Energy 51
   - 3.7 Geology and Soils 53
   - 3.8 Greenhouse Gas Emissions 57
   - 3.9 Hazards and Hazardous Materials 61
   - 3.10 Hydrology and Water Quality 65
   - 3.11 Land Use and Planning 71
   - 3.12 Mineral Resources 72
   - 3.13 Noise 73
   - 3.14 Population and Housing 77
   - 3.15 Public Services 78
   - 3.16 Recreation 79
   - 3.17 Transportation 80
   - 3.18 Tribal Cultural Resources 82
   - 3.19 Utilities and Service Systems 84
   - 3.20 Wildfire 86
   - 3.21 Mandatory Findings of Significance 89
4. List of Acronyms 91

5. List of Preparers 93
5.1 The Metropolitan Water District of Southern California 93
5.2 Rincon Consultants, Inc. 93
6. References 94

Tables

Table 1-1. Anticipated Construction Equipment Quantities 8
Table 1-2. Permits and Approvals Which May Be Required[1] 11
Table 3.3-1. Air Quality Standards and Air Basin Attainment Status 21
Table 3.3-2. SCAQMD Regional Significance Thresholds 22
Table 3.3-3. Representative Maximum Daily Emissions for Proposed Construction Activities (lbs/day) 24
Table 3.4-1. Special-Status Wildlife Species with Moderate to High Potential to Occur Within the Project Site 33
Table 3.8-1. Estimated GHG Emissions – Project Construction (MT of CO_2e / year) 59
Table 3.13-1. FTA Groundborne Vibration Criteria for Architectural Damage 74
Table 3.13-2. Vibration Annoyance Potential Criteria for Humans (in/sec PPV) 74

Figures

Figure 1-1. Regional Project Site Vicinity 3
Figure 1-2. Project Site Location 4
Figure 1-3. Representative Photographs of Existing Project Site Conditions 5
Figure 1-4. Representative Cross-Section of Concrete Encasement 6
Figure 3.4-1. Project Site in Relation to MSHCP Elements 45

Appendices

A. Metropolitan Standard Practices
B. Air Quality and Greenhouse Gas Modeling
C. Biological Resources Assessment
D. Jurisdictional Delineation Report
E. Bat Habitat Assessment and Focused Survey Results
F. Burrowing Owl Habitat Assessment and Focused Survey Results
G. Least Bell's Vireo Protocol Survey Report
H. Rare Plant Survey Report
I. San Bernardino Kangaroo Rat Trapping Focused Survey Report

1. Project Description

1.1 Introduction

The Metropolitan Water District of Southern California (Metropolitan) is a regional wholesaler that provides water for 26 member agencies to deliver either directly or through their sub-agencies to nearly 19 million people across a 5,200-square-mile service area in six counties (Los Angeles, Orange, Riverside, San Bernardino, San Diego, and Ventura) in southern California. The mission of Metropolitan is to provide its service area with an adequate and reliable supply of high-quality water to meet present and future needs in an environmentally and economically responsible way. Metropolitan owns and operates the Colorado River Aqueduct (CRA), which is a regional water conveyance system that consists of five pumping plants, 450 miles of high voltage power lines, one electric substation, four reservoirs, and 242 miles of siphons, canals, conduits, and tunnels starting at the Colorado River and terminating at Lake Mathews in Riverside County, California.

1.2 Project Background

North of Soboba Road in the San Jacinto area, the CRA San Jacinto Tunnel ends at the West Portal, which is the site of the CRA Diversion Structure. The diversion structure is where the CRA branches into three different pipelines (CRA Casa Loma Siphon No. 1, CRA Casa Loma Siphon No. 2, and the San Jacinto Pipeline), as shown in Figure 1-2 in Section 1.3, *Project Location and Land Use*. Approximately 1,000 feet west of the diversion structure, the three pipelines cross underneath the San Jacinto River. Within the San Jacinto River channel, there is currently inadequate cover material (approximately one foot in depth) over the CRA Casa Loma Siphon No. 1 and San Jacinto Pipeline.[1] The inadequate cover material results in potential for flotation of pipelines when the ground becomes saturated during and after storm events and the pipelines are less than 20 percent full. Typically, pipelines constructed in saturated areas rely on cover material or additional restraint, such as concrete encasement, for protection from flotation. Flotation of pipelines has the potential to result in structural damage to the pipelines and interruption of water delivery. Inadequate cover material above the pipelines also presents risk due to erosion, which could result in structural damage. Maintaining cover material above the pipelines also provides protection from debris impacts and loading from vehicles operating above the pipelines (Metropolitan 2023).

In 2019, heavy precipitation and increased San Jacinto River flows resulted in exposure of the buried Casa Loma Siphon No. 1 and San Jacinto Pipeline conduits where they cross underneath the San Jacinto River. Emergency work was undertaken by Metropolitan to reinstall soil cover and protect the CRA Casa Loma Siphon No. 1 and San Jacinto Pipeline within the San Jacinto River. In 2019, Metropolitan installed a series of concrete k-rail and steel trench plates over the pipes to prevent exposure. The k-rail and steel trench plates were displaced over time due to scour and river flows and were ultimately removed in July 2023. In August 2023, buried riprap and k-rails were placed within the river as temporary grade control to prevent further pipe/siphon exposure until a permanent solution could be developed. The proposed Casa Loma Siphon No. 1 and San Jacinto Pipeline Protection Project (proposed Project) is the permanent solution to protect the pipelines at this location.

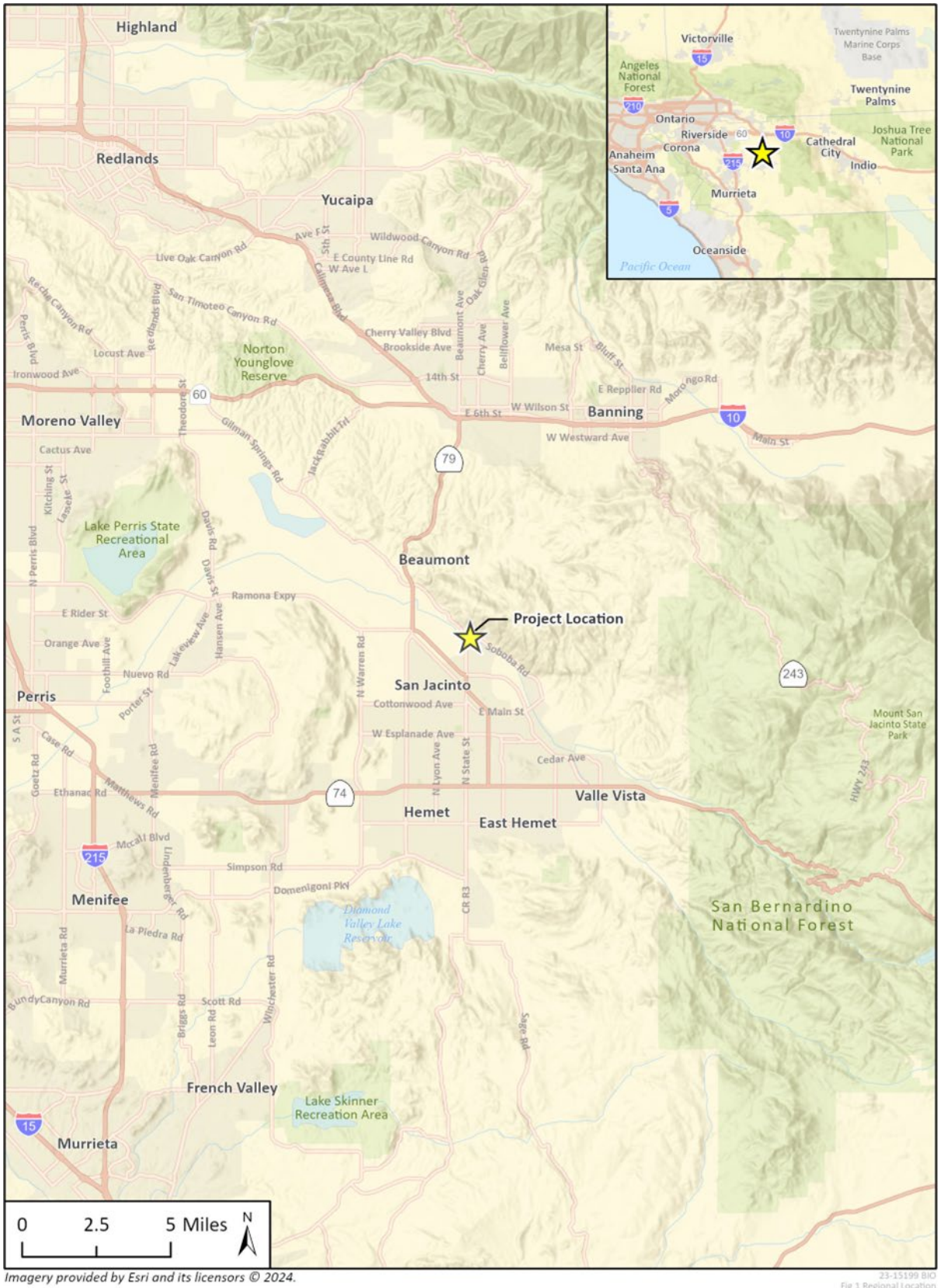
[1] The cover material above the CRA Casa Loma Siphon No. 2 has been determined to be adequate (more than four feet) within the San Jacinto River channel.

1.3 Project Location and Land Use

The proposed Project site encompasses an approximately 6.7-acre area located within and adjacent to the San Jacinto River, between Soboba Road and State Street, near the city of San Jacinto in unincorporated Riverside County, California. The Project site is depicted on the United States Geological Survey *San Jacinto, California,* 7.5-minute topographic map within Township 4 South, Range 1 West, Section 15, San Bernardino Baseline and Meridian. The proposed Project site includes portions of Assessor's Parcel Numbers (APN) 430-220-003, 430-220-008, 430-220-010, and 430-220-011, all of which have a Riverside County General Plan land use designation of Open Space-Recreation/Open Space-Water and are zoned as W-2-10 (County of Riverside 2025a). Land uses surrounding the Project site include open space to the north, a commercial recreation park (e.g., paintball, paragliding, biking, hiking, camping) to the east, open space (City of San Jacinto's planned San Jacinto River Park) to the south, and open space and agricultural land to the west. The San Jacinto River transects the southern end of the proposed Project site from northwest to southeast. The nearest residences as well as Temple Beth Am, a synagogue, are located approximately 0.2 mile to the west.

Figure 1-1 shows the regional location of the proposed Project site. Figure 1-2 shows the proposed Project site and surrounding vicinity in a local context. Figure 1-3 provides representative photos of existing conditions at the proposed Project site.

Figure 1-1. Regional Project Site Vicinity



Imagery provided by Esri and its licensors © 2024.

23-15199 BIO
Fig 1 Regional Location

Figure 1-2. Project Site Location

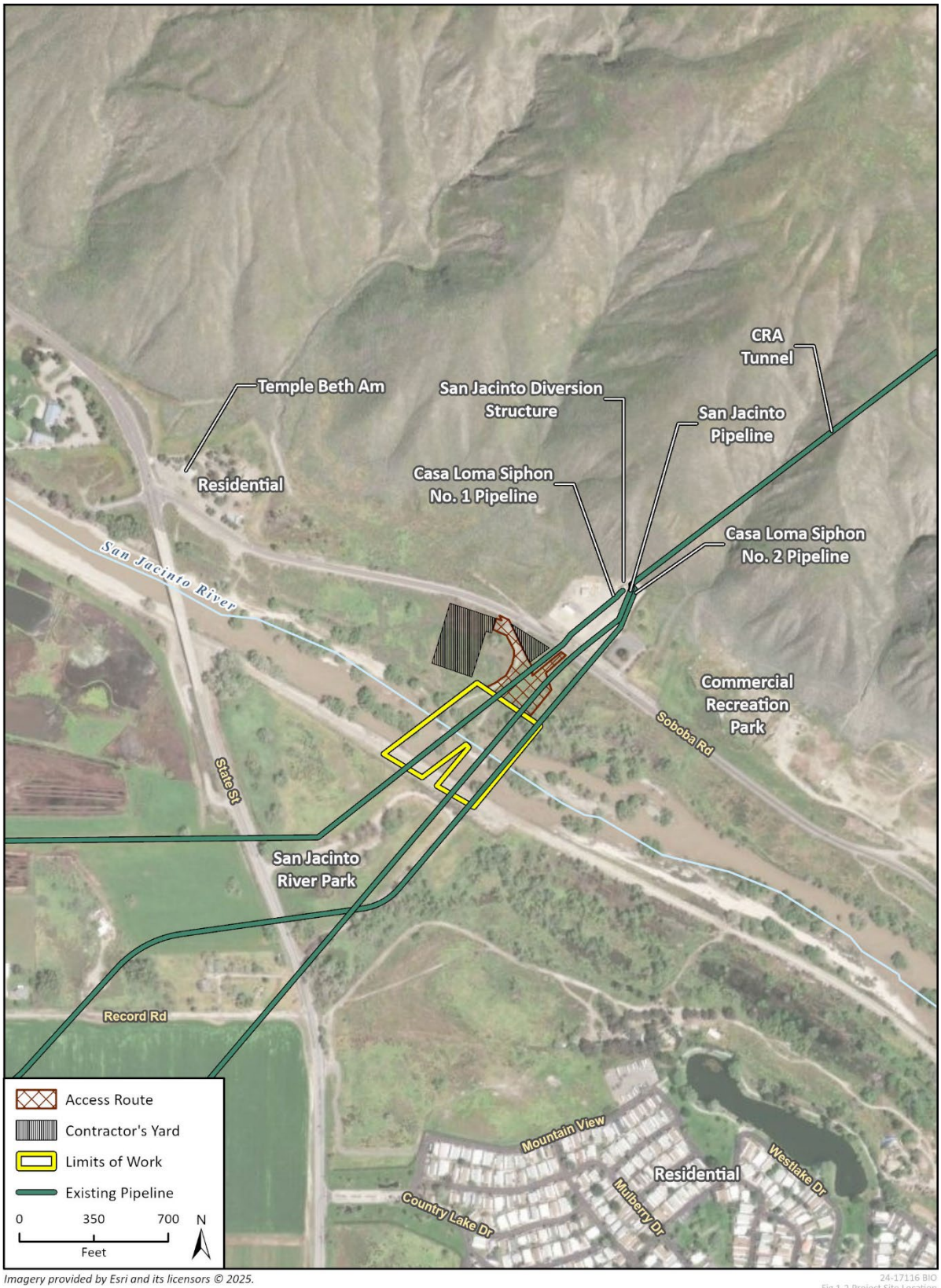


Figure 1-3. Representative Photographs of Existing Project Site Conditions

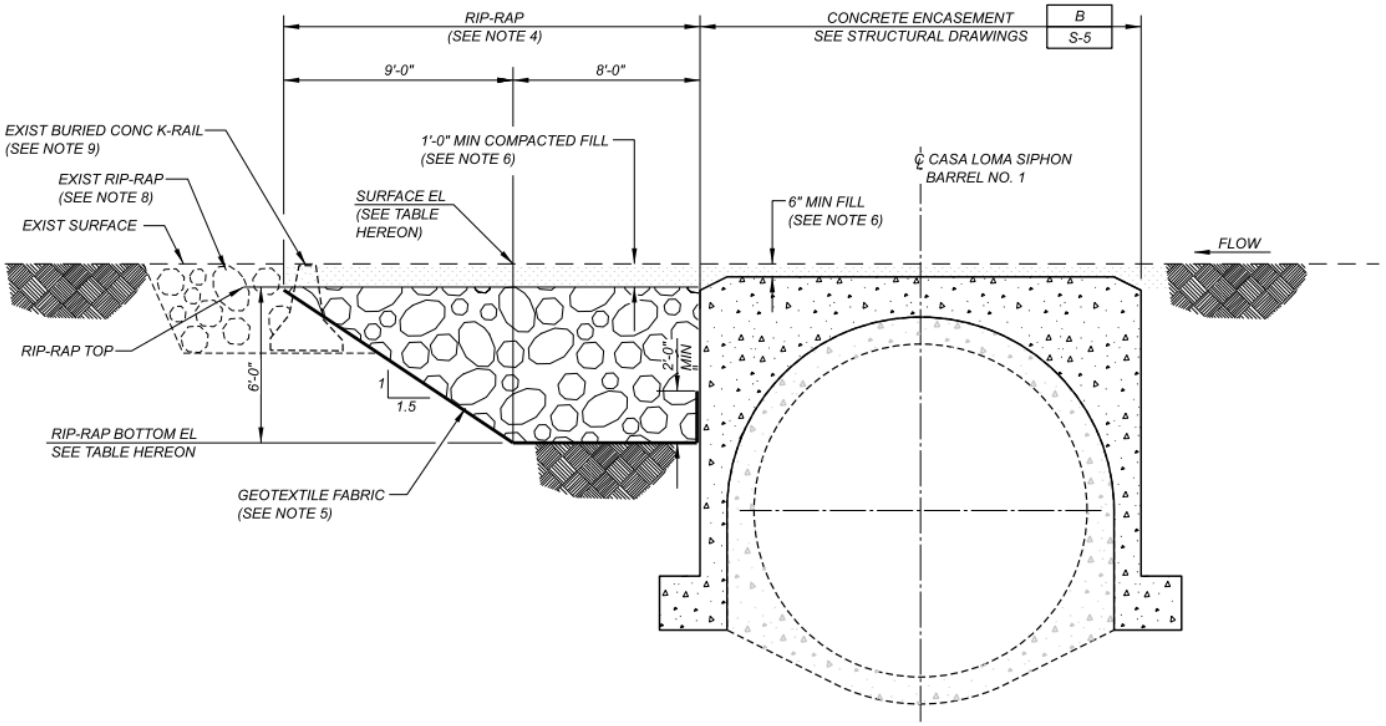
Photo 1. View of the Project site, including the San Jacinto River bed, facing northwest.

Photo 2. View of existing access road leading into the San Jacinto River, facing southwest.

Photo 3. View of the existing access road facing northeast.

Photo 4. View of the location of the proposed access road entrance into the San Jacinto River at the southern border of the Project site, facing northeast.

Figure 1-4. Representative Cross-Section of Concrete Encasement



TYPICAL SECTION (STA 10822+80 TO STA 10826+00)

SECTION A
NTS C-4

1.4 Project Objectives

The proposed Project objectives include the following:

- To protect Metropolitan's critical infrastructure and prevent structural damage;
- To enhance pipeline resilience against environmental factors such as erosion, flooding, and seismic activity;
- To ensure long-term operational reliability of the CRA system by safeguarding essential water conveyance components; and
- To minimize service disruptions by maintaining continuous support of the pipelines during phased construction.

1.5 Project Characteristics

The proposed Project includes the encasement of approximately 320 feet of the CRA Casa Loma Siphon No. 1 and approximately 295 feet of the San Jacinto Pipeline. The encasement would consist of concrete poured around the existing pipelines with a width of 16 feet and a depth of 13 feet for CRA Casa Loma Siphon No. 1 and a width of 12.5 feet and a depth of 10.7 feet for the San Jacinto Pipeline. Both encasements would be reinforced with steel rebar placed both horizontally and vertically to ensure structural integrity. The proposed concrete encasements would be placed on a compacted base and surrounded by riprap for erosion protection. Underneath the riprap, a non-woven geotextile fabric would be installed to prevent soil migration while maintaining drainage. Construction of the concrete encasement would require excavation above and adjacent to both sides of each pipeline to allow for placement of the concrete forms and steel reinforcement. The top of the fill would be graded to match the existing surface elevation. Figure 1-4 presents a cross-section of the proposed encasement activities.

Existing conduit protection structures that were previously installed in 2023 for emergency temporary protection (e.g., concrete k-rails, riprap) would be either removed or relocated within the Project site. K-rails would be removed and re-located to a portion of the Project site outside the streambed, and portions of riprap interfering with the proposed protection structure would be removed and salvaged, as feasible. The proposed Project would not result in the addition of new aboveground components or appurtenances.

1.6 Construction Characteristics

1.6.1 Construction Schedule

Construction of the proposed Project would occur over an approximately eight-month period, anticipated to begin as early as the fall of 2026.[2] Vegetation removal would occur in the fall of 2026 to avoid the nesting bird season and is anticipated to require approximately two weeks to complete. Installation of the proposed protection structures is anticipated to begin during the dry season in May 2027 and require approximately 7.5 to 9.5 months to complete, depending on construction phasing.[3]

[2] The actual start date of construction would be contingent upon the receipt of all required permits and approvals for the proposed Project.
[3] If work on both pipelines occurs concurrently, approximately 7.5 months would be required to complete the proposed Project. However, if work on each pipeline occurs separately, approximately 9.5 months would be required to complete the proposed Project.

Construction would occur Monday through Friday from 7:00 a.m. to 4:00 p.m. No nighttime construction would occur. Construction during early morning and late afternoon hours in the fall, winter, and early spring may require limited construction lighting. Construction phases would include site preparation, excavation, structural reinforcement installation, and site restoration.

1.6.2 Off-road Construction Equipment

The estimated type and number of off-road construction equipment to be used during construction of the proposed Project is listed in Table 1-1.

Table 1-1. Anticipated Construction Equipment Quantities

Equipment	Site Preparation	Excavation	Structural Reinforcement Installation, Backfill, and Riprap Installation	Site Restoration
Backhoes	1	1	1	1
Bore/Drill Rigs	--	2	--	--
Compactors	--	--	2	2
Compressors	--	--	2	--
Dozers	1	1	--	1
Dumpers/Tenders	--	5	--	1
Excavators	1	2	2	1
Front End Loaders	1	2	--	1
Generators	3	3	3	3
Graders	--	--	--	1
Rough Terrain Forklifts	1	1	1	1
Skid Steer Loaders	1	1	1	1

1.6.3 Ground Disturbance and Materials Delivery

Ground disturbance associated with the construction of the proposed Project would occur over an area of approximately 5.5 acres. The maximum depth of ground disturbance would be approximately 15 feet. Ground disturbance would involve approximately 3,900 cubic yards of soil cut, approximately 600 cubic yards of soil fill, and the export of approximately 3,300 cubic yards of soil material from the Project site. Construction activities would involve the transport and delivery of approximately 1,600 cubic yards of ready-mix concrete, approximately 1,600 cubic yards of riprap, and reinforcing steel.

1.6.4 Groundwater Dewatering and Temporary Surface Water Diversion

Groundwater dewatering during Project ground-disturbing activities may be necessary depending on depth to groundwater, although previous excavations at the Project site did not encounter groundwater. If groundwater is encountered during construction activities, groundwater would be pumped out of the excavation area and discharged to the San Jacinto River riverbed pursuant to an applicable National Pollutant Discharge Elimination System (NPDES) permit for discharges of groundwater, which Metropolitan would require its construction contractor to obtain. Groundwater is not expected to require treatment prior to discharge.

During construction, a temporary diversion system consisting of earthen or water-filled berms, a series of pipelines, and appurtenant components would be installed within the bed and banks of the San Jacinto River to allow for diversion of surface water flows should a precipitation event occur. If a precipitation event is forecasted that would cause flows to exceed the capacity of the diversion system, protective measures for the construction work, equipment, and Metropolitan's pipelines would be implemented. This system would be removed following the completion of construction, and the natural topography of the streambed would be restored to pre-project conditions.

1.6.5 Construction Access, Staging, Worker Parking, and Fencing

Construction workers and vehicles would access the Project site regionally from State Route 79, then travel north on State Street and east on Soboba Road. An existing access road, as well as a potential new, unpaved access road, would provide direct access within the Project site from Soboba Road to the proposed disturbance areas. Contractor's yards for construction staging would be located south of Soboba Road, directly to the west and east of the existing access road within the Project site (see Figure 1-2). Construction workers would park at the Project site, either along the existing/proposed access roads or in the contractor's yards.

The proposed Project would include the installation of temporary barrier fencing or other equivalent measures along the southeastern/upstream side of the Project footprint to avoid potential intrusion by wildlife species. The temporary barrier fencing would remain in place for the duration of construction activities and would be removed upon Project completion.

1.6.6 Tree Removal

The proposed Project would require the trimming or removal of some trees within the limits of work (see Figure 1-2) but not within the access routes or contractor's yards.

1.6.7 Environmental Requirements for Construction

Metropolitan has established standardized environmental protocols and requirements for contractors and Metropolitan staff engaging in construction activities, which are outlined primarily in Section 01065 (Environmental Compliance Requirements) of Metropolitan's standard construction contractor specifications (Appendix A) as well as Sections 01063 (Air Quality, Hazardous Materials, and Wastewater Environmental Requirements), 01070 (Storm Water Pollution Prevention Plan), 01550 (Access, Parking, and Traffic), 01565 (Noise Control), and 02110 (Clearing, Grubbing, and Stripping). These requirements are intended to ensure best practices are in place during all construction phases and to reduce and/or avoid environmental impacts.

Relevant construction requirements are summarized below and are referenced throughout Section 3, *Evaluation of Environmental Impacts*, where applicable:

- Obtain and comply with the applicable local, state, and federal environmental permits.
- Comply with the Federal Migratory Bird Treaty Act and California Fish and Game Code Sections 3503, 3503.5, and 3513 including conducting pre-construction nesting bird surveys and implementation of impact avoidance measures, where applicable.

- Prepare, submit, and comply with the surface and storm water control measures in compliance with the Water Pollution Control Program or Stormwater Pollution Prevention Plan (SWPPP) for individual projects greater than one acre.
- Prepare and comply with a Traffic Control Plan, including the use of appropriate advance warning signage to alert motorists to the potential for cross construction vehicle traffic from the work limits in accordance with California Department of Transportation standards.
- Perform all work without undue noise and make every effort to abate or prevent noise nuisances.
- Maintain all construction vehicle equipment in proper working order for the duration of the construction activities.
- Equip all construction equipment, fixed and mobile, including internal combustion engines, with properly operating and maintained noise mufflers and intake silencers, consistent with the manufacturers' standards.
- Cover or locate all stationary noise-generating equipment, such as generators and compressors, as far as practicable from the nearest residential/institutional property lines to attenuate noise.
- Comply with the applicable local tree protection ordinance.
- Protect any sensitive cultural and paleontological resources by halting work within 50 feet of an unanticipated discovery for evaluation of the find by a qualified professional, require archaeological and/or paleontological monitoring for sites with high sensitivity, and comply with California Health and Safety Code Section 7050.5 and Public Resources Code Section 5097.98 in the event that human remains are discovered.
- Direct floodlights to shine downward, and shield floodlights to avoid a nuisance to surrounding areas.
- Equip gasoline-powered or diesel-powered machinery used during construction with standard exhaust controls and muffling devices that also act as spark arrestors.
- Store hazardous materials, including hazardous wastes, in covered, compatible, leak-proof containers when not in use, away from ignition/fire hazards, storm drains, and heavy traffic areas, and protected from rainfall infiltration.
- Store hazardous materials separately from non-hazardous materials and in an area secure from unauthorized entry at all times. Store incompatible hazardous materials and hazardous wastes separately from each other.

1.7 Operational Characteristics

The proposed Project would not result in changes to Metropolitan's existing operation and maintenance conditions at the Project site.

1.8 Potential Permits and Discretionary Approvals

Table 1-2 lists the anticipated permits and discretionary approvals that may be required for Project-related activities. One of the purposes of this ~~Draft~~ Final IS-MND is to provide these agencies with information to support the agency permitting process. Table 1-2 also lists the types of activities that would be subject to these requirements.

Table 1-2. Permits and Approvals Which May Be Required[1]

Agency/Department	Permit/Approval	Description
United States Army Corps of Engineers	Pre-Construction Notification for Use of Clean Water Action Section 404 Nationwide Permit 3 (Maintenance)	This permit may be required to authorize impacts (e.g., discharge of dredge or fill) to non-wetland waters of the United States.
United States Fish and Wildlife Service	Incidental Take Authorization for Least Bell's Vireo[2]	This approval may be required to authorize incidental take of listed species, if a Clean Water Act Section 404 permit is required and Metropolitan chooses to obtain coverage via the Endangered Species Act Section 7 consultation process.
California Department of Fish and Wildlife	Streambed Alteration Agreement	An Agreement may be required by the California Department of Fish and Wildlife to authorize impacts to streambed with measures to protect fish and wildlife resources
	Incidental Take Permit[2]	This permit may be required to authorize incidental take of listed species, if Metropolitan chooses to obtain coverage under California Fish and Game Code Section 2081 or 2080.1.
Santa Ana Regional Water Quality Control Board	Clean Water Act Section 401 Water Quality Certification	This permit is issued to applicants for a federal permit for activities that may result in a discharge into waters of the United States
	Porter-Cologne Water Quality Control Act Waste Discharge Requirement	This permit may be required to authorize impacts (e.g., discharge of waste) into non-wetland waters of the State, if non-wetland waters of the United States are not impacted.
	National Pollutant Discharge Elimination System Permit	This permit may be required to authorize the discharge of groundwater to the San Jacinto River if dewatering is required during construction.
Western Riverside County Regional Conservation Authority	Participating Special Entity Approval[2]	This approval may be required if Metropolitan chooses to seek coverage for incidental take of listed species through the Participating Special Entity process established under the Western Riverside County Multiple Species Habitat Conservation Plan.

[1] California Government Code Section 53091 exempts Metropolitan, as a regional public water purveyor and utility, from local zoning ordinances and local building codes. At Metropolitan facilities, this exemption has been interpreted to pertain only to activities directly related to the storage, conveyance, and transmission of drinking water.

[2] Metropolitan's decision on whether to obtain coverage for incidental take of least Bell's vireo via the Western Riverside County Multiple Species Habitat Conservation Plan Participating Special Entity process or via an incidental take authorization from the United States Fish and Wildlife Service and Incidental Take Permit from California Department of Fish and Wildlife is pending. As such, all potential responsible agencies have conservatively been listed in this table.

2. Initial Study

This document is a proposed Initial Study and Mitigated Negative Declaration (IS-MND), which addresses the potential environmental effects resulting from the proposed Project.

2.1 Legal Authority and Findings

This Initial Study was prepared in accordance with the California Environmental Quality Act (CEQA), Public Resources Code Section 21000 et seq., and the CEQA Guidelines, California Code of Regulations Section 15000 et seq.

Initial Study. Section 15063 of the CEQA Guidelines describes an Initial Study as a preliminary method for analyzing the potential environmental consequences of a project. The purposes of an Initial Study include:

(1) Providing the Lead Agency with the necessary information to decide whether to prepare an Environmental Impact Report (EIR) or a Negative Declaration;

(2) Enabling the Lead Agency to modify a project during the planning stage by mitigating adverse impacts prior to preparation of CEQA documentation, thus avoiding the need to prepare an EIR; and

(3) Providing documentation of the factual basis for the finding in a Mitigated Negative Declaration that the significant environmental impacts of a project have been mitigated to a less-than significant level.

Negative Declaration or Mitigated Negative Declaration. Section 15070 of the CEQA Guidelines states that a public agency shall prepare a Negative Declaration or Mitigated Negative Declaration for a project subject to CEQA when:

(a) The Initial Study shows that there is no substantial evidence, in light of the whole record before the agency, that the project may have a significant effect on the environment; or

(b) The Initial Study identifies potentially significant effects but:

1. Revisions in the project plans or proposals made by, or agreed to by, the applicant before a proposed Mitigated Negative Declaration and Initial Study are released for public review would avoid the effects or mitigate the effects to a point where clearly no significant effects would occur; and
2. There is no substantial evidence, in light of the whole record before the agency, that the project as revised may have a significant effect on the environment.

An IS-MND may be used to satisfy the requirements of CEQA when a proposed project would have no significant unmitigable effects on the environment. As discussed further in subsequent sections of this document, implementation of the proposed Project would not result in significant effects on the environment that cannot be reduced to below the level of significance with the mitigation measures included herein.

2.2 Impact Analysis and Significance Classification

The following sections of this IS-MND discuss the possible environmental effects of the proposed Project for specific environmental factors as identified on the CEQA Environmental Checklist Form in Appendix G of the CEQA Guidelines (as updated in December 2018). For each environmental factor, potential effects are analyzed.

A "significant effect on the environment" is defined by Section 15382 of the CEQA Guidelines as "a substantial, or potentially substantial, adverse change in any of the physical conditions within the area affected by a project, including land, air, water, minerals, flora, fauna, ambient noise, and objects of historic or aesthetic significance. An economic or social change by itself shall not be considered a significant effect on the environment" but "may be considered in determining whether the physical change is significant."

Following the evaluation of each environmental effect determined to be potentially significant is a discussion of mitigation measures and the residual effects or level of significance remaining after the implementation of the measures.

2.3 Initial Study and Environmental Checklist Form

a)	Project Title:	Casa Loma Siphon No. 1 and San Jacinto Pipeline Protection Project (proposed Project)
b)	Lead Agency Name and Address:	The Metropolitan Water District of Southern California 700 North Alameda Street Los Angeles, CA 90012
c)	Contact Person and Phone Number:	Alfredo Aguirre Environmental Planning Section The Metropolitan Water District of Southern California Phone: (213) 217-6730 Email: AAguirre@mwdh2o.com
d)	Project Location:	The Project site encompasses an approximately 6.7-acre area located within and adjacent to the San Jacinto River, between Soboba Road and State Street, near the city of San Jacinto in unincorporated Riverside County, California. The Project site is owned by Metropolitan and contains the CRA Casa Loma Siphon No. 1, CRA Casa Loma Siphon No. 2, and the San Jacinto Pipeline. Figures 1-1 and 1-2 in Section 1.3, *Project Location and Land Use*, show the proposed Project site in a regional context and a local context, respectively.

e)	Project Sponsor's Name and Address:	The Metropolitan Water District of Southern California 700 North Alameda Street Los Angeles, CA 90012
f)	General Plan Designation:	Open Space-Recreation (OS-R), Open Space-Water (OS-W)
g)	Zoning:	Controlled Development Area (W-2-10)
h)	Description of Project:	The proposed Project would provide protection for critical water infrastructure. Refer to Section 1, *Project Description*.
i)	Surrounding Land Uses and Setting:	The Project site is surrounded by open space to the north, a commercial recreation park (e.g., paintball, paragliding, biking, hiking, camping) to the east, open space (City of San Jacinto's planned San Jacinto River Park) to the south, and open space and agricultural land to the west.
j)	Other Agencies Whose Approval May be Required:	• United States Army Corps of Engineers • United States Fish and Wildlife Service • California Department of Fish and Wildlife • Santa Ana Regional Water Quality Control Board • Western Riverside County Regional Conservation Authority
k)	Have California Native American tribes traditionally and culturally affiliated with the Project area requested consultation pursuant to Public Resources Code section 21080.3.1? If so, has consultation begun?	Yes, Metropolitan has conducted consultation pursuant to Public Resources Code (PRC) Section 21080.3.1 and has made an impact determination. See Section 3.18, *Tribal Cultural Resources*.

2.4 Environmental Factors Potentially Affected

The environmental factors checked below would be potentially affected by the proposed Project, requiring implementation of mitigation as indicated by the checklist on the following pages that is "Less Than Significant With Mitigation Incorporated."

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

2.5 Determination

On the basis of 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 in the Project have been made by or agreed to by the Project proponent. A MITIGATED NEGATIVE DECLARATION will be prepared.

☐ I find that the 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 "potentially significant unless mitigated" impact on the environment, but at least one effect (1) has been adequately analyzed in an earlier document pursuant to applicable legal standards, and (2) has been addressed by 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 potentially significant effects (a) have been analyzed adequately in an earlier EIR 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.

Jennifer Harriger 03-18-2026

Jennifer Harriger Date
Manager, Environmental Planning Section

3. Evaluation of Environmental Impacts

The following discussion addresses impacts to various environmental resources pursuant to the Environmental Checklist Form contained in Appendix G of the CEQA Guidelines.

3.1 Aesthetics

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

Significance criteria established by CEQA Guidelines, Appendix G.

Discussion. Would the Project:

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

Less than Significant Impact. No, the proposed Project would not have a substantial adverse effect on a scenic vista. A scenic vista is defined as a viewpoint that provides panoramic or focused views of a highly valued landscape or scenic resource for the benefit of the general public. According to the Riverside County General Plan, Riverside County's natural visual resources include low-lying valleys, ridgelines, mountain ranges, rock formations, rivers, and lakes (County of Riverside 2021b). At the Project site, scenic vistas primarily consist of views of the nearby mountains and the San Jacinto River, which are visible from surrounding roadways such as Soboba Road, State Street, Goodwin Lane, and Trejo Drive. The proposed Project would temporarily degrade views of the nearby mountains and the San Jacinto River from surrounding roadways during the construction period due to the presence of construction vehicles and equipment. However, following the construction period, the Project site would appear visually similar to existing conditions, such that the proposed Project would not result in a permanent impacts to scenic vistas. Thus, the proposed Project would not result in substantial adverse effects on a scenic vista, and impacts would be less than significant.

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

No Impact. No, the proposed Project would not substantially damage scenic resources within a State scenic highway. The nearest designated State scenic highway is a portion of State Route (SR) 243, located approximately eight miles east of the Project site (California Department of Transportation 2018). The Project site is not visible from SR 243 due to the intervening distance and topography; accordingly, the proposed Project would not damage scenic resources within view of a State scenic highway. Therefore, no impact to scenic resources within a State scenic highway would occur.

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

Less than Significant Impact. No, the proposed Project, which is in a non-urbanized area, would not substantially degrade the existing visual character or quality of public views of the Project site and its surroundings. Public views of the Project site are visible from surrounding roadways, including Soboba Road, State Street, Goodwin Lane, and Trejo Drive. Motorists along those roadways currently experience views of the San Jacinto River within the Project site and mountains to the north of the Project site. The proposed Project would temporarily degrade views during the construction period due to the presence of construction vehicles and equipment. Following completion of construction, the Project site would appear visually similar to existing conditions because no new aboveground components would be added to the Project site and vegetation would be allowed to restore naturally over time. Therefore, the proposed Project would not substantially degrade the existing visual character or quality of public views of the Project site and its surroundings, and impacts would be less than significant.

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

Less than Significant Impact. No, the proposed Project would not create new sources of substantial light or glare that would adversely affect day or nighttime views in the area. Project construction activities during early morning and late afternoon hours in the fall, winter, and early spring may require limited construction lighting. In accordance with Metropolitan standard practice outlined in Section 01065 of the construction contractor specifications (see Section 1.6.7, *Environmental Requirements for Construction*), the Project Contractor(s) would be required to exercise special care to direct floodlights to shine downward and to shield them to avoid a nuisance to the surrounding areas, with no lighting including a residence in its direct beam. The proposed Project would not include new permanent lighting sources after the completion of construction, and the proposed Project does not include components with the potential to generate glare. Therefore, impacts would be less than significant.

3.2 Agricultural Resources

AGRICULTURE AND FORESTRY RESOURCES

In determining whether impacts to agricultural resources are significant environmental effects, Lead Agencies may refer to the California Agricultural Land Evaluation and Site Assessment Model (1997) prepared by the California Department of Conservation as an optional model to use in assessing impacts on agriculture and farmland. In determining whether impacts to forest resources, including timberland, are significant environmental effects, Lead Agencies may refer to information compiled by the California Department of Forestry and Fire Protection regarding the state's inventory of forest land, including the Forest and Range Assessment Project and the Forest Legacy Assessment Project; and forest carbon measurement methodology provided in Forest Protocols adopted by the California Air Resources Board. Would the Project:

		Potentially Significant Impact	Less than Significant With Mitigation Incorporated	Less than Significant Impact	No Impact
a)	Convert Prime Farmland, Unique Farmland, or Farmland of Statewide Importance (Farmland), as shown on the maps prepared pursuant to the Farmland Mapping and Monitoring 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?	☐	☐	☐	☒

Significance criteria established by CEQA Guidelines, Appendix G.

Discussion. Would the Project:

a. *Convert Prime Farmland, Unique Farmland, or Farmland of Statewide Importance (Farmland), as shown on the maps prepared pursuant to the Farmland Mapping and Monitoring Program of the California 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?

No Impact. No, the proposed Project would not convert Prime Farmland, Unique Farmland, or Farmland of Statewide Importance; conflict with existing zoning for agricultural use, or a Williamson Act contract; conflict with existing zoning for, or cause rezoning of, forest land, timberland, or timberland zoned as Timberland Production; result in the loss of forest land or conversion of forest land to non-forest use; or involve other changes in the existing environment which, due to their location or nature, could result in the conversion of Farmland to non-agricultural use or conversion of forest land to non-forest use.

The Project site is not designated as Prime Farmland, Unique Farmland, or Farmland of Statewide Importance (California Department of Conservation [DOC] 2022). The Project site is not zoned for agricultural use or under a Williamson Act contract, and no farmland exists within or adjacent to the Project site (County of Riverside 2025a). The Project site is also not zoned for forest land or timberland, and no forest land exists within or adjacent to the Project site (County of Riverside 2021a). Thus, no impacts to agriculture and forestry would occur as a result of the proposed Project.

3.3 Air Quality

AIR QUALITY

Where available, the significance criteria established by the applicable air quality management district or air pollution control district may be relied upon to make the following determinations. Would the Project:	Potentially Significant Impact	Less than Significant With Mitigation Incorporated	Less than Significant Impact	No Impact
a) Conflict with or obstruct implementation of the applicable air quality plan?	☐	☐	☐	☒
b) Result in a cumulatively considerable net increase of any criteria pollutant for which the Project region is non-attainment under an applicable Federal or State ambient air quality standard?	☐	☐	☒	☐
c) Expose sensitive receptors to substantial pollutant concentrations?	☐	☐	☒	☐
d) Result in other emissions (such as those leading to odors) adversely affecting a substantial number of people?	☐	☐	☐	☒

Significance criteria established by CEQA Guidelines, Appendix G.

OVERVIEW OF AIR POLLUTION, AIR QUALITY STANDARDS, ATTAINMENT STATUS, AND AIR QUALITY MANAGEMENT

This section provides an analysis of proposed Project impacts on air quality and is based in part on air pollutant and greenhouse gas (GHG) emissions modeling conducted by Rincon Consultants, Inc. (Rincon), the results of which are included in Appendix B.

The Project site is located in the South Coast Air Basin (SCAB) within the jurisdictional boundaries of the South Coast Air Quality Management District (SCAQMD). The federal and state Clean Air Acts 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, which are summarized in Table 3.3-1. Some pollutants are emitted directly from a source (e.g., vehicle tailpipe, an exhaust stack of a factory, etc.) into the atmosphere, including carbon monoxide, volatile organic compounds (VOC)/reactive organic gases (ROG),[4] nitrogen oxides, particulate matter with diameters of 10 microns or less (PM_{10}) and 2.5 microns or less ($PM_{2.5}$), sulfur dioxide, and lead. Other pollutants are created indirectly through chemical reactions in the atmosphere, such as ozone, which is created by atmospheric chemical and photochemical reactions primarily between VOC and nitrogen oxides. Secondary pollutants include oxidants, ozone, and sulfate and nitrate particulates (smog). 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." The attainment status of the Riverside County portion of the SCAB for each pollutant regulated by the NAAQS and CAAQS is summarized in Table 3.3-1.

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

Table 3.3-1. Air Quality Standards and Air Basin Attainment Status

Pollutant	Federal Standard (NAAQS)	California Standard (CAAQS)	SCAB Attainment Status
Ozone	0.070 ppm (8-hr avg)	0.09 ppm (1-hr avg) 0.070 ppm (8-hr avg)	N (federal and state)
Carbon Monoxide	35.0 ppm (1-hr avg) 9.0 ppm (8-hr avg)	20.0 ppm (1-hr avg) 9.0 ppm (8-hr avg)	U (federal) A (state)
Nitrogen Dioxide	0.100 ppm (1-hr avg) 0.053 ppm (annual avg)	0.18 ppm (1-hr avg) 0.030 ppm (annual avg)	U (federal) A (state)
Sulfur Dioxide	0.075 ppm (1-hr avg) 0.5 ppm (3-hr avg) 0.14 ppm (24-hr avg) 0.030 ppm (annual avg)	0.25 ppm (1-hr avg) 0.04 ppm (24-hr avg)	U (federal) A (state)
Lead	0.15 μg/m^3 (rolling 3-month avg) 1.5 μg/m^3 (calendar quarter)	1.5 μg/m^3 (30-day avg)	U (federal) A (state)
Particulate Matter (PM_{10})	150 μg/m^3 (24-hr avg)	50 μg/m^3 (24-hr avg) 20 μg/m^3 (annual avg)	N (federal and state)
Particulate Matter ($PM_{2.5}$)	35 μg/m^3 (24-hr avg) 9 μg/m^3 (annual avg)	12 μg/m^3 (annual avg)	N (federal and state)
Visibility-Reducing Particles	No Federal Standards	Extinction coefficient of 0.23 per kilometer – visibility of 10 miles or more (0.07 - 30 miles or more for Lake Tahoe) due to particles when relative humidity is less than 70 percent. Method: Beta Attenuation and Transmittance through Filter Tape (8-hr avg)	U (state)
Sulfates	No Federal Standards	25 μg/m^3 (24-hr avg)	A (state)
Hydrogen Sulfide	No Federal Standards	0.03 ppm (1-hr avg)	U (state)
Vinyl Chloride	No Federal Standards	0.01 ppm (24-hr avg)	U (state)

Notes: NAAQS = National Ambient Air Quality Standard, CAAQS = California Ambient Air Quality Standard, SCAB = South Coast Air Basin, ppm = parts per million, hr = hour, avg = average, μg/m^3 = micrograms per cubic meter, N = nonattainment, A = attainment, U = unclassified.
Source: CARB 2024 and 2025; USEPA 2024 and 2025a

The SCAQMD (in conjunction with the Southern California Association of Governments [SCAG]) has developed an air quality management plan (AQMP) to meet the requirements of the federal Clean Air Act. The latest iteration of this plan is the SCAQMD (2022) *Final 2022 Air Quality Management Plan*. This plan addresses various federal non-attainment and attainment/maintenance planning requirements, is incorporated into the State Implementation Plan by CARB, and is approved or disapproved by USEPA.

AIR POLLUTANT EMISSION THRESHOLDS

The SCAQMD has recommended quantitative regional significance thresholds for temporary Project construction activities and long-term Project operation within its jurisdictional boundaries, as shown in Table 3.3-2. In addition to the regional significance thresholds, the SCAQMD has established Localized Significance Thresholds to evaluate localized air pollutant emissions based on ambient pollutant concentrations, proximity to sensitive receptors, and project size. However, the Project site is located approximately 0.2 mile (1,075 feet) from the nearest sensitive receptors, and emissions generated at the Project site would dissipate rapidly with distance. Therefore, localized air pollutant impacts are discussed qualitatively, and the Localized Significance Thresholds are not utilized.

Table 3.3-2. SCAQMD Regional Significance Thresholds

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

Notes: SCAQMD = South Coast Air Quality Management District, VOC = volatile organic compounds, NO_X = nitrogen oxides, CO = carbon monoxide, SO_X = sulfur oxides, PM_{10} = particulate matter 10 micrometers or less in diameter, $PM_{2.5}$ = particulate matter 2.5 micrometers or less in diameter.

Source: SCAQMD 2023

METHODOLOGY

Air pollutant emissions associated with proposed construction activities were estimated using the California Emissions Estimator Model (CalEEMod) version 2022.1.1. Air pollutant emissions associated with operation and maintenance activities were not modeled because the proposed Project would not result in changes to Metropolitan's existing operation and maintenance activities at the Project site. CalEEMod uses Project-specific information, including the proposed Project's land uses and location, to estimate a Project's emissions. Air pollutant and GHG emissions modeling is attached as Appendix B.

Proposed construction activities were modeled to begin in October 2026 with vegetation removal, followed by installation of the proposed protection structures beginning in May 2027. Although construction could begin at a later date depending on when Project permits are acquired, activities occurring in future years would be expected to generate fewer emissions due to increasingly stringent fuel efficiency standards, such as future iterations of the federal construction equipment emissions standards, Corporate Average Fuel Economy standards, and cleaner mobile equipment engine models that would phase in over time.

If construction on both pipelines occurs concurrently with two active work areas, approximately 7.5 months of work would be required to complete the proposed Project. However, if work on each pipeline occurs separately with only one active work area, approximately 9.5 months would be required to complete the proposed Project. For the purposes of estimating maximum daily air pollutant emissions, the 7.5-month construction scenario was modeled in CalEEMod. This approach is considered conservative because the shorter construction duration with two active work areas would result in higher construction intensity and associated construction-related emissions.

Emissions modeled for the proposed construction activities include emissions generated by heavy equipment used on site and emissions generated by vehicle trips, such as worker, water truck, and dump truck trips. The construction schedule, list of heavy equipment, and grading quantities used in CalEEMod were based on information summarized previously in Section 1, *Project Description*. As stated therein, it was assumed ground disturbance would involve the export of approximately 3,300 cubic yards of soil material from the Project site and the transport and delivery of approximately 1,600 cubic yards of ready-mix concrete, approximately 1,600 cubic yards of riprap, and reinforcing steel.

Discussion. Would the Project:

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

No Impact. No, the proposed Project would not conflict with or obstruct implementation of the applicable air quality plan. Pursuant to SCAQMD guidance, the consistency of the proposed Project with the SCAQMD 2022 AQMP is evaluated based on the two criteria established by the SCAQMD CEQA Air Quality Handbook (SCAQMD 1993):

1. Whether the proposed Project would result in an increase in the frequency or severity of existing air quality violations or cause or contribute to new violations or delay the timely attainment of air quality standards or the interim emissions reductions specified in the AQMP
2. Whether the proposed Project would exceed the growth assumptions in the AQMP

Violations of federal and state air quality standards would occur if the proposed Project would generate emissions in excess of SCAQMD regional thresholds set forth in Table 3.3-2. As shown in Table 3.3-3 under Threshold 3.3(b), construction activities would not generate emissions in excess of SCAQMD regional thresholds. After Project construction is complete, there would be no changes to Metropolitan's existing operation and maintenance activities at the Project site. Therefore, the proposed Project would not result in an increase in frequency or severity of existing air quality violations, cause or contribute to a new violation, or delay timely attainment of the air quality standards in the AQMP, pursuant to criterion no. 1.

The proposed Project does not include new housing or businesses that would induce population or employment growth within SCAQMD's jurisdiction. No new facilities or structures are proposed, and the proposed Project would not increase water supply to the area or otherwise directly or indirectly induce population growth. The proposed Project also would not require zone changes, conditional uses, or entitlements that would modify the existing zoning or land use designations of the Project site, which was used, in part, to develop 2022 AQMP growth assumptions and emission inventories. Therefore, the proposed Project would not generate new growth that would conflict with or obstruct implementation of the 2022 AQMP pursuant to criterion no. 2.

b. Result in a cumulatively considerable net increase of any criteria pollutant for which the Project region is non-attainment under an applicable Federal or State ambient air quality standard?

Less than Significant. The proposed Project 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.

Construction Activities

Proposed construction activities would involve vegetation removal, site preparation, excavation, structural reinforcement installation, backfill, riprap installation, and site restoration. Air pollutant emissions would be generated by heavy equipment used on site and by vehicle trips, such as worker, water truck, and dump truck trips. The nature and magnitude of construction emissions would vary from day to day, depending primarily on the level of activity and the construction equipment in use.

Table 3.3-3 summarizes maximum daily air pollutant emissions generated during Project construction. As shown therein, maximum daily emissions generated by construction activities would not exceed SCAQMD regional air emission thresholds. Therefore, Project construction would not result in a cumulatively considerable net increase of any criteria pollutant, and impacts would be less than significant.

Table 3.3-3. Representative Maximum Daily Emissions for Proposed Construction Activities (lbs/day)

	VOC	NO_X	CO	SO_X	PM_{10}	$PM_{2.5}$
Maximum Daily Emissions	3	23	29	<1	4	2
SCAQMD Significance Thresholds	75	100	550	150	150	55
Significant (Exceeds Thresholds)?	No	No	No	No	No	No

Notes: VOC = volatile organic compounds, NO_X = nitrogen oxides, CO = carbon monoxide, SO_X = sulfur oxides, PM_{10} = particulate matter 10 micrometers or less in diameter, $PM_{2.5}$ = particulate matter 2.5 micrometers or less in diameter, SCAQMD = South Coast Air Quality Management District.

Source: Appendix B; SCAQMD 2023

Operation and Maintenance Activities

After Project construction is complete, there would be no changes to Metropolitan's existing operation and maintenance activities at the Project site. Therefore, Project operation and maintenance would not result in a cumulatively considerable net increase of any criteria pollutant, and no impact would occur.

c. Expose sensitive receptors to substantial pollutant concentrations?

Less than Significant Impact. No, the proposed Project would not expose sensitive receptors to substantial pollutant concentrations. Sensitive receptors include schools, playgrounds, childcare centers, long-term health care facilities, rehabilitation centers, convalescent homes, hospitals, retirement homes, and residences. The Project site is located more than 1,000 feet from the nearest sensitive receptors, which are residences located approximately 0.2 mile (1,075 feet) to the west.

Fugitive Dust Emissions

Project construction activities would result in temporary generation of fugitive dust emissions, primarily from site preparation and excavation activities, transport of soil, and movement of heavy-duty construction equipment on unpaved surfaces. The Project Contractor(s) would be required to comply with SCAQMD Rule 403. Rule 403 is intended to reduce the amount of particulate matter

in the air due to fugitive dust sources by requiring actions to minimize the creation of fugitive dust. Rule 403 includes the following measures and is applicable as necessary to the proposed Project:

- Nontoxic chemical soil stabilizers shall be applied according to manufacturers' specifications to all inactive construction areas (previously graded areas inactive for 10 days or more).
- Active sites shall be watered at least twice daily. Locations where grading is to occur shall be thoroughly watered prior to earthmoving.
- All trucks hauling dirt, sand, soil, or other loose materials shall be covered or have at least 0.6 meter (two feet) of freeboard (vertical space between the top of the load and top of the trailer) maintained in accordance with the requirements of California Vehicle Code Section 23114.

Adherence to the dust suppression requirements included in Rule 403, which are incorporated by reference in Section 01065 of Metropolitan's construction contractor specifications, would minimize the creation of fugitive dust and the associated potential to expose sensitive receptors to localized fugitive dust emissions. Therefore, Project construction would not expose sensitive receptors to substantial concentrations of fugitive dust emissions, and impacts would be less than significant.

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 proposed Project activities would be diesel particulate matter (DPM) generated by heavy equipment and diesel-fueled delivery and dump trucks used during construction activities at the Project site.

The amount of TACs to which receptors are exposed (a function of concentration and duration of exposure) is the primary factor used to determine health risk (i.e., potential exposure to TAC emission levels that exceed applicable standards). Health-related risks associated with diesel-exhaust emissions are primarily linked to long-term exposure and the associated risk of contracting cancer. The California Office of Environmental Health Hazard Assessment has not identified short-term health effects from DPM.

Construction activities would be temporary and short-term (between approximately 7.5 to 9.5 months) and would not generate emissions in a fixed location for extended periods of time. The nearest sensitive receptors to the Project site are located approximately 0.2 mile (1,075 feet) to the west, and exhaust from mobile equipment dissipates rapidly with distance. Furthermore, the duration of exposure would be short in comparison to the exposure period typically used to evaluate health risk. Current models and methodologies for conducting health risk assessments are associated with longer-term exposure periods of 9, 30, and 70 years, which do not correlate well with the temporary nature of construction activities. DPM emissions from an approximately 9.5-month period of construction activities would represent 2.6 percent of the typical 30-year exposure duration used in health risk assessments; therefore, construction activities would not represent the type of long-term TAC emission sources typically subject to health risk assessments. Construction

activities would also be subject to and required to comply with California regulations limiting the idling of heavy equipment to no more than five minutes, which would further reduce the exposure of the nearest sensitive receptors 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.

After Project construction is complete, there would be no changes to Metropolitan's existing operation and maintenance activities at the Project site, which do not currently involve activities that generate TAC emissions. Therefore, Project operation and maintenance would not expose sensitive receptors to substantial TAC concentrations, and no impact would occur.

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

No Impact. No, the proposed Project would not result in other emissions adversely affecting a substantial number of people. The Project site is located more than 1,000 feet from the nearest sensitive receptors, which are residences located approximately 0.2 mile (1,075 feet) to the west. The proposed Project would generate oil and diesel fuel odors from heavy-duty equipment operating at the Project site during construction activities. However, these odors would be localized, limited to the approximately 7.5- to 9.5-month period of construction activities, and would dissipate rapidly with distance. Upon completion of construction activities, there would be no changes to Metropolitan's existing operation and maintenance activities at the Project site, which do not currently generate odorous emissions. Accordingly, the proposed Project would not result in other emissions, such as those leading to odors, adversely affecting a substantial number of people, and no impact would occur.

3.4 Biological Resources

BIOLOGICAL RESOURCES Would the Project:		Potentially Significant Impact	Less than Significant With Mitigation Incorporated	Less Than Significant Impact	No Impact
a)	Have a substantial adverse effect, either directly or through habitat modifications, on any species identified as a candidate, sensitive, or special-status species in local or regional plans, policies, or regulations, or by the California Department of Fish and Wildlife or U.S. Fish and Wildlife Service?	☐	☒	☐	☐
b)	Have a substantial adverse effect on any riparian habitat or other sensitive natural community identified in local or regional plans, policies, regulations or by the California Department of Fish and Wildlife or U.S. Fish and Wildlife Service?	☐	☒	☐	☐
c)	Have a substantial adverse effect on state or federally protected wetlands (including, but not limited to, marsh, vernal pool, coastal, etc.) through direct removal, filling, hydrological interruption, or other means?	☐	☒	☐	☐
d)	Interfere substantially with the movement of any native resident or migratory fish or wildlife species or with established native resident or migratory wildlife corridors, or impede the use of native wildlife nursery sites?	☐	☐	☒	☐
e)	Conflict with any local policies or ordinances protecting biological resources, such as a tree preservation policy or ordinance?	☐	☐	☐	☒
f)	Conflict with the provisions of an adopted Habitat Conservation Plan, Natural Community Conservation Plan, or other approved local, regional, or State habitat conservation plan?	☐	☐	☐	☒

Significance criteria established by CEQA Guidelines, Appendix G.

OVERVIEW OF BIOLOGICAL RESOURCES

Rincon prepared a Biological Resources Assessment report to document existing conditions and evaluate the potential for impacts to biological resources during implementation of the proposed Project. Regulated or sensitive biological resources studied and analyzed herein include special-status plant and wildlife species, nesting birds and raptors, sensitive plant communities, jurisdictional waters and wetlands, wildlife movement, and locally regulated resources, such as protected trees. The Biological Resources Assessment is attached as Appendix C. Rincon also conducted a Jurisdictional Delineation Report to delineate the extent and potential regulatory jurisdiction of wetlands, waters, and riparian habitat, which is included as Appendix D. In addition, Rincon prepared species-specific survey reports to document the results of focused habitat assessments and surveys conducted for bats (Appendix E), western burrowing owl (*Athene cunicularia*) (Appendix F), least Bell's vireo (*Vireo belli pusillus*) (Appendix G), rare plants (Appendix H), and small mammals (Appendix I).

REGULATORY FRAMEWORK

The following is a summary of the regulatory context under which biological resources are managed at the federal, state, and local levels. Many federal and state statutes provide a regulatory structure that guides the protection of biological resources. Agencies with the responsibility for protection of biological resources include:

- United States Army Corps of Engineers (USACE) (wetlands and other waters of the United States);
- Regional Water Quality Control Board (RWQCB) (waters of the State);
- United States Fish and Wildlife Service (USFWS) (federally listed species and migratory birds); and
- California Department of Fish and Wildlife (CDFW) (fish and wildlife resources of the State, lakes and streambeds, and state-listed species).

Sensitive habitats are vegetation types, associations, or sub-associations that support concentrations of special-status plant or wildlife species, are of relatively limited distribution, or are of value to wildlife.

Listed species are those taxa that are formally designated as endangered or threatened by the federal government (e.g., USFWS, National Marine Fisheries Service) pursuant to the Endangered Species Act (ESA) or those designated or candidates for listing as endangered, threatened, or rare (for plants only) by the State of California pursuant to the California Endangered Species Act (CESA) or the California Native Plant Protection Act. In addition, certain species are identified as Fully Protected by the California Fish and Game Code (Sections 3511, 4700, 5050, and 5515). Furthermore, some species are considered rare in accordance with CEQA (but not formally listed), if the species exists in such small numbers throughout all or a significant portion of its range that it may become endangered if its environment worsens; or is likely to become endangered within the foreseeable future throughout all or a significant portion of its range (CEQA Guidelines Section 15380). These species do not receive statutory protection but may be considered during federal and State environmental review. These species may include those designated as Species of Special Concern or Watch List by CDFW and plants occurring on lists 1 through 4 of the California Native Plant Society (CNPS) California Rare Plant Rank (CRPR) system.

METHODOLOGY

Biological conditions were evaluated by confirming applicable regulations, policies, and standards; reviewing biological literature and querying available databases pertinent to the Project site and vicinity (within nine topographic quadrangles for CDFW's California Natural Diversity Data Base [CNDDB] and CNPS' Inventory of Rare and Endangered Plants of California); and conducting a reconnaissance-level biological survey of the Project site plus a 100-foot survey buffer in all directions (Biological Study Area). Prior to conducting the biological survey, a variety of literature was reviewed to obtain baseline information about the biological resources with potential to occur within the Project site and surrounding area, including databases from CDFW, USFWS, and CNPS. Refer to Appendix C for a full list of literature reviewed.

On October 24, 2023, biologists Jared Reed and Kevin Gugerty from Rincon conducted a reconnaissance-level biological survey by walking through the Biological Study Area (wandering pedestrian transect approach) to document existing site conditions and the potential presence of regulated biological resources, including special-status plant and wildlife species, sensitive plant communities, potentially jurisdictional waters and wetlands, and habitat for nesting birds. Weather conditions were sunny and clear with temperatures between 61 and 69 (degrees Fahrenheit) with no wind and no cloud cover (Appendix C).

On January 8, 2024, biologists Jared Reed and Kevin Gugerty from Rincon conducted an aquatic resources delineation to assess potential jurisdictional waters within the Biological Study Area. Current USACE and State Water Resources Control Board delineation procedures and guidance were used to identify and delineate any wetlands and/or waters of the United States/State potentially subject to USACE and RWQCB jurisdiction (Appendix D). Likewise, current CDFW procedures and guidance were used to identify and delineate any streambeds, rivers, or associated riparian habitat potentially subject to CDFW jurisdiction. Additional detail on the survey methodology is provided in the Jurisdictional Delineation Report included as Appendix D.

Additional, focused biological surveys were conducted in 2024 and 2025 to assess habitat conditions and determine the presence/absence of bats (habitat assessment and emergence survey on June 26, 2024), western burrowing owl (four surveys between April 15 and June 24, 2025), least Bell's vireo (eight surveys between May 14 and July 30, 2024), rare plants (one survey on July 15, 2024), and small mammals (five consecutive nights of trapping from June 10 to 15, 2024). Additional detail on the survey methodologies is provided in reports included as Appendices E through I.

EXISTING BIOLOGICAL CONDITIONS

The Project site is located within the San Jacinto River at the north end of the San Jacinto River Valley and has a relatively uniform elevation at approximately 1,500 feet above mean sea level. Soils within the Project site are mapped as Dello loamy sand, 0 to 5 percent slopes, Tujunga loamy sand, channeled, 0 to 8 percent slopes and Riverwash. Soboba cobbly loamy sand, 2 to 25 percent slopes is mapped outside the Project site but within the 100-foot survey buffer included in the Biological Study Area. Most of the Project site is mapped as Riverwash, which is classified as a hydric soil type (Appendix C).

The Project site has a high level of disturbance, including soil compaction from vehicle use and within an existing laydown area. Vegetation communities documented in the Project site during the October 2023 reconnaissance-level survey include Fremont cottonwood woodland (*Populus fremontii* Woodland Alliance), upland mustards, and fourwing saltbush scrub. Fremont cottonwood woodland is located within the San Jacinto River and is comprised of Fremont cottonwood (*Populus fremontii* ssp. *fremontii*), Goodding's black willow (*Salix gooddingii*), and scattered stands of tamarisk (*Tamarix ramosissima*) and mulefat (*Baccharis salicifolia*). Upland mustards (*Brassica nigra* Herbaceous Semi-Natural Alliance) are located outside the main channel of the San Jacinto River and dominated by shortpod mustard (*Hirschfeldia incana*), Russian thistle (*Salsola tragus*), and common stork's bill (*Erodium cicutarium*). Fourwing saltbush scrub is found in the northwestern portion of the Project site and contains fourwing saltbush (*Atriplex canescens*), red brome (*Bromus rubens*), and horsewheat (*Triticum aestivum*). Disturbed four wing saltbush scrub was mapped within the northern portion of the 100-foot survey buffer included in the

Biological Study Area, on the north side of Soboba Road. This community is similar in species composition to fourwing saltbush scrub but is sparser with large areas of bare or disturbed ground between shrubs and herbaceous vegetation. The developed/disturbed land cover was the only other land cover type documented in the Project site and was identified along the shoulder of Soboba Road and within/along the existing dirt access roads within the Project site (Appendix C).

The Project site contains a portion of the San Jacinto River, which is classified by the National Wetlands Inventory as a Riverine System. More specifically, this river is classified as an intermittent streambed that is intermittently flooded. The river is approximately 150 feet wide within the Project site. Based on the January 2024 field delineation, the portion of the San Jacinto River within the Project site is likely subject to the jurisdiction of USACE, RWQCB, and CDFW (Appendix D).

Wildlife species observed within the Project site during the October 2023 reconnaissance-level survey were limited to common species, including western fence lizard (*Sceloporus occidentalis*), black phoebe (*Sayornis nigricans*), common raven (*Corvus corax*), Bewick's wren (*Thryomanes bewickii*), Nuttall's woodpecker (*Dryobates nuttallii*), American crow (*Corvus brachyrhynchos*), California towhee (*Melozone crissalis*), lesser goldfinch (*Spinus psaltria*), red-tailed hawk (*Buteo jamaicensis*), and bushtit (*Psaltriparus minimus*). Several small mammal burrows were observed near the center of the Project site, but no small mammals or their sign were identified (Appendix C).

One special-status plant species, chaparral sand-verbena (*Abronia villosa* var. *aurita,* California Rare Plant Rank 1B.1), was observed during the October 2023 reconnaissance survey and subsequent focused rare plants survey with 40 individuals present in the Biological Study Area (Appendix H). Focused surveys for least Bell's vireo (federally and state endangered) identified suitable nesting habitat and detected 13 total observations of the species within the Project site plus a 500-foot survey buffer (Appendix G). Yellow warbler (*Setophaga petechia*; California Species of Special Concern [SSC]) was observed within the Project site during biological monitoring conducted by Rincon for emergency repairs in July 2023. Cooper's hawk (*Accipiter cooperii*) is a CDFW Watch List species that was observed within the Project site and 500-foot survey buffer during the focused least Bell's vireo protocol surveys. No burrowing owl (state candidate endangered, California SSC) or sign were observed during the focused western burrowing owl surveys (Appendix F). Focused bat surveys concluded the Project site contains suitable foraging habitat for bats and Fremont cottonwood stands may be used as day roosts, but no night or maternity roosts were observed (Appendix E). Protocol trapping surveys for small mammals identified Los Angeles pocket mouse (*Perognathus longimembris brevinasus*; California SSC) within the Project site and two subspecies of San Diego pocket mouse (*C. fallax fallax* and *C. fallax pallidus*) (Appendix I).

The Project site is located within the Plan Area of the *Habitat Conservation Plan for the Stephens' Kangaroo Rat in Western Riverside County California*, a permit/agreement between the Riverside County Habitat Conservation Agency (RCHCA) and USFWS/CDFW (County of Riverside 1996). The Project site also is located within the boundaries of the *Western Riverside County Multiple Species Habitat Conservation Plan* (MSHCP; County of Riverside 2003), and implementation of the MSHCP is overseen by the Regional Conservation Authority (RCA).

Discussion. 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?*

Less Than Significant with Mitigation Incorporated. No, the proposed Project would not 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 CDFW or USFWS with incorporation of mitigation measures.

SPECIAL-STATUS PLANTS

The literature review documented 61 special-status plant species within the nine-quadrangle search area. Of these, species ranked as CRPR 1B are considered rare, threatened, or endangered in California and elsewhere and are treated as endangered, threatened, or rare under CEQA. CRPR 1B species warrant particular attention during environmental review and are analyzed separately from other CRPR-ranked species.

Chaparral sand-verbena (CRPR 1B.1) was observed within the Biological Study Area during the July 2024 special-status plant survey. Three additional special-status plant species had a moderate potential to occur within the Project site due to presence of specific habitat requirements and relatively recent occurrences in the CNDDB (less than 25 years). However, these species were not detected during the special-status plant survey, which was conducted at a time when these species would be identifiable, and therefore their status has been reduced to low potential to occur (Appendices C and H).[5] These three species include smooth tarplant (*Centromadia pungens* ssp. *laevis*; CRPR 1B.1), Mojave tarplant (*Deinandra mohavensis*; CRPR 1B.3) and white rabbit-tobacco (*Pseudognaphalium leucocephalum*; CRPR 2B.2). The remaining 57 special-status plant species documented within the nine-quadrangle search area have low potential to occur or are not expected to occur in the Project site (Appendix C). No additional CRPR 2 through 4 species were observed or are expected to occur within the Project site.

Of the 40 chaparral sand-verbena individuals documented within the Biological Study Area, 39 were documented within the San Jacinto River and its banks, and one was documented along a road cut near the center of the Project site. Of these, 28 chaparral sand-verbena individuals are within the Project site (Appendix H). Of the 28 chaparral sand-verbena individuals within the Project site, three individuals are within the permanent impact area, and 17 individuals are within the temporary impact area. The remaining eight individuals are outside of the proposed impact area but within the Project site. Direct impacts to chaparral sand-verbena could include removing or running over individual plants during construction activities. The three chaparral sand-verbena individuals in the permanent impact area would be removed as well as the 17 individuals in the temporary impact area because they are within the understory of Fremont cottonwood trees proposed for removal. Indirect impacts could include spreading invasive species inadvertently transported by construction equipment (e.g., seeds of invasive plant species carried to the site within the undercarriage or tires of heavy equipment that has not been cleaned thoroughly between

[5] The potential for these species to occur has been updated since preparation of the Biological Resources Assessment based on the results of subsequent focused botanical surveys.

construction sites) or dust generated by ground disturbance and the movement of equipment and vehicles within the Project site, which could negatively affect individual plants documented within the Project site and Biological Study Area, or suitable habitat for the species in the future. However, Project impacts would be temporary, and the species would likely recolonize disturbance areas following construction (Appendix C). In accordance with Metropolitan standard practice outlined in Section 01065 of the construction contractor specifications (see Section 1.6.7, *Environmental Requirements for Construction*), the Project Contractor(s) and their personnel would attend a Worker Environmental Awareness Program training that would educate workers on environmental sensitivities at the Project site, including the presence of special-status plant species. Nevertheless, impacts to chaparral sand-verbena would be potentially significant due to the species' special status (CRPR 1B.1) and the fact that Project activities would directly impact approximately 50 percent of the individuals identified during the surveys and could indirectly affect the remaining individuals observed within the Project site and Biological Study Area. Implementation of Mitigation Measures BIO-1 (Special-Status Plant Species Surveys), BIO-2 (Special-Status Plant Species Avoidance and Minimization), and BIO-3 (Special-Status Plant Species Revegetation) would be implemented to avoid and/or minimize potentially significant impacts through pre-activity surveys, avoidance and minimization measures for identified special-status plants, and transplantation of impacted special-status plant individuals outside the construction footprint. With the implementation of these measures, impacts to special-status plant species would be reduced to less-than-significant levels because direct impacts would be minimized to the extent practicable.

SPECIAL-STATUS WILDLIFE

The literature review documented 48 special-status wildlife species within the nine-quadrangle search area. Of these, nine special-status wildlife species were determined to either have a moderate to high potential to occur within the Biological Study Area or to be present within the Biological Study Area due to presence of specific habitat requirements, relatively recent occurrences tracked in the CNDDB (less than 25 years), and/or observations from past Project-specific surveys. Table 3.4-1 lists the special-status wildlife species with moderate to high potential to occur within the Biological Study Area, which are discussed in further detail below. The remaining 39 special-status wildlife species have low or no potential to occur within the Biological Study Area. Although western burrowing owl has a low potential to occur, it is included in this analysis given its status as a California SSC and a candidate for listing under CESA (Appendix C).

Table 3.4-1. Special-Status Wildlife Species with Moderate to High Potential to Occur Within the Project Site

Common Name	Scientific Name	Status
Least Bell's vireo	*Vireo bellii pusillus*	Federal Endangered/State Endangered
Yellow warbler	*Setophaga petechia*	CDFW SSC
Cooper's hawk	*Accipiter cooperii*	CDFW Watch List
Pallid bat	*Antrozous pallidus*	CDFW SSC
Townsend's big-eared bat	*Corynorhinus townsendii*	CDFW SSC
Western yellow bat	*Lasiurus xanthinus*	CDFW SSC
Stephens' kangaroo rat	*Dipodomys stephensi*	Federal Threatened/State Threatened
Los Angeles pocket mouse	*Perognathus longimembris brevinasus*	CDFW SSC
San Bernardino kangaroo rat	*Dipodomys merriami parvus*	Federal Endangered/State Endangered

Notes: CDFW (California Department of Fish and Wildlife), SSC (Species of Special Concern)
Source: Appendix C

Least Bell's Vireo

Least Bell's vireo is listed as endangered under the federal ESA and CESA. Focused surveys for least Bell's vireo were conducted within suitable habitat on the Project site plus a 500-foot survey buffer from May to July 2024. The focused surveys concluded that the Project site contains suitable nesting habitat for the species with 13 total observations. Least Bell's vireo were detected in two territories within the survey area - a western territory and a southeastern territory. Individuals were observed singing and foraging in three identified habitat types, including Fremont cottonwood forest and woodland, tamarisk thickets, and fourwing saltbush scrub. No nests were directly observed during the focused surveys; however, the western territory likely contained one nest based on observations of a male singing within a dense tamarisk thicket during the first survey and additional observations of a fledgling and the male near the same area during the fourth, seventh, and eighth surveys. Additionally, in the southeastern territory, there were observations of a male singing and observations of a fledgling during the first, fifth, seventh and eighth surveys, indicating the likely presence of a nest in this area. Out of the 13 observations, only one was within the Project site, and the remaining observations were outside of the Project site and within the 500-foot survey buffer (Appendix G).

Potential direct impacts to least Bell's vireo could include mortality if vegetation or trees with active nests are removed during Project construction. Indirect impacts could include removal of suitable habitat during Project construction as well as disturbance to active nests or disturbance to breeding, feeding, foraging, or nesting behavior from dust, vibration, or noise generated by Project construction (Appendix C). Suitable habitat within the Project site includes Fremont cottonwood woodland and tamarisk. The proposed Project would result in approximately 0.87 acre of permanent impacts to habitat (0.75 acre of Fremont cottonwood woodland, 0.12 acre of tamarisk) and approximately 1.17 acres of temporary impacts to habitat (1.17 acres of Fremont cottonwood woodland). Therefore, direct and indirect impacts to least Bell's vireo would be potentially significant and could result in "take" of this species, as defined by the federal ESA and CESA. Metropolitan would obtain the appropriate federal and state permits from USFWS and CDFW, respectively, to authorize the incidental take of least Bell's vireo. Implementation of protection measures and compensatory mitigation for least Bell's vireo would be required as conditions of

those federal and state permits. In addition, Metropolitan would implement avoidance, minimization, and mitigation measures, including but not limited to:

- Vegetation removal would occur outside the least Bell's vireo nesting season.
- Metropolitan standard practices, outlined in Section 01065 of the construction contractor specifications (see Section 1.6.7, *Environmental Requirements for Construction*), would include:
    - Conducting pre-activity nesting bird surveys within the Project site for construction activities occurring during the nesting bird season; and
    - Implementing appropriate avoidance buffers if active nests are identified until the young have fledged from the nest or the nest is inactive.

Nevertheless, implementation of Mitigation Measures BIO-4 (Least Bell's Vireo Pre-Construction Survey and Avoidance) and BIO-5 (Compensatory Mitigation for Fremont Cottonwood Woodland, Jurisdictional Waters, and Least Bell's Vireo Habitat) would be implemented to avoid and/or minimize potentially significant impacts through pre-activity surveys, avoidance and minimization measures for identified active nests, and compensatory mitigation for habitat removal. With implementation of these measures and adherence to CDFW and USFWS permit requirements, impacts to least Bell's vireo would be reduced to less-than-significant levels because direct and indirect impacts would be avoided, minimized, and compensated for through on-site or off-site restoration, payment to an in-lieu fee program, or purchase of mitigation credits at a minimum 1:1 ratio.

Yellow Warbler and Cooper's Hawk

Yellow warbler is a CDFW Species of Special Concern that was observed within the Project site during biological monitoring conducted for emergency repairs in July 2023. The Fremont cottonwood woodland within the Project site provides suitable nesting and foraging habitat for this species. Cooper's hawk is a CDFW Watch List species that was observed within the Project site and 500-foot survey buffer during the focused least Bell's vireo protocol surveys conducted between May to July 2024 (Appendix G).

Potential direct impacts to yellow warbler and Cooper's hawk could include mortality through vegetation or tree removal during Project construction that affects active nests, and potential indirect impacts could include disturbance to active nests or nesting activity through dust, vibration, or noise during Project construction (Appendix C). To avoid the nesting season and potential direct impacts to nesting yellow warbler and/or Cooper's hawk, vegetation removal would occur outside of nesting bird season. Additionally, in accordance with Metropolitan standard practice outlined in Section 01065 of the construction contractor specifications (see Section 1.6.7, *Environmental Requirements for Construction*), Metropolitan would perform pre-activity nesting bird surveys within the Project site for construction activities occurring during the nesting bird season, such as installation of the proposed protection structures, which is anticipated to begin during the dry season in May 2027, and implement appropriate avoidance buffers if active nests are identified and until the young have fledged from the nest or the nest fails. With adherence to Metropolitan standard practice related to the protection of biological resources, impacts to yellow warbler and Cooper's hawk would be less than significant because direct impacts would

be avoided and indirect impacts would be limited and not likely to substantially reduce local populations or their ability to persist once the proposed Project is complete.

Western Burrowing Owl

Western burrowing owl is a CDFW SSC and a CESA candidate species with low potential to occur in the Biological Study Area. Protocol surveys conducted between April 15 and June 24, 2025, identified elements of suitable habitat present within the Biological Study Area. However, no suitable burrows (greater than four inches in diameter) or observations of sign or individuals were observed during the October 2023 reconnaissance survey; the focused surveys completed in January and May through July 2024; the 2025 protocol surveys (Appendices C and F); or during survey and monitoring efforts during the emergency repairs between July 24 and August 8, 2023. The repeated negative findings indicate a low likelihood that burrowing owls occupy the Project site.

Nevertheless, suitable habitat is present within the Project site, and the species is mobile and could move into the Project site prior to the start of Project construction. If present at the time of construction, potential direct impacts to western burrowing owl could include disturbance or mortality of active nests, and potential indirect impacts could result from dust, vibration, or noise (Appendix C) occurring within 165 feet of active nests or nesting activity during the wintering season. In accordance with Metropolitan standard practice outlined in Section 01065 of the construction contractor specifications (see Section 1.6.7, *Environmental Requirements for Construction*), Metropolitan would perform pre-activity nesting bird surveys within the Project site for construction activities occurring during the nesting bird season, such as installation of the proposed protection structures, which is anticipated to begin during the dry season in May 2027. Avoidance buffers would be implemented if active nests are detected.

Because wintering owls may occur within the Project site outside the nesting bird season, implementation of Mitigation Measure BIO-6 (Western Burrowing Owl Pre-Activity Survey) would be required to avoid and/or minimize impacts to wintering owls. With adherence to Metropolitan standard practice related to the protection of biological resources and implementation of Mitigation Measure BIO-6, impacts to western burrowing owl would be reduced to less-than-significant levels because direct impacts would be avoided and indirect impacts would be minimized such that local populations would not be substantially affected.

Special-Status Bats

Three special-status bat species designated as CDFW SSC – pallid bat, Townsend's big-eared bat, and western yellow bat - have moderate potential to occur within the Project site. Focused surveys for special-status bats were conducted within the Project site and a 300-foot survey buffer in June 2024. The surveys concluded the Project site contains suitable foraging habitat for bats, although no night or maternity roosts were observed. The acoustic surveys detected the presence of canyon bat (*Parastrellus hesperus*), Mexican free-tailed bat (*Tadarida brasiliensis*), silver-haired bat (*Lasionycteris noctivagans*), western yellow bat, and Yuma myotis (*Myotis yumanensis*). Of these bat species observed, only the western yellow bat is a CDFW SSC and is thus the focus of this analysis (Appendix E).

The riparian woodlands within the Project site provide potentially suitable roosting and foraging habitat for bats, although no night or maternity roosts were observed during the focused surveys. The proximity of the Project site to Lake Perris and Diamond Valley Lake increases the likelihood for the western yellow bat to be present within the Project site. In addition, pallid bat and Townsend's big-eared bat could occupy the Project site at the time of construction given their mobility and the presence of suitable foraging habitat and roosting trees. Potential direct impacts to western yellow bat and other special-status bats could include mortality through tree removal during Project construction that affects active roosts, and potential indirect impacts could include disturbance to active roosts or roosting activity through dust, vibration, or noise during Project construction (Appendix C). Therefore, impacts to western yellow bat and other special-status bats would be potentially significant, and implementation of Mitigation Measure BIO-7 **(**Special-Status Bats Avoidance and Minimization**)** would be required to avoid impacts to these species. With implementation of Mitigation Measure BIO-7, impacts to special-status bat species would be reduced to less-than-significant levels because direct impacts would be avoided and indirect impacts would be limited and not likely to substantially reduce local populations or their ability to persist once the proposed Project is complete.

Special-Status Small Mammals

The Project site is located within USFWS-designated critical habitat for San Bernardino kangaroo rat, which is listed as endangered under the federal ESA and endangered under CESA. In addition, Los Angeles pocket mouse, a CDFW SSC, and Stephen's kangaroo rat, which is listed as threatened under the federal ESA and CESA, have moderate potential to occur within the Biological Study Area (Appendix C).

Several small mammal burrows were observed near the center of the Project site during the October 2023 reconnaissance survey, and protocol trapping surveys for small mammals were conducted within the Project site in June 2024. The June 2024 survey identified Los Angeles pocket mouse as well as two subspecies of San Diego pocket mouse, which are listed as CDFW Special Animals but are not designated as CDFW SSC. While several recent CNDBB occurrences of San Bernardino kangaroo rat and Stephen's kangaroo rat are tracked within the San Jacinto quadrangle (Appendix C), no San Bernardino kangaroo rat or Stephen's kangaroo rat were detected (Appendix I). Therefore, Los Angeles pocket mouse is the focus of this analysis.

One Los Angeles pocket mouse individual was trapped within the Project site during the June 2024 protocol trapping surveys (Appendix I). Direct impacts to Los Angeles pocket mouse may include crushing/killing of individuals with equipment or vehicles or disturbing existing burrows during Project construction. Potential indirect impacts could include increased sound and vibration levels that displace individuals as well as exposure to dust during Project construction. Furthermore, vegetation loss could impact the species by reducing available habitat (Appendix C). However, given that only one individual Los Angeles pocket mouse was trapped over the course of the protocol surveys, direct and indirect impacts from the proposed Project are unlikely to cause the species' local population to drop below a self-sustaining level. In addition, the proposed Project would result in approximately 0.03 acre of permanent impacts and 2.86 acres of temporary impacts to suitable scrub and herbaceous habitat for the species, which is a limited amount in comparison to the substantial acreage of suitable habitat present in the open space and conserved lands that surround the Project site. Furthermore, in accordance with Metropolitan standard practice outlined in Section 01065 of the construction contractor specifications (see Section 1.6.7, *Environmental*

Requirements for Construction), the Project Contractor(s) and their personnel would attend a Worker Environmental Awareness Program training that would educate workers on environmental sensitivities at the Project site, including the potential for Los Angeles pocket mouse to be present. Therefore, potential impacts to Los Angeles pocket mouse would be less than significant.

MITIGATION MEASURES

BIO-1 Special-Status Plant Species Survey

A seasonally timed, pre-activity survey for special-status plants shall be completed prior to any vegetation removal, grubbing, or other ground-disturbing activity (including staging and mobilization). The survey shall be timed to coincide with the blooming period of chaparral sand-verbena (March to September), smooth tarplant (April to September), Mojave tarplant (June to October), and white rabbit-tobacco (August to November). The survey shall provide specific, updated information on the locations of chaparral sand-verbena individuals and determine the continued absence of other special-status plant species. The plant survey shall be conducted by a qualified botanist and shall cover suitable habitat within the entire area proposed for disturbance (including areas for staging and mobilization). All special-status plant species identified on site shall be mapped onto a site-specific aerial photograph and topographic map. The survey shall be conducted in accordance with the most current protocols established by CDFW and USFWS. If federally listed, state listed, or California Rare Plant Rank 1B species are found, avoidance and minimization measures shall be implemented in accordance with Mitigation Measure BIO-2. A report of the survey results shall be submitted to Metropolitan.

BIO-2 Special-Status Plant Species Avoidance and Minimization

Chaparral sand-verbena and any newly identified federally listed, state listed, or California Rare Plant Rank 1B species shall be avoided, if feasible. Occurrences of these special-status plant species that are not within the immediate disturbance footprint but located within 50 feet of disturbance limits shall be protected at least 30 feet beyond their extent, or other distance as approved by a monitoring biologist, to minimize the potential for impacts. If avoidance of these special-status plant species is not feasible, salvage and transplantation shall be implemented in accordance with Mitigation Measure BIO-3. Any avoidance and minimization measures implemented shall be documented and included in the special-status plant survey report prepared under Mitigation Measure BIO-1.

BIO-3 Special-Status Plant Species Salvage and Transplantation

If avoidance of chaparral sand-verbena or any newly identified federally listed, state listed, or California Rare Plant Rank 1B species within the Project site is not feasible, the impacted specimens, seed, and surrounding topsoil shall be salvaged and redistributed into adjacent, undisturbed suitable habitat. Any salvage and transplantation efforts shall be documented and included in the special-status plant survey report prepared under Mitigation Measure BIO-1.

BIO-4 Least Bell's Vireo Pre-Construction Survey and Avoidance

To avoid potential direct and indirect impacts to least Bell's vireo, Metropolitan shall implement the following measures for all Project work areas at or within 300 feet of riparian vegetation known to be occupied by least Bell's vireo based on 2024 protocol-level survey results, as well as pre-construction surveys conducted by a qualified biologist/ornithologist:

- Construction (primarily ground disturbance) activities that occur at or within 300 feet of riparian areas known to be occupied by least Bell's vireo shall occur outside of least Bell's vireo nesting season (generally March 1 to August 31) to the extent feasible.
- If construction activities must occur during least Bell's vireo nesting season and could encroach within 300 feet of suitable least Bell's vireo habitat, a qualified biologist/ornithologist shall conduct a pre-construction survey no more than seven days prior to initiation of construction activities in all areas deemed suitable for least Bell's vireo, including areas determined occupied by least Bell's vireo during the 2024 protocol-level surveys.
    - If least Bell's vireo is not detected within riparian habitat located at or within 300 feet of construction activities, no further action or exclusion buffers are required.
    - If least Bell's vireo is detected and construction activities are planned at or within 300 feet of occupied least Bell's vireo habitat, the following measures shall be implemented:
        - A qualified biologist/ornithologist shall establish a 300-foot exclusion buffer measured from the edge of the occupied riparian habitat to the closest edge of the construction work area, if feasible. If it is not feasible to maintain a 300-foot exclusion buffer due to site constraints, the qualified biologist/ornithologist may reduce the buffer based on the intensity of construction activities, construction noise levels, and observed behavior of individual birds. The qualified biologist/ornithologist shall be present for the duration of the construction activities that occur at or within 300 feet of the edge of riparian areas occupied by least Bell's vireo. If any signs of nest disturbance or stress are observed, then additional avoidance and minimization measures shall be implemented, such as installing noise barriers or modifying buffer distances.
        - If an appropriate exclusion buffer is unable to be established that would ensure direct and indirect impacts to nesting least Bell's vireo can be fully avoided, construction shall be halted and shall not occur until it is confirmed by the qualified biologist/ornithologist that the young are no longer dependent on the nest.
        - Monitoring reports shall document the ambient noise level recorded prior to construction initiation, as well as document the recorded noise levels used to determine least Bell's vireo exclusion buffer distances, whether increased or reduced.

BIO-5 Compensatory Mitigation for Fremont Cottonwood Woodland, Jurisdictional Waters, and Least Bell's Vireo Habitat

Compensatory mitigation for impacts to Fremont cottonwood woodland and jurisdictional waters regulated by USACE, RWQCB, and CDFW shall be identified prior to disturbance of these features. Mitigation shall be required at a minimum ratio of 1:1 for temporary and permanent impacts, including removal of mature cottonwood trees, unless a higher ratio is required by

RWQCB, CDFW, or USACE during their respective permitting processes. Mitigation may take the form of permittee-responsible on-site or off-site mitigation, payment to an in-lieu fee program, or the purchase of credits from an approved mitigation bank.

If on-site or off-site restoration would occur, Metropolitan shall retain a qualified biologist to develop a Habitat Revegetation, Restoration, and Monitoring Program prior to the commencement of Project construction (including, but not limited to, site preparation, staging and mobilization, vegetation clearance/mowing/trimming, grading, and excavation). At a minimum, the program shall include the following:

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

The Habitat Revegetation, Restoration, and Monitoring Program plant palette shall avoid use of species from MSHCP Table 6-2 (Plants to be Avoided Within or Adjacent to Conservation Areas) for any restoration of temporary impacts.

If payment to an in-lieu fee program or the purchase of credits from an approved mitigation bank is utilized, Metropolitan shall retain proof of purchase in the Project file.

BIO-6 Western Burrowing Owl Pre-Activity Survey and Avoidance

Metropolitan shall retain a qualified biologist to conduct a pre-activity burrowing owl clearance survey of suitable habitat within the Project site and a 500-foot buffer, as feasible, to confirm the absence of wintering western burrowing owl individuals, no more than 14 days prior to start of construction. The survey methodology shall be consistent with the methods outlined in the CDFW *Staff Report on Burrowing Owl Mitigation* (CDFW 2012). If no active wintering owls or evidence of occupied habitat is identified, then Project construction in suitable habitat may commence, and no further action is required.

If active wintering owls are detected within the Project site, Metropolitan shall implement the following measures to avoid and/or minimize potential impacts in accordance with the CDFW *Staff Report on Burrowing Owl Mitigation* (CDFW 2012):

- A qualified biologist shall be present on site during initial ground disturbing activities in suitable burrowing owl habitat

- During the nonbreeding (winter) season (September 1 to January 31), ground-disturbing work can proceed near active burrowing owl burrows at the discretion of the qualified biologist as long as the work occurs no closer than 165 feet (50 meters) from the burrow, depending on whether the level of disturbance is low and if the active burrow is not directly affected by the Project activity. A smaller/larger buffer may be established by the qualified biologist following monitoring and assessment of the Project's effects on the burrowing owl(s).
- Smaller non-disturbance buffers may be permitted in the winter for burrowing owl individuals if a noise and visual barrier, such as hay bale walls, is installed between the occupied burrowing owl burrow and construction activities, if the qualified biologist determines the reduced buffer will provide adequate protection.
- If active winter burrows are found that would be directly affected by ground-disturbing activities and cannot be avoided, Metropolitan shall coordinate with CDFW to determine a course of action and obtain incidental take authorization, if necessary.

A final letter shall be prepared by the qualified biologist documenting the results of the pre-activity surveys and monitoring, which shall be submitted to Metropolitan.

BIO-7 Special-Status Bats Avoidance and Minimization

To the extent feasible, demolition or disturbance of suitable bat roosting habitat (e.g., live and dead trees) shall be scheduled between October 1 and February 28, outside of the maternity roosting season. If suitable roost trees must be encroached during the maternity season (March 1 to September 30) or structures must be removed at any time of the year, Metropolitan shall retain a qualified bat specialist to conduct a pre-activity survey no more than seven days prior to the start of Project construction in a given work area to identify those trees proposed for disturbance that could provide hibernacula or nursery colony roosting habitat for bats. The trees or structures shall be closely inspected by the bat specialist to determine the presence or absence of roosting bats. If potentially suitable hibernacula or nursery colony roosting habitat for bats is not present in areas anticipated to be directly impacted by Project construction, no additional action is required.

If bats are not detected, but the bat specialist determines roosting bats may be present at any time of year, trees shall be felled in a controlled manner using heavy machinery. To ensure the optimum warning for any roosting bats that may still be present, the trees or structures shall be nudged lightly two to three times, with a pause of approximately 30 seconds between each nudge to allow bats to become active. Trees or structures may then be pushed to the ground slowly under the supervision of a qualified bat specialist. Felled trees shall remain in place until they are inspected by a bat specialist. Trees that are known to be bat roosts shall not be sawed or mulched immediately. A period of at least 48 hours shall elapse prior to such operations to allow bats to escape.

The bat specialist shall document all demolition monitoring activities and prepare a summary report for Metropolitan upon completion of tree removal activities.

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

Less Than Significant with Mitigation Incorporated. No, the proposed Project would not have a substantial adverse effect on any riparian habitat or other sensitive natural community identified in local or regional plans, policies, regulations or by the CDFW or USFWS with incorporation of mitigation measures. The only sensitive natural community located within the Project site is Fremont cottonwood woodland, which has a state rarity ranking of S3 and a global rarity ranking of G4 (Appendix C). Construction of the proposed Project would require the trimming or removal of some trees within the Fremont cottonwood woodland. Up to 17 Fremont cottonwood trees, two Goodding's black willows, four dead/unidentifiable trunks, and several clusters of tamarisk would be removed during Project construction. Based on the proposed limits of disturbance, the proposed Project would impact up to approximately 1.92 acres of Fremont cottonwood woodland, including up to approximately 0.75 acre of permanent impacts and approximately 1.17 acres of temporary impacts. In accordance with Metropolitan standard practice outlined in Section 01065 of the construction contractor specifications (see Section 1.6.7, *Environmental Requirements for Construction*), the Project Contractor(s) would be required to avoid or minimize any additional tree disturbances outside of those identified for trimming or removal in construction drawings. Nevertheless, because trimming and removal of trees would occur, impacts to Fremont cottonwood woodland would be potentially significant, and implementation of Mitigation Measure BIO-5 (Compensatory Mitigation for Fremont Cottonwood Woodland, Jurisdictional Waters, and Least Bell's Vireo Habitat) would be required to compensate for such impacts. With adherence to Metropolitan standard practice related to the protection of biological resources and implementation of Mitigation Measure BIO-5, impacts to the Fremont cottonwood woodland sensitive natural community would be reduced to less-than-significant levels because temporary and permanent impacts would be mitigated at a minimum ratio of 1:1. Mitigation would take the form of permittee-responsible on-site or off-site mitigation, payment to an in-lieu fee program, or the purchase of credits from an approved mitigation bank.

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?*

Less Than Significant with Mitigation Incorporated. No, the proposed Project would not have a substantial adverse effect on state or federally protected wetlands through direct removal, filling, hydrological interruption, or other means with incorporation of mitigation measures. Portions of the Project site within the San Jacinto River are potentially subject to the jurisdiction of USACE, RWQCB, and CDFW (Appendix D). Construction of the proposed Project would directly impact up to approximately 2.54 acres (413 linear feet) of non-wetland waters of the U.S. potentially subject to USACE and RWQCB jurisdiction, which includes approximately 0.48 acre (413 linear feet) of permanent impacts and approximately 2.06 acres (360 linear feet) of temporary impacts. The proposed Project would also impact up to approximately 3.53 acres (413 linear feet) of streambed and riparian habitat potentially subject to CDFW jurisdiction (Appendix C), consisting of approximately 0.66 acre (413 linear feet) of permanent impacts and approximately 2.87 acres (360 linear feet) of temporary impacts. It should be noted that permanent and temporary linear foot impacts overlap substantially and are not additive.

Direct impacts to potentially jurisdictional waters and riparian habitat would include vegetation removal and temporary alteration of the channel of the San Jacinto River during Project construction through ground disturbance and installation of a temporary diversion system to allow for diversion of surface water flows should a precipitation event occur. Indirect impacts would include adverse effects to water quality from material spills or sediment runoff from the construction site. In accordance with Metropolitan standard practice outlined in Section 01065 of the construction contractor specifications (see Section 1.6.7, *Environmental Requirements for Construction*), the Project Contractor(s) would be required to implement best management practices to avoid debris, hazardous materials, and other types of pollution from impacting water quality, which would minimize the potential for indirect impacts to occur. Following the construction period, the Project site would be similar to existing conditions, with the pipelines covered with substrate that matches the existing contours of the streambed, and there would be no changes to Metropolitan's existing operation and maintenance activities at the Project site. Because potentially jurisdictional waters would be directly impacted during Project construction, impacts to potentially jurisdictional waters would be potentially significant, and implementation of Mitigation Measure BIO-5 (Compensatory Mitigation for Fremont Cottonwood Woodland, Jurisdictional Waters, and Least Bell's Vireo Habitat) would be required to compensate for such impacts. With adherence to Metropolitan standard practices related to the protection of biological resources and implementation of Mitigation Measure BIO-5, impacts to potentially jurisdictional waters would be reduced to less-than-significant levels because temporary and permanent impacts would be mitigated at a minimum ratio of 1:1. Mitigation would take the form of permittee-responsible on-site or off-site mitigation, payment to an in-lieu fee program, or the purchase of credits from an approved mitigation bank.

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

Less than Significant Impact. No, the proposed Project would not interfere substantially with the movement of any native resident or migratory fish or wildlife species or disrupt native nursery sites. The San Jacinto River is classified as an intermittent streambed that is intermittently flooded and is approximately 150 feet wide within the Biological Study Area. No water has been present in the river during any of the monitoring and surveys completed during various seasons between 2023 and 2025. In addition, no occurrences of special-status fish species are documented in CNDDB or USFWS's Information for Planning and Consultation system, and none were observed during monitoring and surveys completed in the Biological Study Area (Appendix C). No native wildlife nursery sites (e.g., water bird nesting colonies, bat maternity roosts) were identified within the Project site. The Project site is surrounded by undeveloped land and open space, including the San Jacinto Mountain foothills, which provide a multitude of regional wildlife movement opportunities within and adjacent to the Project site. In addition, the Project site is not in an Essential Connectivity Area; however, it is less than one mile south of the Natural Landscape Block that includes the San Jacinto Mountains. Common wildlife associated with riparian and adjacent scrub habitats could move through the Project site because the San Jacinto River serves as a habitat linkage in the area at large. Disturbance-tolerant species, such as California ground squirrel (*Spermophilus beecheyi*), raccoon (*Procyon lotor*), and coyote (*Canis latrans*), are most likely to utilize these local wildlife corridors; however, the Project site could also be utilized for

movement by special-status wildlife species associated with riparian woodland habitats (Appendix C).

The proposed Project would not involve the construction of fences or other barriers that could permanently inhibit wildlife movement, and conserved open space areas to the southwest would remain undisturbed and available for facilitating movement of wildlife species. Although no nighttime lighting would be required, project construction activities during early morning and late afternoon hours in the fall, winter, and early spring may require limited construction lighting, and Project construction would temporarily increase noise and human presence at the Project site, which could potentially alter wildlife movement behavior (Appendix C). However, in accordance with Metropolitan standard practice outlined in Section 01065 of the construction contractor specifications (see Section 1.6.7, *Environmental Requirements for Construction*), the Project Contractor(s) would be required to exercise special care to direct floodlights to shine downward and to shield them. In addition, based on the short-term duration of Project construction (anticipated to be approximately eight months), the potential limited and temporary deterrence of wildlife movement through the San Jacinto River corridor is unlikely to result in substantial temporal loss of movement functions and values in and around the Project site. Following the construction period, the Project site would be similar to existing conditions, and there would be no changes to Metropolitan's existing operation and maintenance activities at the Project site. Given the substantial amount of open space in the surrounding area and the temporary nature of Project construction activities, the proposed Project would not substantially interfere with the movement of any native resident or migratory fish or wildlife species or with established native resident or migratory wildlife corridors, or impede the use of native wildlife nursery sites, and impacts would be less than significant.

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

No Impact. No, the proposed Project would not conflict with any local policies or ordinances protecting biological resources. The Riverside County Code does not provide protection for the species of trees observed within the Project site, and compliance with County of Riverside Ordinance No. 663 (Stephens' Kangaroo Rat Mitigation Fee Ordinance) is addressed under threshold 3.4(f). No other local policies or ordinances protecting biological resources were determined to be applicable to the proposed Project (Appendix C). Therefore, no impact would occur.

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

No Impact. No, the proposed Project would not conflict with the provisions of an adopted Habitat Conservation Plan, Natural Community Conservation Plan, or other approved local, regional, or State habitat conservation plan with incorporation of mitigation measures.

STEPHENS' KANGAROO RAT HABITAT CONSERVATION PLAN

Protocol trapping surveys for small mammals were conducted in June 2024. No Stephens' kangaroo rat was trapped (Appendix I). In addition, although Metropolitan is not a Participant in the Stephens' Kangaroo Rat Habitat Conservation Plan, Metropolitan is covered for operations and maintenance activities. The proposed Project constitutes an operations and maintenance

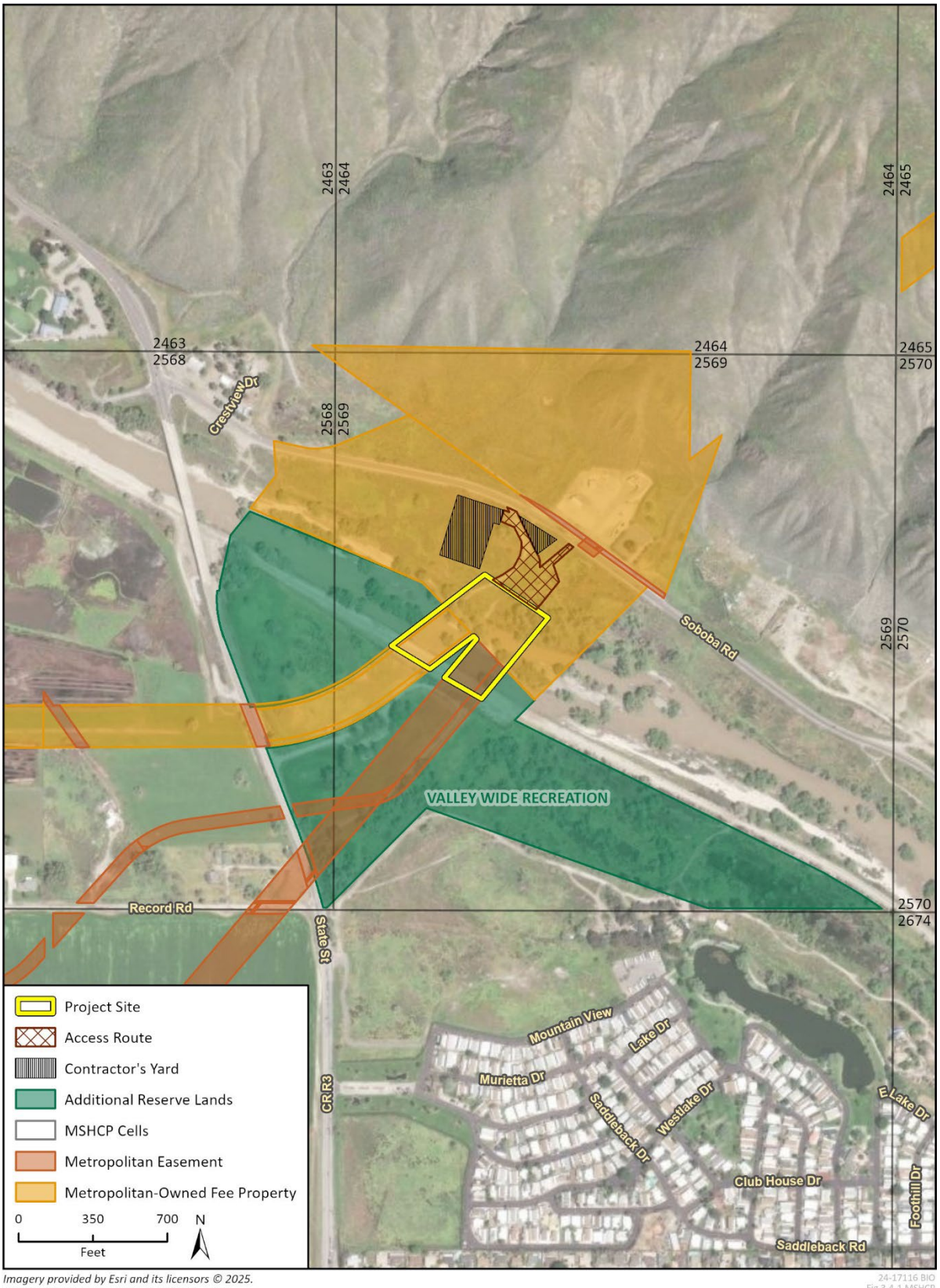
project rather than the development of new facilities. Although incidental take of Stephens' kangaroo rat is not anticipated to occur, this exemption allows for incidental take occurring in conjunction with all operations and maintenance activities conducted by Metropolitan (County of Riverside 1996). Therefore, the proposed Project would not conflict with the provisions of the *Habitat Conservation Plan for the Stephens' Kangaroo Rat in Western Riverside County California*, and no impact would occur.

WESTERN RIVERSIDE COUNTY MULTIPLE SPECIES HABITAT CONSERVATION PLAN

Metropolitan is not a Permittee in the MSHCP and is not seeking a local discretionary permit from a Permittee. However, Metropolitan may choose to use the MSHCP Participating Special Entity (PSE) process for incidental take coverage of listed species instead of ESA Section 7 and California Fish and Game Code Section 2081 or 2080.1.

The Project site is located in Subunit 1 - Gilman Springs/Southern Badlands of the MSCHP's San Jacinto Valley Area Plan and within Criteria Cell 2569 (Figure 3.4-1). Project activities would occur entirely within Metropolitan's fee-owned property or existing legal easement (Figure 3.4-1). Metropolitan's fee-owned property and easement associated with the Project site have legally been in existence since 1933 for the fee-owned property and since 1949 and 1959 for property under easement. However, in January 2024, the RCA acquired parcels in this area that are now MSHCP Conservation Land, specifically Additional Reserve Land (ARL). As shown on Figure 3.4-1, Metropolitan fee-owned property was appropriately carved out of the ARL; however, its easement was not, and as a result, ARL now overlaps with a portion of the Project site. The ability for Metropolitan to operate and maintain its facilities, and upgrade when needed, is essential to the continued provision of adequate water supplies for present and future residents of western Riverside County and within its rights as a pre-existing easement holder. The portion of the Project site that overlaps with the ARL would occur entirely within Metropolitan's pre-existing pipeline easements established in 1949 and 1958, which predate the inclusion of this property into the reserve lands of the Western Riverside County MSHCP (January 2024). Metropolitan's easements in the Project area are senior and remain enforceable. As such, Metropolitan's use of this easement does not constitute a new encroachment into the reserve lands of the Western Riverside County MSHCP. Therefore, the proposed project would not conflict with the Western Riverside County MSHCP.

Figure 3.4-1. Project Site in Relation to MSHCP Elements



Imagery provided by Esri and its licensors © 2025.
Additional data sourced from WRCRCA, 2025.

24-17116 BIO
Fig 3.4-1 MSHCP

3.5 Cultural Resources

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

Significance criteria established by CEQA Guidelines, Appendix G.

CULTURAL RESOURCES OVERVIEW

This section provides an analysis of proposed Project impacts on cultural resources, including historical and archaeological resources as well as human remains, and is based on the Cultural Resource Assessment (Abdo et al. 2025).

REGULATORY FRAMEWORK

CEQA requires a Lead Agency to determine whether a project may have a significant effect on historical resources (PRC Section 21084.1) and archaeological resources (PRC Section 21083.2). 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 that a Lead Agency determines to be historically significant (CEQA Guidelines Section 15064.5[a][1-3]). Resources listed on the National Register of Historic Places (NRHP) are automatically listed on the CRHR, along with State Landmarks and Points of Interest. The CRHR can also include properties designated under local ordinances or identified through local historical resource surveys. In addition, 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.

PRC Section 21083.2(g) defines a unique archaeological resource as an archaeological artifact, object, or site about which it can be clearly demonstrated that, without merely adding to the current body of knowledge, there is a high probability that it:

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

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

METHODOLOGY

A search of the California Historical Resources Information System (CHRIS) was conducted to identify any previously recorded cultural resources and previously conducted cultural resources studies within the Project site and a 0.5-mile buffer surrounding it. On June 10, 2025, staff from the South Coastal Information Center (SCIC) at San Diego State University conducted the CHRIS search for the Project site. In addition, Rincon completed a review of the NRHP, the CRHR, the California Historical Landmarks list, the Built Environment Resources Directory and its predecessor the California State Historic Property Data File, and the Archaeological Determination of Eligibility list. Rincon also reviewed a variety of primary and secondary source materials relating to the history and development of the Project site and its surroundings. Sources included, but were not limited to, historical topographic maps, historical aerial photographs, geologic maps, and soil survey maps (Abdo et al. 2025).

The SCIC records search identified seven cultural resources within the Project site or within a 0.5-mile buffer, including one pre-contact site, five historic-period built environment resources, and one built environment historic district. Of these resources, only a portion of the built environment historic district (the CRA Historic District [P-33-011265]) is located within the Project site (Abdo et al. 2025).

A Sacred Lands File (SLF) search was completed by the Native American Heritage Commission (NAHC) with positive results, meaning sacred lands have been reported near the Project site. The SLF results do not provide specific details on the nature or precise location of Sacred Lands or whether they are related to any cultural resources recorded by the CHRIS at the SCIC; thus, additional details cannot be provided (Abdo et al. 2025).

Rincon Archaeologist Dylan Sparkman conducted a pedestrian field survey of the Project site on June 18, 2025, to identify archaeological and built environment resources. No surface manifestation of the previously recorded segment of the CRA (P-33-011265) was encountered within the Project site, and no surface evidence of archaeological resources was identified as a result of the survey (Abdo et al. 2025).

A geoarchaeological review was completed that indicates the Project site has been subject to previous historic and modern disturbance associated with construction and maintenance of the CRA, including the three underground pipelines within the Project site (CRA Casa Loma Siphon No. 1, CRA Casa Loma Siphon No. 2, and San Jacinto Pipeline). The historical map and aerial photograph review indicates the Project site has undergone extensive grading starting in the late 1930s as a result of construction of the existing CRA, including the San Jacinto Tunnel West Portal and CRA Casa Loma Siphon No. 1, and the later construction of the CRA Casa Loma Siphon No. 2, San Jacinto levee, and the San Jacinto River recreational park in 1959 to 1960. Furthermore, the Project site is located adjacent to and within the San Jacinto River channel. The geoarchaeological research indicates Holocene-age gravel, sand, and clay of valley areas are present within the entire Project site. While Holocene-age sediments dating to the period of human occupation of the region may bury and preserve archaeological deposits, the Project site is located adjacent to and within an active river channel, which indicates continuous disturbances as a result of seasonal water flow activity. Given the lack of buried topsoil within the underlying soil series along with previous

grading and construction activities, the geoarchaeological review determined the Project site has low sensitivity for the presence of intact subsurface archaeological deposits (Abdo et al. 2025).

Discussion. Would the Project:

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

No Impact. No, the proposed Project would not cause a substantial adverse change in the significance of a historical resource pursuant to CEQA Guidelines Section 15064.5.

Although seven cultural resources were identified within a 0.5-mile radius of the Project site, only three of those resources have been identified as eligible or listed historical resources under CEQA. All three eligible/listed historical resources are located within 0.25 mile of the Project site. Each of these is discussed in the following subsections. In summary, the proposed Project would not result in a substantial adverse change in the significance of these three historical resources, and no impact would occur.

Colorado River Aqueduct (P-33-011265)

Resource P-33-011265, the CRA Historic District, includes a one-mile-wide corridor extending from the Whitsett Pumping Plant (located near Lake Havasu in eastern San Bernardino County) to the eastern edge of Lake Mathews (in western Riverside County), including the western entrance of the San Jacinto, Bernasconi, and Valverde tunnels and the Casa Loma Siphon No. 1 and the Casa Loma Siphon No. 2, to encompass the aqueduct canal structure, pumping stations, power lines, access roads, pumping plant villages, and other associated infrastructure (inclusive of the three pipelines in the Project site) that allowed the CRA to be constructed and maintained over the course of time. The CRA Historic District was formally determined eligible for listing in the NRHP and CRHR as part of the environmental review process for a previous project in 2010 and therefore qualifies as a historical resource under CEQA as defined in CEQA Guidelines Section 15064.5. The CRA Historic District is eligible for listing in the NRHP and CRHR under Criterion A/1 as a driving and enabling force for the economic development of Southern California and under Criterion C/3 as a marvel of civil engineering. Important features of this category include the design through numerous harsh environments in the desert landscape, extensive testing of materials (primarily concrete) necessary for construction in the desert, and the development of high efficiency pumping equipment. The CRA Historic District is also significant under Criterion D/4 for its potential to yield information about living and working conditions during the time of survey and construction. The district's character varies throughout its roughly 242-mile-long linear alignment. Within the Project site, the elements of the CRA Historic District consist of three roughly 900-foot-long pipeline segments including the CRA Casa Loma Siphon No. 1, CRA Casa Loma Siphon No. 2, and San Jacinto Pipeline (Abdo et al. 2025).

The purpose of the proposed Project is to protect two of the three pipelines in the Project site from flotation and erosion and to enhance their resilience against environmental factors. While the proposed Project includes modifications to the existing pipelines (for example, their encasement in concrete), the proposed Project does not include any elements that would result in physical demolition, destruction, relocation, or alteration of the resource or its immediate surroundings, such that its significance would be materially impaired. Following Project implementation, the CRA would retain the ability to convey its historical significance and would retain the character

that justifies its inclusion in the CRHR and its eligibility for the NRHP (Abdo et al. 2025). Therefore, the proposed Project would not result in a substantial adverse change in the significance of the CRA as defined in CEQA Guidelines Section 15064.5(b)(1-2), and no impact would occur.

West Portal of the San Jacinto Tunnel of the CRA (P-33-07394)

Resource P-33-07394, the West Portal of the San Jacinto Tunnel of the CRA, consists of an irregular-in-plan concrete building/transition structure connecting the West Portal San Jacinto Tunnel and the CRA Casa Loma Siphon. The building is located on Soboba Road, approximately 0.11 mile north of the Project site. The structure is an element of the CRA Historic District (P-33-011265), which is recommended eligible for listing in the NRHP and CRHR. Therefore, the West Portal of the San Jacinto Tunnel qualifies as a historical resource under CEQA (Abdo et al. 2025).

The West Portal of the San Jacinto Tunnel of the CRA is outside the APE; therefore, no direct impacts would occur. Proposed Project elements would be buried belowground, consistent with current conditions, and the proposed Project would not introduce any permanent visual features that would diminish the integrity of the West Portal of the San Jacinto Tunnel of the CRA due to its distance from the Project site and the lack of aboveground components (Abdo et al. 2025). As such, no direct or indirect impacts to the West Portal of the San Jacinto Tunnel of the CRA would occur, and the proposed Project would not result in a substantial adverse change in the significance of the West Portal of the San Jacinto Tunnel of the CRA as defined in CEQA Guidelines Section 15064.5(b)(1-2). No impact would occur.

Cottonwood Grove (P-33-017364)

Resource P-33-017364, Cottonwood Grove, is a cottonwood tree grove that is of apparent traditional cultural value to local Luiseño tribal members, located along the north and south sides of the San Jacinto River approximately 0.25 mile east of the Project site. The grove has decreased to one-fifth of its original size in 1900 due to the agricultural use and the surrounding development of water conveyance infrastructure and residential areas. P-33-017364 was previously recommended as potentially eligible for listing in the NRHP and CRHR and is therefore considered a historical resource under CEQA as defined in CEQA Guidelines Section 15064.5 (Abdo et al. 2025).

The Cottonwood Grove is outside the APE; therefore, no direct impacts would occur. Proposed Project elements would be buried belowground, consistent with current conditions, and the Project would not introduce any permanent visual features that would diminish the integrity of the Cottonwood Grove due to its distance from the Project site and the lack of aboveground components (Abdo et al. 2025). As such, no direct or indirect impacts to the Cottonwood Tree Grove would occur, and the proposed Project would not result in a substantial adverse change in the significance of the Cottonwood Grove as defined in CEQA Guidelines Section 15064.5(b)(1-2). No impact would occur.

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

Less than Significant Impact. No, the proposed Project would not cause a substantial adverse change in the significance of an archaeological resource pursuant to CEQA Guidelines Section 15064.5. No pre-contact or historic-period archaeological resources were identified within the

Project site through the cultural resources records search, background research, or field survey. Therefore, the proposed Project has no potential to impact known archaeological resources qualifying as historical resources or unique archaeological resources, as defined by CEQA. The geoarchaeological review indicates the Project site, located within and along the San Jacinto River channel, is underlain by Riverwash deposits of recent sands and gravels deposited within frequently-flooded drainageways, which have low to no potential to support intact archaeological deposits. The Project site has been subject to historic and modern disturbances associated with construction of the existing CRA components associated with the CRA Casa Loma Siphon No. 1, CRA Casa Loma Siphon No. 2, and San Jacinto Pipeline. Proposed Project work would take place within existing fill and overburden covering the existing pipelines and within the river where previous fill and riprap material have been previously deposited as part of prior pipeline stabilization efforts. Given these conditions, the potential for encountering archaeological resources is low (Abdo et al. 2025).

Nonetheless, although unlikely, unanticipated discoveries remain a possibility during ground disturbance. In accordance with Metropolitan standard practice outlined in Section 01065 of the construction contractor specifications (see Section 1.6.7, *Environmental Requirements for Construction*), if unanticipated archaeological resources are encountered during construction activities, the Project Contractor(s) would be required to cease all work immediately within 50 feet of a discovery, notify the Engineer, and protect the discovery area, as directed by the Engineer. The Engineer, with a qualified archaeologist, shall make a decision of validity of the discovery and designate an area surrounding the discovery as a restricted area until a qualified archaeologist can evaluate the discovery and recommend additional measures for proper handling and treatment. The Contractor shall not enter or work in the restricted area until the Engineer provides written authorization. As such, impacts to archaeological resources would be less than significant.

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

Less than Significant Impact. No, the proposed Project would not disturb human remains, including those interred outside of dedicated cemeteries. No human remains are known to be present within the Project site, and the Project site is highly disturbed from previous pipeline construction and maintenance and due to its location in an active riverbed channel (Abdo et al. 2025). In the event of an unanticipated discovery of human remains, the County Coroner must be notified immediately. In accordance with Metropolitan standard practice outlined in Section 01065 of the construction contractor specifications (see Section 1.6.7, *Environmental Requirements for Construction*), Metropolitan would comply with California Health and Safety Code Section 7050.5, which states no further disturbance shall occur until the County Coroner has made a determination of origin and disposition pursuant to PRC Section 5097.98. If the human remains are determined to be of Native American origin, the Coroner will notify the NAHC, which will determine and notify a Most Likely Descendant. The Most Likely Descendant has 48 hours from being granted site access to make recommendations for the disposition of the remains. If the Most Likely Descendant does not make recommendations within 48 hours, the landowner shall reinter the remains in an area of the property secure from subsequent disturbance. Adherence to California Health and Safety Code Section 7050.5 would result in the proper handling and treatment of unexpected human remains. Therefore, impacts to human remains would be less than significant.

3.6 Energy

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

Significance criteria established by CEQA Guidelines, Appendix G.

Discussion. Would the Project:

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

No Impact. No, the proposed Project would not result in a potentially significant environmental impact due to wasteful, inefficient, or unnecessary consumption of energy resources.

Energy use during the construction phase would be in the form of fuel consumption (e.g., gasoline and diesel fuel) to operate heavy equipment, light-duty vehicles, and machinery. Electrical power consumed to construct the proposed Project would be supplied from existing electrical infrastructure in the area and temporary grid power may also be provided to construction trailers or electric construction equipment. Energy use would be temporary in nature, and construction equipment used would be typical of similar-sized construction projects in the region. In addition, the Project Contractor(s) would be required to restrict the idling of heavy-duty diesel motor vehicles in accordance with Title 13 California Code of Regulations Section 2449(d)(3) and Section 2485. The Project Contractor(s) would utilize fleets that comply with CARB's Regulation of In-Use (On-Road) Heavy-Duty Diesel-Fueled Vehicles, which governs the accelerated retrofitting, repowering, or replacement of heavy-duty diesel on- and off-road equipment. Construction activities would utilize fuel-efficient equipment consistent with State and federal regulations and comply with State measures to reduce the inefficient, wasteful, or unnecessary consumption of energy. The Project Contractor(s) would also be required to comply with applicable regulatory construction waste management practices to divert construction and demolition debris. Overall, these practices would reduce the potential for wasteful, inefficient, or unnecessary consumption of energy resources to occur during Project construction activities. After Project construction is complete, there would be no changes to Metropolitan's existing operation and maintenance activities at the Project site. Therefore, the proposed Project would not result in the wasteful, inefficient, or unnecessary consumption of energy resources, and no impact would occur.

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

No Impact. No, the proposed Project would not conflict with or obstruct a state or local plan for renewable energy or energy efficiency. In May 2022, Metropolitan adopted its Climate Action Plan (CAP), which includes measures for renewable energy and energy efficiency. None of these renewable energy and energy efficiency measures are applicable to the proposed Project. In addition, Metropolitan is not subject to the *County of Riverside Climate Action Plan Update*

(2019), and the entire Project site is within Metropolitan fee and easement property. Indirectly, on-road vehicles used during construction activities would be required to meet the ongoing federal and state fuel efficiency requirements. Therefore, the proposed Project would not conflict with or obstruct a state or local plan for renewable energy or energy efficiency, and no impact would occur.

3.7 Geology and Soils

GEOLOGY AND SOILS Would the Project:	Potentially Significant Impact	Less than Significant With Mitigation Incorporated	Less than Significant Impact	No Impact
a) Directly or indirectly cause potential substantial adverse effects, including the risk of loss, injury, or death involving:				
i) Rupture of a known earthquake fault, as delineated on the most recent Alquist-Priolo Earthquake Fault Zoning Map issued by the State Geologist for the area or based on other substantial evidence of a known fault? Refer to Division of Mines and Geology Special Publication 42.	☐	☐	☒	☐
ii) Strong seismic groundshaking?	☐	☐	☒	☐
iii) Seismic-related ground failure, including liquefaction?	☐	☐	☐	☒
iv) Landslides?	☐	☐	☐	☒
b) Result in substantial soil erosion or the loss of topsoil?	☐	☐	☒	☐
c) Be located on geologic units 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 Section 1803.5.3 of the California Building Code (2010), 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?	☐	☐	☒	☐

Significance criteria established by CEQA Guidelines, Appendix G.

Discussion. Would the Project:

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

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

   ii) *Strong seismic groundshaking?*

Less than Significant Impact. No, the proposed Project would not directly or indirectly cause potential substantial adverse effects, including the risk of loss, injury, or death involving the rupture of an earthquake fault mapped as part of an Alquist-Priolo Earthquake Fault Zone (APEFZ) or strong seismic groundshaking.

Like much of California, the Project site is located in a seismically active region. The United States Geological Survey defines active faults as those that have had surface displacement within the Holocene period (approximately the last 11,000 years). Potentially active faults are those that have had surface displacement during the last 1.6 million years, and inactive faults have not had surface displacement within that period. The Project site is located within a mapped APEFZ; the Claremont Fault runs northwest to southeast through the Project site (DOC 2025).

The proposed Project would encase the CRA Casa Loma Siphon No. 1 and the San Jacinto Pipeline to avoid pipeline flotation. Construction would not require excavation into bedrock or active fault zones. Because the Project does not introduce new habitable structures, permanent personnel, or expanded operational activities, it would not alter existing seismic conditions or increase the potential for fault rupture, seismic shaking, or ground failure in the region. The pipeline encasements are designed to improve structural integrity and reduce risks such as pipeline flotation without changing the geologic or seismic environment. Therefore, the proposed Project would not directly or indirectly cause substantial adverse effects, including the risk of loss, injury, or death, as a result of fault rupture or seismic groundshaking, and impacts would be less than significant.

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

   iii) Seismic-related ground failure, including liquefaction?

   iv) Landslides?

No Impact. No, the proposed Project would not directly or indirectly cause potential substantial adverse effects, including the risk of loss, injury, or death involving seismic-related ground failure, including liquefaction, and landslides. The Project site is not located within a mapped liquefaction zone or landslide hazard area (DOC 2025). The proposed Project would not include modifications to existing topography within the Project site that would have the potential to increase the risk of landslides or involve activities that could create a liquefaction hazard, such as shallow groundwater injection. Thus, the proposed Project would not directly or indirectly cause substantial adverse effects, including the risk of loss, injury, or death, as a result of seismic-related ground failure (including liquefaction) and landslides. No impact would occur.

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

Less than Significant Impact. No, the proposed Project would not result in substantial soil erosion or the loss of topsoil. The Project site was previously disturbed during the original construction of the CRA Casa Loma Siphon No. 1, CRA Casa Loma Siphon No. 2, and the San Jacinto Pipeline, as well as emergency activities conducted in 2019 and 2023 to keep the pipelines weighed down. The Project site primarily consists of gravel and sand associated with the San Jacinto River channel. In addition, the proposed Project would be subject to the requirements of the NPDES Construction General Permit (Order No. 2022-0057-DWQ) because the Project's area of disturbance (4.67 acres) would be greater than one acre. The Construction General Permit requires the development of a SWPPP to reduce erosion during construction activities. Compliance with the requirements set forth in this permit would require the Project Contractor(s) to implement best management practices during construction to prevent substantial soil erosion. Compliance with NPDES permit requirements would minimize the potential for Project construction to result in substantial soil erosion. Furthermore, there would be no changes to Metropolitan's existing

operation and maintenance activities at the Project site. Thus, the proposed Project would not result in substantial soil erosion or the loss of topsoil, and impacts would be less than significant.

c. *Be located on geologic units 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?*

No Impact. No, the proposed Project would not be located on or result in unstable geologic deposits or soils such that on- or off-site landslide, lateral spreading, subsidence, liquefaction, or collapse would potentially occur. As discussed under thresholds 3.7(a)(iii) and (a)(iv), the Project site is not located within a landslide hazard area or liquefaction zone. The proposed Project would not include modifications to existing topography that could adversely affect soil stability or increase the potential for local or regional landslides, and the proposed Project does not include activities that would increase the potential for subsidence and collapse (such as oil extraction) or with the potential to result in lateral spreading and liquefaction (such as shallow groundwater injection). After Project construction is complete, there would be no changes to Metropolitan's existing operation and maintenance activities at the Project site. Thus, the proposed Project would not result in on- or off-site landslide, lateral spreading, subsidence, liquefaction, or collapse, and no impact would occur.

d. *Be located on expansive soil, as defined in Section 1803.5.3 of the California Building Code (2010), creating substantial direct or indirect risks to life or property?*

No Impact. No, the proposed Project would not be located on expansive soil, as defined in Section 1803.5.3 of the California Building Code (2010), creating substantial direct or indirect risks to life or property. According to the County of Riverside's General Plan, expansive soils are widely dispersed and can be found in hillside areas as well as low-lying alluvial basins (County of Riverside 2024a). The Project site contains soils composed of primarily Riverwash (RsC), with a small portion of Dello sandy loam (DgB) along the southern boundary (Natural Resources Conservation Service 2025). Due to the lack of clay content of the on-site soils, the potential for expansive soils to occur is low. In addition, the proposed Project involves encasement of the existing CRA Casa Loma Siphon No. 1 and the San Jacinto Pipeline and would not involve the addition of permanent on-site personnel or habitable structures to the Project site. Therefore, the proposed Project would have no potential to create substantial direct or indirect risks to life or property related to expansive soils, and no impact would occur.

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?*

No Impact. No, the proposed Project would not require the use or installation of septic tanks or alternative wastewater disposal systems. No impact would occur.

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

Less than Significant Impact. No, the proposed Project would not directly or indirectly destroy a unique paleontological resource or unique geologic features. Geoarchaeological research conducted for the proposed Project indicates Holocene-age Riverwash deposits of gravel, sand,

and clay of valley areas are present within the entire Project site (Abdo et al. 2025). The proposed Project site is located adjacent to and within an active river channel, which indicates continuous disturbances as a result of seasonal water flow activity of sands and gravels deposited within frequently-flooded drainageways, which have a low potential to support unique paleontological resources. Project construction activities would occur within soils that were previously disturbed during the original construction of the existing pipelines and decades of ongoing maintenance activities. Additionally, there are no unique geologic features within the Project site. In accordance with Metropolitan standard practice outlined in Section 01065 of the construction contractor specifications (see Section 1.6.7, *Environmental Requirements for Construction*), if unanticipated paleontological resources are discovered during construction activities, the Project Contractor(s) would be required to cease all work immediately within 50 feet of a discovery, notify the Engineer, and protect the discovery area, as directed by the Engineer. The Engineer, with the qualified paleontologist, shall decide validity of the discovery and designate an area surrounding the discovery as a restricted area. The Contractor shall not enter or work in the restricted area until the Engineer provides written authorization. Therefore, the proposed Project would not directly or indirectly destroy a unique paleontological resource or site or unique geologic feature, and impacts would be less than significant.

3.8 Greenhouse Gas Emissions

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

Significance criteria established by CEQA Guidelines, Appendix G.

OVERVIEW OF CLIMATE CHANGE AND GREENHOUSE GASES

This section provides an analysis of proposed Project impacts on GHG emissions and is based in part on air pollutant and GHG emissions modeling conducted by Rincon, the results of which are included in Appendix B.

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. Climate change is the result of numerous, cumulative sources of GHG emissions contributing to the "greenhouse effect," a natural occurrence that takes place in Earth's atmosphere and helps regulate the temperature of the planet. GHG emissions occur both naturally and as a result of 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. The global warming potential 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 GHG emitted multiplied by its global warming potential. Carbon dioxide has a 100-year global warming potential of one. By contrast, methane has a global warming potential 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).[6]

Anthropogenic activities since the beginning of the industrial revolution (approximately 250 years ago) are adding to the natural greenhouse effect by increasing the concentration of GHGs in the atmosphere that trap heat. Since the late 1700s, estimated concentrations of CO_2, methane, and nitrous oxide in the atmosphere have increased by over 43 percent, 156 percent, and 17 percent, respectively, primarily due to human activity (USEPA 2025b). 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 (State of California 2018).

[6] The IPCC's (2021) *Sixth Assessment Report* determined that methane has a GWP of 30. However, the 2022 Climate Change Scoping Plan published by the California Air Resources Board uses a GWP of 25 for methane, consistent with the IPCC's (2007) *Fourth Assessment Report*. Therefore, this analysis utilizes a GWP of 25.

REGULATORY FRAMEWORK

In May 2022, Metropolitan adopted a CAP and certified the associated Program EIR. The CAP sets targets for reducing GHG emissions from Metropolitan's operations, including the conveyance, storage, treatment, and delivery of water to its 26-member water agencies. The CAP informs policy and planning decisions and establishes a feasible and implementable way to reach its emissions reduction target. As outlined in Section 1.1 of Metropolitan's CAP, the CAP meets all the required elements of a qualified GHG emissions reduction plan and is in compliance with CEQA Guidelines Section 15183.5(b)(1) (Metropolitan 2022). Metropolitan used an emissions inventory and forecast to provide a basis for establishing targets for future GHG reductions. Metropolitan established a 2030 target of 40 percent below 1990 levels for GHG emissions reduction to achieve consistency with Senate Bill 32 and a 2045 target of carbon neutrality consistent with Assembly Bill 1279, which codifies the State's goal of achieving carbon neutrality by 2045 that was initially set forth in Executive Order B-55-18. Metropolitan is tracking its GHG emissions annually using a carbon budget approach. The carbon budget is analogous to a tank with a set capacity, or a total mass emission cap, between emissions level in 2005 and carbon neutrality in 2045. All the emissions from Metropolitan's operations go into this tank each year. The total capacity of the tank is Metropolitan's total emissions budget, and over time that tank fills up. As long as Metropolitan produces fewer GHG emissions than can fit in the tank, the identified targets will be achieved regardless of emissions produced during any particular year. Metropolitan's total carbon budget was calculated in Section 4.3 of the CAP and is based on the total emissions that can be generated between 2005 and 2045 while still achieving Metropolitan's 2030 and 2045 GHG emissions reduction targets (Metropolitan 2022). Additionally, Metropolitan is committed to preparing annual CAP progress reports to track GHG emissions against the carbon budget as well as a CAP update every five years to achieve carbon neutrality by 2045.

The CAP includes a suite of 42 GHG emissions reduction measures that would reduce Metropolitan's GHG emissions and achieve carbon neutrality while also providing improved infrastructure reliability, increased energy resiliency, and decreased costs associated with energy procurement and maintenance. GHG reduction measures included in the CAP include phasing out natural combustion, converting to a zero-emissions vehicle fleet, using alternative low-carbon intensity fuels, utilizing low-carbon and carbon-free electricity, improving energy efficiency, increasing waste diversion, and increasing water conservation and local water supplies (Metropolitan 2022).

METHODOLOGY

Similar to the air pollutant emissions modeling, GHG emissions associated with proposed construction activities were estimated using CalEEMod version 2022.1.1, generally in accordance with the methodology outlined in Section 3.3, *Air Quality*. GHG emissions associated with operation and maintenance activities were not modeled because the proposed Project would not result in changes to Metropolitan's existing operation and maintenance activities at the Project site. The primary difference in the GHG emissions modeling as compared to the air pollutant emissions modeling is that the 9.5-month construction scenario with work occurring separately on each pipeline was modeled in CalEEMod. This represents a conservative approach for GHG emissions analysis because emissions would be generated over a longer period of time under this scenario, resulting in higher total emissions, and GHG emissions are evaluated as a sum total instead of on a daily basis like the air quality analysis.

Discussion. Would the Project:

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

Less than Significant Impact. As outlined in Section 1.1 of Metropolitan's CAP, the CAP meets the requirements of CEQA Guidelines Section 15183.5(b)(1) for a qualified GHG emissions reduction plan (Metropolitan 2022). As a result, pursuant to CEQA Guidelines Section 15064.4, 15183.5(a), and 15183.5(b), Metropolitan can streamline the CEQA review of its projects using the GHG emissions analysis completed for the CAP if the proposed Project is consistent with the adopted CAP. Therefore, this analysis relies on the streamlining provisions of CEQA Guidelines Section 15183.5 to determine whether the proposed Project would generate GHG emissions that may have a significant impact on the environment by evaluating whether the proposed Project would be consistent with the CAP. The proposed Project would be consistent with the CAP if the Project's emissions are within Metropolitan's carbon budget and the proposed Project incorporates all applicable reduction measures from the CAP.

Construction Activities

Construction of the proposed Project would result in temporary increases in GHG emissions as a result of the use of heavy-duty construction equipment and vehicle trips generated by construction workers and the transport of concrete, rebar, riprap, and soil. Estimated GHG emissions generated during Project construction are shown in Table 3.8-1. As shown therein, Project construction would generate approximately 330 metric tons (MT) of CO_2e.

Table 3.8-1. Estimated GHG Emissions – Project Construction (MT of CO_2e / year)

Year of Construction	Emissions (MT of CO_2e / year)
2026	15
2027	277
2028	38
Total Construction Emissions	**330**

Notes: MT = metric tons; CO_2e = carbon dioxide equivalent
Source: Appendix B

Operation and Maintenance Activities

Once construction is complete, there would be no changes to Metropolitan's existing operations and maintenance activities at the Project site. Therefore, no new operational GHG emissions would be generated.

Summary of Impacts

As noted previously, Metropolitan adopted a CAP to address and mitigate organization-wide GHG emissions associated with construction and operational activities. Metropolitan's 2024 CAP Annual Progress Report states approximately 9,108,078 MT of CO_2e remains in the carbon budget for the period 2024 through 2045 (Metropolitan 2025). The proposed Project would generate a total of approximately 330 MT of CO_2e (see Table 3.8-1), which is within the remaining quantified carbon budget as of 2024. Pursuant to the annual CAP GHG emissions inventory and reporting

procedures, GHG emissions generated by proposed Project activities are tracked as part of Metropolitan's overall carbon budget through data collected from construction contractors, utility and service providers (electricity, natural gas, water, wastewater, and solid waste), and the employee commute survey. In addition, organization-wide CAP measures are being implemented to reduce Metropolitan's GHG emissions over time such that GHG emissions remain within the carbon budget.

As mentioned previously, the CAP includes a suite of measures to reduce GHG emissions. These measures include conducting studies, enacting administrative policies and Projects, upgrading fleet vehicles and deploying alternative fuel technologies, installing battery energy storage systems at specific treatment plants, increasing energy efficiency at pumping plants, incentivizing employees' use of low carbon transportation options, increasing waste diversion, promoting water use efficiency among Metropolitan's customers, and evaluating carbon sequestration opportunities. None of the CAP measures are applicable to the proposed Project, and implementation of the proposed Project would not conflict with GHG emissions reduction measures listed in the CAP.

In summary, the proposed Project's GHG emissions are within Metropolitan's carbon budget, and no CAP reduction measures are applicable to the proposed Project. Therefore, pursuant to CEQA Guidelines Sections 15064.4 and 15183.5, the proposed Project would not directly or indirectly generate GHG emissions that may have a significant impact on the environment, and the proposed Project would have a less than significant impact.

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

No Impact. Applicable plans, policies, and regulations consist of Metropolitan's CAP, Senate Bill 32, Executive Order B-55-18, the 2022 Scoping Plan, and Assembly Bill 1279. As discussed under threshold 3.8(a), the proposed Project would be consistent with Metropolitan's CAP because 1) estimated GHG emissions generated by proposed Project activities are within Metropolitan's carbon budget and would be tracked as part of Metropolitan's overall carbon budget with organization-wide CAP measures implemented to reduce Metropolitan's GHG emissions over time such that GHG emissions remain within the carbon budget; and 2) the proposed Project would not conflict with the adopted CAP measures because none are applicable. Also, by being consistent with the CAP, the proposed Project would also be consistent with state GHG emission reduction plans, policies, and regulations, such as the 2022 Scoping Plan, Senate Bill 32, Executive Order B-55-18, and Assembly Bill 1279 because the GHG emission reduction targets established by these plans, laws, and policies are incorporated into and consistent with Metropolitan's GHG emissions reduction targets. Therefore, the proposed Project would not conflict with any applicable plan, policy or regulation of an agency adopted for the purpose of reducing GHG emissions, and no impact would occur.

3.9 Hazards and Hazardous Materials

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

Significance criteria established by CEQA Guidelines, Appendix G.

Discussion. Would the Project:

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

Less than Significant Impact. No, the proposed Project would not create a significant hazard to the public or the environment through the routine transport, use, or disposal of hazardous materials.

Construction of the proposed Project would temporarily increase the transport and use of hazardous materials in the local vicinity of the Project site through the operation of heavy-duty vehicles and equipment. Such substances include diesel fuel, oil, solvents, and other similar materials brought onto the Project site for use and storage during the construction period. In accordance with Metropolitan standard practice outlined in Sections 01063 and 01065 of the construction contractor specifications (see Section 1.6.7, *Environmental Requirements for Construction*), the Project Contractor(s) would be required to store hazardous materials in covered, leak-proof containers when not in use, away from storm drains and heavy traffic areas; protect containers from rainfall infiltration; store hazardous materials separately from non-hazardous materials on a surface that prevents spills from permeating the ground surface, and in an area secure from unauthorized entry at all times; and store incompatible materials separately from each

other. These materials would be disposed off site in accordance with applicable laws pertaining to the handling and disposal of hazardous waste. Furthermore, the Project Contractor(s) would be required to comply with all applicable federal, State, and local laws and regulations. These regulations and laws include the Hazardous Materials Transportation Act, California Hazardous Material Management Act, and California Code of Regulations Title 22. Operations and maintenance activities at the Project site, which do not currently involve the permanent storage of hazardous materials on site, would be similar to existing conditions once construction activities are completed. Therefore, the proposed Project would not create a significant hazard to the public or the environment through the routine transport, use or disposal of hazardous materials, and impacts would be less than significant.

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

Less than Significant Impact. No, the proposed Project would not create a significant hazard to the public through reasonably foreseeable upset and accident conditions involving the release of hazardous materials into the environment. As noted under threshold 3.9(a), construction of the proposed Project would temporarily increase the transport and use of hazardous materials during routine construction activities that could cause an upset or accident. However, in accordance with Metropolitan standard practice outlined in Sections 01063 and 01065 of the construction contractor specifications (see Section 1.6.7, *Environmental Requirements for Construction*), standard best management practices, such as secondary containment and locating containers away from drainage areas, would be implemented, and hazardous materials would be stored away from the river in covered, leak-proof containers when not in use and protected from rainfall infiltration and ground permeation in the event of an accidental spill. Construction materials also would not be placed in areas where they could be washed into the San Jacinto River during a precipitation event, pursuant to Metropolitan standard practice. Furthermore, during construction, a temporary diversion structure consisting of earthen or water-filled berms, a series of pipelines, and appurtenant components would be installed within the bed and banks of the San Jacinto River to allow for diversion of surface water flows around the construction work area should a precipitation event occur, which would minimize the possibility of a hazardous materials spill entering the San Jacinto River. Operations and maintenance activities at the Project site, which do not currently involve the permanent storage of hazardous materials on site, would be similar to existing conditions once construction activities are completed. Therefore, the proposed Project would not create a significant hazard to the public or the environment through reasonably foreseeable upset and accident conditions involving the release of hazardous materials into the environment, and impacts would be less than significant.

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

No Impact. No, the proposed Project would not 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, Mt. San Jacinto Community College, is located approximately one mile to the south of the Project site. Therefore, no impact related to emitting or handling hazardous materials, substances, or wastes within 0.25 mile of an existing or proposed school would occur.

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

No Impact. No, the proposed Project would not be located on or near a site found on a list of hazardous materials sites compiled pursuant to Government Code Section 65962.5. Based on a review of the Department of Toxic Substances Control's EnviroStor (2025) and the State Water Resources Control Board's GeoTracker (2025) databases, there are no hazardous materials sites within a mile of the Project site. Therefore, the proposed Project would not create a significant hazard to the public or the environment related to hazardous materials sites, and no impact would occur.

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

No Impact. No, the proposed Project would not result in a safety hazard or excessive noise for people residing or working in the Project Area due to proximity to a public airport or public use airport. The Project site is not located within two miles of a public airport or public use airport or within the jurisdiction of an airport land use plan. The nearest public use airport is the Hemet-Ryan Airport, located approximately 6.4 miles southwest of the Project site. Therefore, no impact would occur.

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

No Impact. No, the proposed Project would not impair implementation of or physically interfere with an adopted emergency plan or evacuation plan. The County of Riverside's Operational Area Emergency Operations Plan is the applicable emergency response plan for the vicinity of the Project site and provides guidance during unique situations requiring an unusual or extraordinary emergency response (County of Riverside 2024b). Implementation of the Operational Area Emergency Operations Plan involves coordination with all the facilities and personnel of County government, along with the jurisdictional resources of the cities and special districts within Riverside County, into an efficient organization capable of responding to an emergency. Although State Street and Soboba Road are identified as evacuation routes by the Western Riverside Council of Governments (Western Riverside Council of Governments 2025), Project construction would occur entirely within Metropolitan fee property and easements and would not temporarily obstruct or permanently alter these or other public roadways or existing access points in the vicinity of the Project site. Therefore, the proposed Project would not impair implementation of or physically interfere with an adopted emergency response or evacuation plan. No impact would occur.

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

Less than Significant Impact. No, the proposed Project would not expose people or structures, either directly or indirectly, to a significant risk of loss, injury or death involving wildland fires.

The Project site is located in a State Responsibility Area and a Very High Fire Hazard Severity Zone (California Department of Forestry and Fire Protection 2025). Construction of the proposed Project would include the use of heavy-duty equipment, which could pose a potential ignition risk. In accordance with PRC Section 4442, equipment including earth-moving and portable construction equipment with internal combustion engines would be equipped with spark arrestors to prevent the emission of flammable debris from exhaust, when operating on any forest-covered, brush-covered, or grass-covered land. In addition, PRC Sections 4427 and 4431 specify standards for conducting construction activities on days when a burning permit is required (i.e., during the State's declared fire season as well as when wildfire risk is otherwise high during the non-fire season), and PRC Section 4428 requires construction contractors to maintain fire suppression equipment during the highest fire danger period (April 1 to December 1) when operating on or near any forest-covered, brush-covered, or grass-covered land. These measures are designed to prevent accidental ignition and facilitate rapid response in the event of a fire. Furthermore, in accordance with Metropolitan standard practice outlined in Section 01065 of the construction contractor specifications (see Section 1.6.7, *Environmental Requirements for Construction*), gasoline-powered or diesel-powered machinery used during construction would be equipped with standard exhaust controls and muffling devices that also act as spark arrestors. After Project construction is complete, there would be no changes to Metropolitan's existing operation and maintenance activities at the Project site, and there would be no new permanent aboveground facilities or habitable structures within the Project site. Therefore, the proposed Project would have limited potential to 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.

3.10 Hydrology and Water Quality

HYDROLOGY AND WATER QUALITY Would the Project:	Potentially Significant Impact	Less than Significant With Mitigation Incorporated	Less than Significant Impact	No Impact
a) Violate Regional Water Quality Control Board 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?	☐	☐	☒	☐
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?	☐	☐	☐	☒

Significance criteria established by CEQA Guidelines, Appendix G.

Discussion. Would the Project:

a. Violate Regional Water Quality Control Board water quality standards or waste discharge requirements or otherwise substantially degrade surface or ground water quality?

Less than Significant Impact. No, the proposed Project would not violate RWQCB water quality standards or waste discharge requirements or otherwise substantially degrade surface or ground water quality. The proposed Project would involve work within and near the San Jacinto River bed and thus would have the potential to introduce construction materials or wastes to the San Jacinto River, which would lead to water quality degradation. However, the proposed Project would be subject to the requirements of the NPDES Construction General Permit, which requires the development of a SWPPP. The SWPPP would include best management practices that minimize the migration of construction materials and sediment from the Project site into nearby receiving surface waters. In addition, Metropolitan would obtain a Clean Water Act Section 401 Water Quality Certification or Porter-Cologne Water Quality Control Act Waste Discharge Requirements from the Santa Ana RWQCB, which would include construction standards and measures to further reduce water quality impacts to the San Jacinto River. Furthermore, in accordance with Metropolitan standard practice outlined in Sections 01063 and 01065 of the construction contractor

specifications (see Section 1.6.7, *Environmental Requirements for Construction*), standard best management practices, such as secondary containment and locating containers away from drainage areas, would be implemented, and hazardous materials would be stored away from the river in covered, leak-proof containers when not in use and protected from rainfall infiltration and ground permeation in the event of an accidental spill. Construction materials also would not be placed in areas where they could be washed into the San Jacinto River during a precipitation event, pursuant to Metropolitan standard practice. Furthermore, during construction, a temporary diversion structure consisting of earthen or water-filled berms, a series of pipelines, and appurtenant components would be installed within the bed and banks of the San Jacinto River to allow for diversion of surface water flows around the construction work area should a precipitation event occur, which would minimize the possibility of construction materials, sediment, or hazardous materials entering the San Jacinto River.

If groundwater is encountered during construction activities, groundwater would be pumped out of the excavation area and discharged to the San Jacinto River riverbed pursuant to an applicable NPDES permit for discharges of groundwater, which Metropolitan would require the Project Contractor(s) to obtain. Groundwater is not expected to require treatment prior to discharge, and compliance with the applicable NPDES permit requirements would minimize the potential for groundwater discharge to degrade water quality of the San Jacinto River.

After Project construction is complete, there would be no changes to Metropolitan's existing operation and maintenance activities at the Project site, which do not involve activities with the potential to degrade water quality. Therefore, the proposed Project would not violate RWQCB water quality standards or waste discharge requirements or otherwise substantially degrade surface or ground water quality, and impacts would be less than significant.

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

Less than Significant Impact. No, the proposed Project would not substantially decrease groundwater supplies or interfere substantially with groundwater recharge such that the proposed Project may impede sustainable groundwater management of the basin. The Project site overlies the San Jacinto Groundwater Basin, which is managed by Eastern Municipal Water District (EMWD). The Groundwater Sustainability Plan for the San Jacinto Groundwater Basin was approved by the California Department of Water Resources in April 2023 (EMWD 2021).

Construction and operation of the proposed Project would not result in demand for groundwater supplies. The proposed Project would not add new impervious surfaces to the Project site. Groundwater dewatering during Project ground-disturbing activities may be necessary depending on depth to groundwater, although previous excavations at the Project site did not encounter groundwater. If groundwater is encountered during construction activities, groundwater would be pumped out of the excavation area and discharged to the San Jacinto River riverbed pursuant to an applicable NPDES permit for discharges of groundwater, which Metropolitan would require the Project Contractor(s) to obtain. Groundwater is not expected to require treatment prior to discharge. Therefore, the proposed Project would not substantially decrease groundwater supplies or interfere substantially with groundwater recharge such that the proposed Project may impede sustainable groundwater management of the basin, and impacts would be less than significant.

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

i) Result in substantial erosion or siltation on or off site?

Less than Significant Impact. No, the proposed Project would not substantially alter the existing drainage pattern of the site or area in a manner that would result in substantial erosion on or off site. The proposed Project would temporarily divert the San Jacinto River during construction via earthen or water-filled berms, a series of pipelines, and appurtenant components, which would minimize the potential for a wash-out of the construction site during a precipitation event. If a precipitation event is forecasted that would cause flows to exceed the capacity of the diversion system, protective measures for the construction work, equipment, and Metropolitan's pipelines would be implemented. This system would be removed following the completion of construction, and the natural topography of the streambed would be restored to pre-project conditions. The proposed Project also would not add new impervious surfaces to the Project site. Furthermore, the proposed Project would be subject to the requirements of the NPDES Construction General Permit, which requires the development of a SWPPP, as well as a Clean Water Act Section 401 Water Quality Certification or Porter-Cologne Water Quality Control Act Waste Discharge Requirements. The SWPPP would include best management practices that would minimize the potential for erosion and sedimentation from the Project site. The Section 401 Water Quality Certification or Porter-Cologne Water Quality Control Act Waste Discharge Requirements would require project-specific best management practices and conditions that further prevent sediment discharge into waters of the State during construction activities. After Project construction is complete, there would be no changes to Metropolitan's existing operation and maintenance activities at the Project site, and the proposed Project would not result in new land uses that have the potential to generate substantial erosion or siltation. Therefore, impacts would be less than significant.

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

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

Less than Significant Impact. No, the proposed Project would not substantially alter the existing drainage pattern of the site or area in a manner that would substantially increase the rate or amount of surface runoff in a manner which would result in flooding on or off site. As discussed under threshold 3.10(c.i), the proposed Project would not introduce new impervious surfaces to the Project site but would temporarily divert the San Jacinto River during construction via earthen or water-filled berms, a series of pipelines, and appurtenant components, which would minimize the potential for a wash-out of the construction site during a precipitation event. If a precipitation event is forecasted that would cause flows to exceed the capacity of the diversion system, protective measures for the construction work, equipment, and Metropolitan's pipelines would be implemented. The temporary diversion system would re-route flows from upstream of the Project site to downstream of the Project site and would be designed in a manner that would avoid causing flooding on or off site. This system would be removed following the completion of construction, and the natural topography of the streambed would be restored to pre-project conditions. The

proposed Project would be also subject to the requirements of the NPDES Construction General Permit, which requires the development of a SWPPP. The SWPPP would include best management practices that would minimize the potential for increased runoff from the Project site. After Project construction is complete, there would be no changes to Metropolitan's existing operation and maintenance activities at the Project site, and the proposed Project would not result in new land uses that have the potential to generate additional surface runoff beyond existing conditions. Therefore, impacts would be less than significant.

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

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?

Less than Significant Impact. No, the proposed Project would not substantially alter the existing drainage pattern of the site or area in a manner that would create or contribute runoff water that would exceed the capacity of existing or planned stormwater drainage systems or provide substantial additional sources of polluted runoff water. As discussed under threshold 3.10(c.i), the proposed Project would not introduce new impervious surfaces to the Project site but would temporarily divert the San Jacinto River during construction via earthen or water-filled berms, a series of pipelines, and appurtenant components, which would minimize the potential for a wash-out of the construction site and the release of construction materials, sediment, and hazardous materials into the San Jacinto River during a precipitation event. Although construction would occur primarily during the dry season, which would minimize the potential for a precipitation event, if a precipitation event is forecasted that would cause flows to exceed the capacity of the diversion system, protective measures for the construction work, equipment, and Metropolitan's pipelines would be implemented. The temporary diversion system would re-route flows from upstream of the Project site to downstream of the Project site and would be designed in a manner that would avoid creating or contributing runoff water off site. This system would be removed following the completion of construction, and the natural topography of the streambed would be restored to pre-project conditions. The proposed Project would also be subject to the requirements of the NPDES Construction General Permit, which requires the development of a SWPPP. The SWPPP would include best management practices that would minimize the potential for runoff from the Project site. After Project construction is complete, there would be no changes to Metropolitan's existing operation and maintenance activities at the Project site, and the proposed Project would not result in new land uses that have the potential to generate additional and/or polluted runoff. Therefore, impacts would be less than significant.

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

iv) Impede or redirect flood flows?

Less than Significant Impact. No, the proposed Project would not substantially alter the existing drainage pattern of the site or area in a manner that would impede or redirect flood flows. As discussed under threshold 3.10(c.i), the proposed Project would not introduce new impervious

surfaces to the Project site but would temporarily divert the San Jacinto River during construction via earthen or water-filled berms, a series of pipelines, and appurtenant components, which would minimize the potential for a wash-out of the construction site. Although construction would occur primarily during the dry season, which would minimize the potential for a precipitation event, if a precipitation event is forecasted that would cause flows to exceed the capacity of the diversion system, protective measures for the construction work, equipment, and Metropolitan's pipelines would be implemented. The temporary diversion system would re-route flows from upstream of the Project site to downstream of the Project site and would be designed in a manner that would avoid causing flooding on or off site. This system would be removed following the completion of construction, and the natural topography of the streambed would be restored to pre-project conditions such that the proposed Project would not result in a permanent alteration to the San Jacinto River's alignment and long-term flood behavior. The proposed Project also would not involve the installation of aboveground structures or facilities that could impede or redirect flood flows. Therefore, impacts would be less than significant.

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

Less than Significant Impact. No, the proposed Project would not result in the potential for pollutants to be released to the environment by inundation of the Project site during flood, tsunami, or seiche events. The Project site is located approximately 48 miles east of the Pacific Ocean; therefore, it is not located in a tsunami zone. A seiche is a standing wave oscillating in a body of water. The nearest body of water capable of seiche, Diamond Valley Lake, is approximately 8.3 miles southwest of the Project site, and intervening topography would minimize the potential for a seiche to inundate the Project site.

The Project site is located within Zone AE, defined as an area subject to a one percent annual chance of flooding (100-year floodplain) (Federal Emergency Management Agency 2018). In accordance with Metropolitan standard practice outlined in Sections 01063 and 01065 of the construction contractor specifications (see Section 1.6.7, *Environmental Requirements for Construction*), standard best management practices, such as secondary containment and locating containers away from drainage areas, would be implemented, and hazardous materials would be stored away from the river in covered, leak-proof containers when not in use and protected from rainfall infiltration and ground permeation in the event of an accidental spill. Furthermore, during construction, a temporary diversion structure consisting of earthen or water-filled berms, a series of pipelines, and appurtenant components would be installed within the bed and banks of the San Jacinto River to allow for diversion of surface water flows around the construction work area should a precipitation event occur, which would minimize the possibility of construction materials, sediment, or hazardous materials entering the San Jacinto River during a flood event. Although construction would occur primarily during the dry season, if a precipitation event would cause flows to exceed the capacity of the diversion system, additional protective measures for the construction work, equipment, and Metropolitan's pipelines would be implemented, which would further minimize the risk of release of pollutants. After Project construction is complete, there would be no changes to Metropolitan's existing operation and maintenance activities at the Project site, which do not currently involve the storage of hazardous materials or other potential pollutant sources at the Project site. Therefore, the potential for the proposed Project to risk the release of pollutants due to inundation during a flood event is low, and impacts would be less than significant.

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

No Impact. No, the proposed Project would not conflict with or obstruct implementation of a water quality control plan or sustainable groundwater management plan. Applicable plans include the Groundwater Sustainability Plan for the San Jacinto Groundwater Basin (Eastern Municipal Water District 2021), as well as the Water Quality Control Plan for the Santa Ana River Basin (Santa Ana RWQCB 2025), which includes the San Jacinto River watershed.

As discussed under threshold 3.10(a), the proposed Project has a low potential for surface water degradation due to installation of a temporary diversion structure within the San Jacinto River bed during construction, implementation of a SWPPP and compliance with the best management practices outlined in the SWPPP and Section 401 Water Quality Certification or Porter-Cologne Water Quality Control Act Waste Discharge Requirements designed to minimize the off-site migration of sediment and construction materials into the San Jacinto River, adherence to Metropolitan's standard best practices for hazardous materials containment, and adherence to applicable NPDES permit requirements for groundwater discharge. As discussed under threshold 3.10(b), the proposed Project would not introduce a new permanent demand for groundwater, construction dewatering would be conducted in accordance with applicable NPDES permit requirements, and the proposed Project would not add new impervious surfaces to the Project site. Thus, the proposed Project would not have the potential to conflict with the Water Quality Control Plan for the Santa Ana River Basin or the Groundwater Sustainability Plan for the San Jacinto Groundwater Basin. No impact would occur.

3.11 Land Use and Planning

LAND USE PLANNING Would the Project:	Potentially Significant Impact	Less than Significant With Mitigation Incorporated	Less than Significant Impact	No Impact
a) Physically divide an established community?	☐	☐	☐	☒
b) Cause a significant environmental impact due to a conflict with any land use plan, policy, or regulation adopted for the purpose of avoiding or mitigating an environmental effect?	☐	☐	☐	☒

Significance criteria established by CEQA Guidelines, Appendix G.

Discussion. Would the Project:

a. Physically divide an established community?

No Impact. No, the proposed Project would not physically divide an established community. The proposed Project involves the encasement of existing underground pipelines entirely within Metropolitan fee property and easements. The Project site does not serve as a means of moving through or connecting a community or neighborhood. No new permanent aboveground facilities or structures would be constructed as part of the proposed Project, and no existing roadways that provide access within the local vicinity (e.g., Soboba Road, State Street) would be altered. Therefore, the proposed Project would not physically divide an existing community, and no impact would occur.

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?

No Impact. No, the proposed 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. The Project site is located on Metropolitan fee property and easements in unincorporated Riverside County. The Project site has Riverside County General Plan land use designations of Open Space-Recreation and Open Space-Water and is zoned as W-2-10 (County of Riverside 2025a). No General Plan land use amendment or zone change is proposed, and upon completion of construction activities, the Project site would remain in its current use. Pursuant to California Government Code Section 53091, 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. Operations and maintenance activities at the Project site would be similar to existing conditions once construction is complete. Therefore, the proposed 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. No impact would occur.

3.12 Mineral Resources

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

Significance criteria established by CEQA Guidelines, Appendix G.

Discussion. 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?*

No Impact. No, the proposed Project would not 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 or the loss of availability of a locally important mineral resource recovery site delineated on a local general plan, specific plan, or other land use plan. No mineral recovery is currently occurring at the Project site, and the Project site and surrounding properties are not designated or zoned for mineral resource extraction (County of Riverside 2021a). The proposed Project would not result in changes to the current land use of the Project site. Therefore, the proposed Project would result in no impacts to mineral resources.

3.13 Noise

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

Significance criteria established by CEQA Guidelines, Appendix G.

OVERVIEW OF NOISE AND VIBRATION

Noise

Sound is a vibratory disturbance created by a moving or vibrating source that is capable of being detected by the hearing organs. Noise is defined as sound that is loud, unpleasant, unexpected, or undesired and may therefore be classified as a more specific group of sounds. The effects of noise on people can include general annoyance, interference with speech communication, sleep disturbance, and, in the extreme, hearing impairment (Caltrans 2013).

Noise levels are commonly measured in decibels (dB) using the A-weighted sound pressure level (dBA). The A-weighting scale is an adjustment to the actual sound pressure levels so that they are consistent with the human hearing response. Decibels are measured on a logarithmic scale that quantifies sound intensity in a manner similar to the Richter scale used to measure earthquake magnitudes. A doubling of the energy of a noise source, such as doubling of traffic volume, would increase the noise level by 3 dB; dividing the energy in half would result in a 3 dB decrease (Crocker 2007).

Vibration

Vibration is a unique form of noise because its energy is carried through buildings, structures, and the ground, whereas sound is simply carried through the air. Thus, vibration is generally felt rather than heard. Some vibration effects can be caused by noise (e.g., the rattling of windows from passing trucks). Typically, ground-borne vibration generated by manmade activities attenuates rapidly as distance from the source of the vibration increases. Vibration amplitudes are usually expressed in peak particle velocity (PPV) for buildings and Root Mean Square (RMS) vibration velocity for people and are normally described in inches per second (in/sec). PPV is defined as the maximum instantaneous positive or negative peak of a vibration signal (Caltrans 2020a). RMS is generally the equivalent to 71 percent of the PPV. Thus, evaluating human annoyance to vibration usually results in a more restrictive vibration limit than structural damage limits. Table 3.13-1 summarizes the vibration limits recommended by the Federal Transit Administration (FTA) to avoid structural damage to buildings.

Table 3.13-1. FTA Groundborne Vibration Criteria for Architectural Damage

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

Notes: in/sec (inches per second), PPV (peak particle velocity).
Source: FTA 2018

The vibration annoyance potential criteria recommended for use by Caltrans, which are based on the general human response to different levels of groundborne vibration velocity levels, are described in Table 3.13-2.

Table 3.13-2. Vibration Annoyance Potential Criteria for Humans (in/sec PPV)

Human Response	Transient Sources	Continuous/Frequent Intermittent Sources
Severe	2.0	0.4
Strongly perceptible	0.9	0.10
Distinctly perceptible	0.25	0.04
Barely perceptible	0.04	0.01

Notes: in/sec (inches per second), PPV (peak particle velocity).
Source: Caltrans 2020a

REGULATORY FRAMEWORK

Chapter 9.52 of the Riverside County Code regulates noise in the unincorporated areas of Riverside County and notes that no person shall create any sound, or allow the creation of any sound, on any property that causes the exterior sound level on any other occupied property to exceed the sound level standards set forth by the County. Section 9.52.020(A-C) exempts facilities owned or operated by or for a governmental agency, capital improvement projects of a governmental agency, and the maintenance or repair of public properties from compliance with Chapter 9.52.

Discussion. 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?*

Less than Significant Impact. No, the proposed Project would not generate a substantial temporary or permanent increase in ambient noise levels in excess of applicable standards.

Construction Activities

Pursuant to Riverside County Code Section 9.52.020(A-C), Metropolitan's facilities, capital improvement projects, and maintenance and repair activities are exempt from compliance with the sound level standards in the County's noise ordinance because Metropolitan is a governmental agency. Therefore, construction noise associated with the proposed Project would be exempt from the County's noise regulations. Furthermore, noise from construction activities would quickly

attenuate with distance from the equipment and would not substantially increase the ambient noise level at the nearest residence due to the large distance between this residence and the Project site, which is located approximately 0.2 mile west of the nearest limit of work boundary associated with the proposed Project. Lastly, in accordance with Metropolitan standard practice outlined in Section 01065 of the construction contractor specifications (see Section 1.6.7, *Environmental Requirements for Construction*), the Project Contractor(s) would be required to implement several noise reduction measures including maintaining all construction vehicle equipment in proper working order for the duration of the construction activities, equipping all construction equipment with properly operating and maintained noise mufflers and intake silencers, and covering or locating all stationary noise-generating equipment, such as generators and compressors, as far as practicable from the nearest residential and institutional property lines. Therefore, Project construction would not generate a substantial temporary increase in ambient noise levels in the vicinity of the Project site in excess of standards established in a local general plan or noise ordinance, or applicable standards of other agencies. Impacts would be less than significant.

Operation and Maintenance Activities

After Project construction is complete, there would be no changes to Metropolitan's existing operation and maintenance activities at the Project site. Therefore, Project operation and maintenance would not generate a substantial permanent increase in ambient noise levels in the vicinity of the Project site in excess of standards established in a local general plan or noise ordinance, or applicable standards of other agencies. No impact would occur.

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

Less than Significant Impact. No, the proposed Project would not generate excessive groundborne vibration or noise levels.

Construction Activities

During construction, the use of heavy-duty equipment, such as excavators and graders, for sitework and earthmoving activities would generate groundborne vibration at the Project site and in the immediate vicinity. However, groundborne vibration levels resulting from construction activities would quickly diminish with distance from the source. Vibration-generating construction activities would occur approximately 1,075 feet from the nearest residential structure. At this distance, vibration levels would be well below the thresholds for building damage recommended by the FTA and the thresholds for annoyance recommended by Caltrans. Therefore, Project construction activities would not generate excessive groundborne vibration or noise levels at the nearest sensitive receptors, and impacts would be less than significant.

Operation and Maintenance Activities

After Project construction is complete, there would be no changes to Metropolitan's existing operation and maintenance activities at the Project site, which do not currently involve the use of vibration-generating equipment. Groundborne vibration and noise impacts would be less than significant. Therefore, Project operation and maintenance would not generate excessive groundborne vibration or groundborne noise levels, and no impact would occur.

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, expose people residing or working in the Project area to excessive noise levels?*

No Impact. No, the proposed Project would not expose people working in the Project area to excessive noise levels. The Project site is not located within two miles of a public airport, public use airport, or private airstrip or within the jurisdiction of an airport land use plan. The nearest public use airport is the Hemet-Ryan Airport, located approximately 6.4 miles southwest of the Project site. Therefore, no impact would occur.

3.14 Population and Housing

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

Significance criteria established by CEQA Guidelines, Appendix G.

Discussion. Would the Project:

a. 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)?

No Impact. No, the proposed Project would not directly or indirectly induce substantial unplanned growth in the Project area. The proposed Project does not propose the construction of new homes and thus would not directly induce population growth in Riverside County. The proposed Project does not include construction of new water supply facilities or expansion of existing facilities and therefore would not increase water supply to the region or otherwise indirectly induce population growth. Operations and maintenance activities at the Project site would remain similar to existing conditions once construction activities are completed and would not require additional Metropolitan employees. Therefore, the proposed Project would not directly or indirectly induce substantial unplanned population growth, and no impact would occur.

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

No Impact. No, the proposed Project would not displace substantial numbers of existing people or housing, necessitating the construction of replacement housing elsewhere. The Project site does not contain housing, and the proposed Project would not change the existing land use of the Project site. As such, the proposed Project would not displace any people or housing, and no impact would occur.

3.15 Public Services

PUBLIC SERVICES

Would the Project result in substantial adverse physical impacts associated with the provision of new or physically altered governmental facilities, need for new or physically altered governmental facilities, the construction of which could cause significant environmental impacts, in order to maintain acceptable service ratios, response times, or other performance objectives for any of the public services:	Potentially Significant Impact	Less than Significant With Mitigation Incorporated	Less than Significant Impact	No Impact
a) Fire protection?	☐	☐	☐	☒
b) Police protection?	☐	☐	☐	☒
c) Schools?	☐	☐	☐	☒
d) Parks?	☐	☐	☐	☒
e) Other public facilities?	☐	☐	☐	☒

Significance criteria established by CEQA Guidelines, Appendix G.

Discussion.

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

a. Fire protection?

b. Police protection?

c. Schools?

d. Parks?

e. Other public facilities?

No Impact. No, the proposed Project would not result in substantial adverse physical impacts associated with the provision of fire protection services, police protection services, schools, parks, and other public facilities. The nearest governmental facilities to the Project site are Riverside County Fire Department Station 25 (located 2.3 miles to the south), the San Jacinto Police Department (located 2.7 miles to the south), Mt. San Jacinto Community College (located 1.0 mile to the south), Sagecrest Park (located 0.8 mile to the southwest), and the San Jacinto Public Library (located 2.6 mile to the southeast). As discussed in Section 3.14, *Population and Housing,* the proposed Project would not directly or indirectly induce population growth or require additional Metropolitan employees for operation and maintenance and thus would not increase demand for fire protection services, police protection services, schools, parks, or other public facilities. Therefore, the proposed Project would not result in a need for new or physically altered fire protection services, police protection services, schools, parks, or other public facilities to maintain acceptable service ratios, response times, or other performance objectives, and no impact would occur.

3.16 Recreation

RECREATION Would the Project:	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?	☐	☐	☐	☒

Significance criteria established by CEQA Guidelines, Appendix G.

Discussion.

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

No Impact. No, the proposed Project would not increase the use of existing neighborhood and regional parks or other recreational facilities. The Project site is located entirely within Metropolitan's fee property and easements, and the nearest park to the Project site is Sagecrest Park, located approximately 0.8 mile to the southwest. In addition, the City of San Jacinto's planned San Jacinto River Park is located immediately south of the Project site. As discussed in Section 3.14, *Population and Housing,* the proposed Project would not directly or indirectly induce population growth or require additional Metropolitan employees for operation and maintenance in a manner that would increase the use of existing neighborhood and regional parks or other recreational facilities. Therefore, the proposed Project 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, and no impact would occur to such facilities.

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

No Impact. No, the proposed Project does not include recreational facilities or require the construction or expansion of recreational facilities. As such, no impact would occur.

3.17 Transportation

TRANSPORTATION Would the Project:		Potentially Significant Impact	Less than Significant With Mitigation Incorporated	Less than Significant Impact	No Impact
a)	Conflict with a program, plan, ordinance, or policy addressing the circulation system, including transit, roadway, bicycle, and pedestrian facilities?	☐	☐	☐	☒
b)	Would the Project 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 uses (e.g., farm equipment)?	☐	☐	☐	☒
d)	Result in inadequate emergency access?	☐	☐	☐	☒

Significance criteria established by CEQA Guidelines, Appendix G.

Discussion. Would the Project:

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

No Impact. No, the proposed Project would not conflict with a program, plan, ordinance, or policy addressing the circulation system, including transit, roadway, bicycle, and pedestrian facilities. The Project site is located in unincorporated Riverside County, in close proximity to the city of San Jacinto. The County of Riverside's General Plan Circulation Element (2024c), County of Riverside's San Jacinto Valley Area Plan (2021), City of San Jacinto's General Plan (2025a), City of San Jacinto's Trails Master Plan (2025b), and SCAG's 2024-2045 Regional Transportation Plan/Sustainable Communities Strategy (SCAG 2024) identify goals and policies for the circulation system in the vicinity of the Project site. During Project construction, vehicles would access the Project site from SR 79, before traveling north on State Street and east on Soboba Road. An existing access road leading from Soboba Road, as well as a new unpaved access road, would provide direct access into the Project site. There are no pedestrian facilities (sidewalks) or bicycle lanes along Soboba Road in the vicinity of the Project site. The City of San Jacinto's Trails Master Plan (2025b) identifies a planned regional trail south of the Project site. Construction staging would occur south of Soboba Road, to the west and east of existing access roads, and would not interfere with circulation along this roadway. Neither construction nor operation of the proposed Project would require modifications to public roadways or circulation infrastructure. Project construction would require the temporary use of heavy equipment and a limited number of construction worker trips during weekday daytime hours. These activities would represent a minor and short-term addition to existing traffic volumes and would not result in long-term increases in traffic. Upon the completion of construction, there would be no changes to Metropolitan's existing operation and maintenance activities at the Project site, and no aboveground structures or facilities would be installed that could interfere with the City of San Jacinto's planned regional trail. Therefore, the proposed Project would not conflict with applicable programs, plans, ordinances, or policies addressing the circulation system, including transit, roadway, bicycle, or pedestrian facilities, and no impact would occur.

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

Less than Significant Impact. No, the proposed Project would not conflict with or be inconsistent with CEQA Guidelines Section 15064.3(b). Neither the Governor's Office of Land Use and Climate Innovation nor any jurisdiction in the local area requires an evaluation of vehicle miles traveled (VMT) impacts during construction (County of Riverside 2020). Caltrans' (2020b) *Transportation Analysis under CEQA, First Edition* guidance document indicates that a construction VMT analysis is typically only necessary for large projects or projects located a considerable distance from urbanized areas. The guidance also states that vehicle trips related to construction activities are temporary and the associated VMT is generally minor and limited to construction equipment and personnel with no long-term trip generation. The Project site is close to urbanized areas, and the proposed Project would not involve large-scale construction activities that would have the potential to result in substantial increases in regional VMT because 1) construction workers and materials would be primarily sourced locally and 2) a relatively low volume of daily truck trips is anticipated. In addition, the proposed Project would not require lane closures that could result in out-of-direction travel as travelers attempt to avoid the construction area. Therefore, based on the Caltrans guidance, the proposed Project would not generate substantial VMT during construction. After Project construction is complete, there would be no changes to Metropolitan's existing operation and maintenance activities at the Project site. Therefore, the proposed Project would not conflict with or be inconsistent with CEQA Guidelines Section 15064.3(b), and impacts would be less than significant.

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

No Impact. No, the proposed Project would not substantially increase hazards due to a geometric design feature or incompatible uses. The Project site would be accessed via SR 79, State Street, and Soboba Road during construction activities. The proposed Project would not result in temporary or permanent alterations to these roadways, changes to existing geometric design, or creation of incompatible uses along these roadways. Upon the completion of construction, there would be no changes to Metropolitan's existing operation and maintenance activities at the Project site. Therefore, no impact would occur.

d. Result in inadequate emergency access?

No Impact. No, the proposed Project would not result in inadequate emergency access. The Project site would be accessed via major regional routes (SR 79) and local roads (State Street and Soboba Road) during construction activities. Project-related vehicles and equipment would be parked off of public roads and would not block emergency access routes, and no road or lane closures are proposed. Additionally, in accordance with Metropolitan standard practice outlined in Section 01065 of the construction contractor specifications (see Section 1.6.7, *Environmental Requirements for Construction*), the Construction Contractor(s) would prepare a Traffic Control Plan that would include provisions to ensure that emergency vehicles can access the area without delay or interference. As a result, the proposed Project would not result in inadequate emergency access, and no impact would occur.

3.18 Tribal Cultural Resources

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

Significance criteria established by CEQA Guidelines, Appendix G.

Discussion. Would the Project:

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

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

Less Than Significant Impact. Metropolitan sent letters dated June 23, 2025, via certified mail to two Native American tribes (Soboba Band of Luiseño Indians and Pechanga Band of Luiseño Indians) that had previously requested to be informed through formal notification of proposed projects in the geographic area that is traditionally and culturally affiliated with those tribes. One tribe, the Soboba Band of Luiseño Indians, requested consultation. A consultation meeting took place on August 28, 2025. During the consultation meeting, the Soboba Tribal Historic Preservation Officer, Joseph Ontiveros, expressed concerns that the proposed Project is located in an area considered sensitive by the Soboba and has spiritual significance to the tribe. Mr. Ontiveros described the tribal use of the proposed Project area and local vicinity, and the importance of the geographic features within and surrounding the proposed Project area that may be sensitive for unidentified tribal cultural resources and burials, and described that the proposed Project area has a Luiseño place name. Mr. Ontiveros proposed measures to avoid or minimize effects to Tribal Cultural Resources. Metropolitan's cultural resource and archaeological resource identification efforts did not identify the presence of a resource eligible for or listed on the CRHR or local register

within the proposed Project area except for the CRA itself, which is eligible for the CRHR as a historic district. Because no tribal cultural resource eligible for the CRHR or a local register of historical resources was identified within or adjacent to the proposed Project area, impacts would be less than significant.

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

Less Than Significant Impact with Mitigation Incorporated. As described above, Metropolitan conducted tribal cultural resource consultation with the Soboba Band of Luiseño Indians. Although no cultural resources eligible for the CRHR or a local register of historical resources are known to be present within the proposed Project area, except for the CRA, the area is known to be sensitive for prehistoric archaeological resources and has been used or occupied by native peoples prior to European contact. During consultation, Mr. Ontiveros, the Soboba Tribal Historic Preservation Officer, recommended the implementation of a Tribal Cultural Resource Management Plan as a mitigation measure, detailing processes and procedures for unanticipated tribal cultural resource discoveries during Project-related ground-disturbing activities and procedures for the unanticipated discovery of human remains and burials. Therefore, Metropolitan would implement Mitigation Measure TCR-1, which includes preparation and implementation of a Tribal Cultural Resource Management Plan in coordination with the Soboba Band of Luiseño Indians to reduce potential direct and indirect impacts to tribal cultural resources to less-than-significant levels.

MITIGATION MEASURES

TCR-1 Tribal Cultural Resource Management Plan

Metropolitan shall prepare a Tribal Cultural Resources Management Plan in coordination with the Soboba Band of Luiseño Indians prior to Project construction. The plan shall include a description of Project construction activities that shall require tribal monitoring. The plan shall also include detailed processes and procedures for unanticipated tribal cultural resource discoveries during Project ground-disturbing activities and procedures for the unanticipated discovery of human remains and burials. The provisions of the Tribal Cultural Resources Management Plan shall be implemented during Project construction, and any monitoring logs/reports shall be submitted to Metropolitan.

3.19 Utilities and Service Systems

UTILITIES AND SERVICE SYSTEMS Would the Project:		Potentially Significant Impact	Less than Significant With Mitigation Incorporated	Less than Significant Impact	No Impact
a)	Require or result in the relocation or construction of new or expanded water, wastewater treatment or stormwater drainage, electric power, natural gas, or telecommunication facilities, the construction 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?	☐	☐	☐	☒

Significance criteria established by CEQA Guidelines, Appendix G.

Discussion. Would the Project:

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

No Impact. No, the proposed Project would not require or result in the relocation or construction of new or expanded water, wastewater treatment, stormwater drainage, electric power, natural gas, or telecommunication facilities. The proposed Project itself involves structural improvements to the existing CRA Casa Loma Siphon No. 1 and San Jacinto Pipeline, including subsurface concrete encasement reinforced with steel rebar and erosion control measures, such as riprap. The proposed Project does not include construction of new water supply facilities or expansion of existing water supply facilities, and no increase in wastewater generation at the Project site would occur. In addition, the proposed Project would not require electric power, natural gas connections, or telecommunications infrastructure and would not permanently alter stormwater drainage patterns within the Project site. Therefore, the proposed Project would not require or result in the relocation or construction of new or expanded utility facilities, and no impact would occur.

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

Less than Significant Impact. Yes, there would be sufficient water supplies available to serve the proposed Project. Project construction activities may temporarily require water supplies for controlling dust and irrigating any hydroseeded areas installed during site restoration. EMWD, one of Metropolitan's member agencies, is the retail water provider for the Project site vicinity. Water

for dust suppression and irrigation would be transported to the Project site via a mobile water truck, and this usage would be minimal and temporary. After Project construction is complete, there would be no changes to Metropolitan's existing operation and maintenance activities at the Project site, and Metropolitan would continue to convey water supplies through the CRA Casa Loma Siphon No. 1 and San Jacinto Pipeline to its service area, as under existing conditions. Therefore, there would be sufficient water supplies available to serve the proposed Project, and impacts to water supplies would be less than significant.

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

No Impact. The proposed Project would not require wastewater treatment and thus would not need a determination by a wastewater treatment provider that it has adequate capacity to serve the proposed Project. Therefore, no impact would occur.

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

Less than Significant Impact. No, the proposed Project would not 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. Construction activities would temporarily generate solid waste, including soil spoils and other construction waste that would be disposed of at the Lamb Canyon Sanitary Landfill approximately 4.7 miles northwest of the Project site, or at another nearby landfill. The Lamb Canyon Sanitary Landfill has a maximum permitted throughput of 5,000 tons per day. As of 2020, the Lamb Canyon Sanitary Landfill had approximately 14.5 million cubic yards remaining of its total capacity of 39.7 million cubic yards and is expected to continue operations through 2032 (California Department of Resources Recycling and Recovery 2025). According to the Riverside County Integrated Waste Management Plan 2023 Five-Year Review Report and the 2023 Riverside-Unincorporated Electronic Annual Report summary, a shortfall in permitted landfill capacity within Riverside County is not anticipated to occur in the next 15 years or more (California Department of Resources and Recycling Recovery 2023 and 2024). Furthermore, after Project construction is complete, there would be no changes to Metropolitan's existing operation and maintenance activities at the Project site, which currently do not generate solid waste routinely. Given that waste would only be temporarily generated by the proposed Project during the construction period and the existing availability of landfill capacity at the Lamb Canyon Sanitary Landfill, the proposed Project would have low potential to 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. Therefore, impacts would be less than significant.

e. *Comply with federal, state, and local management and reduction statutes and regulations related to solid waste?*

No Impact. Yes, the proposed Project would comply with federal, state, and local management and reduction statutes and regulations related to solid waste. Project construction activities would temporarily generate solid waste, including soil spoils and other construction waste. Project Contractor(s) would be required to comply with federal, state, and local statutes and regulations related to solid waste. Therefore, no impact would occur.

3.20 Wildfire

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

Significance criteria established by CEQA Guidelines, Appendix G.

The Project site is in a Very High Fire Hazard Severity Zone in a State Responsibility Area (California Department of Forestry and Fire Protection 2025).

Discussion. 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?

Less than Significant Impact. No, the proposed Project would not substantially impair an adopted emergency response plan or emergency evacuation plan. The County of Riverside's Operational Area Emergency Operations Plan is the applicable emergency response plan for the vicinity of the Project site and provides guidance during unique situations requiring an unusual or extraordinary emergency response (County of Riverside 2024b). Implementation of the Operational Area Emergency Operations Plan involves coordination with all the facilities and personnel of County government, along with the jurisdictional resources of the cities and special districts within Riverside County, into an efficient organization capable of responding to an emergency. The proposed Project involves concrete encasement and installation of riprap protection for two underground pipelines entirely within Metropolitan fee property and easements and would not temporarily obstruct or permanently alter public roadways or existing access points in the vicinity of the Project site. In addition, although State Street and Soboba Road are identified as evacuation routes, the proposed Project does not involve road closures or changes to public access routes. In accordance with Metropolitan standard practice outlined in Section 01065 of the construction contractor specifications (see Section 1.6.7, *Environmental Requirements for Construction*), a Traffic Control Plan would be prepared and would ensure continued emergency access along the adjacent routes during construction. Therefore, although the Project site is in a Very High Fire Hazard Severity Zone in a State Responsibility Area, impacts would be less than significant.

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

Less than Significant Impact. No, the proposed Project would not expose occupants to pollutant concentrations from a wildfire or exacerbate wildfire risks. Although the Project site is in a Very High Fire Hazard Severity Zone in a State Responsibility Area, the Project site consists of the riverbed of the San Jacinto River and adjacent vegetated open space areas (including the riverbanks) characterized by gentle slopes and low topographic relief surrounded by moderate hillside slopes. Based on topographic interpretation and United States Geological Survey mapping, the site does not contain steep slopes that would facilitate rapid fire spread (United States Geological Survey 2021). Meteorological data for the San Jacinto area indicate that prevailing winds generally flow from the southwest to west-southwest at 5 to 10 miles per hour, which could carry smoke or embers in the event of a wildfire (National Weather Service 2025). While these wind patterns could influence the spread of smoke or embers during a wildfire, they do not inherently increase the likelihood of wildfire ignition or occurrence during construction or operation of the Project.

Construction of the proposed Project would include the use of heavy-duty equipment, which could pose a potential ignition risk. In accordance with PRC Section 4442, equipment including earth-moving and portable construction equipment with internal combustion engines would be equipped with spark arrestors to prevent the emission of flammable debris from exhaust, when operating on any forest-covered, brush-covered, or grass-covered land. In addition, PRC Sections 4427 and 4431 specify standards for conducting construction activities on days when a burning permit is required, and PRC Section 4428 requires construction contractors to maintain fire suppression equipment during the highest fire danger period (April 1 to December 1) when operating on or near any forest-covered, brush-covered, or grass-covered land. These measures are designed to prevent accidental ignition and facilitate rapid response in the event of a fire. Furthermore, in accordance with Metropolitan standard practice outlined in Section 01065 of the construction contractor specifications (see Section 1.6.7, *Environmental Requirements for Construction*), gasoline-powered or diesel-powered machinery used during construction would be equipped with standard exhaust controls and muffling devices that also act as spark arrestors. Upon the completion of construction, there would be no new aboveground structures or facilities, no new permanent on-site personnel, and no changes to Metropolitan's existing operation and maintenance activities at the Project site. Therefore, the proposed Project would not expose occupants to pollutant concentrations from a wildfire or exacerbate wildfire risks, and impacts would be less than significant.

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

No Impact. No, the proposed Project would not require the installation or maintenance of infrastructure such as roads, fuel breaks, emergency water sources, power lines, or other utilities that could exacerbate fire risk or result in temporary or ongoing environmental impacts. Therefore, no impact would occur.

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

Less than Significant Impact. No, the proposed Project would not expose people or structures to significant risks, including downslope or downstream flooding or landslides, as a result of runoff, post-fire slope instability, or drainage patterns. Although the Project site is in a Very High Fire Hazard Severity Zone in a State Responsibility Area and is surrounded by moderate slopes, the Project site is uninhabited and does not contain any structures that would be exposed to increased risk from wildfire. The proposed Project involves subsurface encasement of existing pipelines and would not introduce new aboveground infrastructure or alter existing drainage patterns. The proposed Project also includes installation of erosion control measures such as riprap and geotextile fabric to stabilize soils and maintain drainage. The proposed Project is designed to improve the structural integrity of existing infrastructure and would not increase the potential for post-fire slope instability or related hazards. Therefore, impacts would be less than significant.

3.21 Mandatory Findings of Significance

MANDATORY FINDINGS OF SIGNIFICANCE Would the Project:	Potentially Significant Impact	Less than Significant With Mitigation Incorporated	Less than Significant Impact	No Impact
a) Does the Project have the potential to substantially degrade the quality of the environment, substantially reduce the habitat of a fish or wildlife species, cause a fish or wildlife population to drop below self-sustaining levels, threaten to eliminate a plant or animal community, substantially reduce the number or restrict the range of a rare or endangered plant or animal, or eliminate important examples of the major periods of California history or prehistory?	☐	☒	☐	☐
b) Does the Project have impacts that are individually limited, but cumulatively considerable? (*Cumulatively considerable* means that the incremental effects of a Project are 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) Does the Project have environmental effects that would cause substantial adverse effects on human beings, either directly or indirectly?	☐	☐	☒	☐

Significance criteria established by CEQA Guidelines, Appendix G.

Discussion:

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

Less Than Significant with Mitigation Incorporated. No, the proposed Project would not substantially degrade or impact biological resources or eliminate important examples of the major periods of California history or prehistory. As discussed in Section 3.4, *Biological Resources*, and Appendix C, construction of the proposed Project has the potential to affect threatened, endangered, candidate, or special-status species. However, implementation of Mitigation Measures BIO-1 through BIO-7 would ensure that impacts to biological resources are mitigated to a less-than-significant level. Therefore, impacts are considered less than significant with mitigation.

As discussed in Section 3.5, *Cultural Resources*, the proposed Project would not cause a substantial adverse change in the significance of a historical resource or of an archaeological resource, and impacts would be less than significant. Operations and maintenance of the proposed Project would be similar to existing conditions, and no long-term permanent impacts to biological or cultural resources would occur.

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.)

Less than Significant Impact. No, the proposed Project does not have impacts that are individually limited, but cumulatively considerable. Based on the analysis contained in this IS-MND, the proposed Project would not result in significant and unmitigable impacts to environmental resource areas. In all cases, impacts associated with the proposed Project would be limited to the Project site or are of such a negligible degree that they would not result in a significant contribution to any cumulative impacts. This is largely due to the fact that Project construction activities would be temporary, and after construction is completed, there would be no changes to Metropolitan's existing operation and maintenance activities at the Project site.

Cumulative impacts could occur if the construction of other projects occurs at the same time as the proposed Project and in the same geographic scope, such that the effects of similar impacts of multiple projects combine to create greater levels of impact than would occur at the project level. For example, if the construction of other projects in the area occurs at the same time as construction activities associated with the proposed Project, combined noise and transportation impacts may be greater than at the project level. However, the Project site is within a non-urbanized area within Metropolitan fee property and easements. Given that the Project site is located more than 1,000 feet from the nearest residences and communities, and there are no planned projects in the vicinity of the Project site (County of Riverside 2024d and 2025b), the proposed Project's impacts during construction would not combine with the impacts of other projects to create cumulative construction activity-related impacts in areas such as air quality, noise, and transportation. Furthermore, upon completion, the proposed Project would have no operational impacts that could combine with the impacts of other projects to create cumulative impacts because there would be no changes to Metropolitan's existing operation and maintenance activities at the Project site. For these reasons, the incremental effects of the proposed Project would not be considerable when viewed in connection with the effects of past projects, current projects, or probable future projects, and cumulative impacts would be less than significant.

c. Does the Project have environmental effects that would cause substantial adverse effects on human beings, either directly or indirectly?

Less than Significant Impact. Based on the analysis contained in this IS-MND, the proposed Project does not exceed any significance thresholds or result in significant impacts in the environmental categories typically associated with indirect or direct effects to human beings, such as aesthetics, air quality, geology and soils, hazards and hazardous materials, hydrology and water quality, noise, public services, transportation, or wildfire. As discussed in Section 3.1, *Aesthetics*, Section 3.3, *Air Quality*, Section 3.7, *Geology and Soils*, Section 3.9, *Hazards and Hazardous Materials*, Section 3.10, *Hydrology and Water Quality*, Section 3.13, *Noise*, Section 3.15, *Public Services*, Section 3.17, *Transportation*, and Section 3.20, *Wildfire*, of this document, the proposed Project would not expose persons to the hazards of toxic air emissions, chemical or explosive materials, groundshaking, flooding, noise, transportation, or wildfire. For these reasons, the proposed Project does not have a Mandatory Finding of Significance due to environmental effects that could cause substantial adverse effects on humans.

4. List of Acronyms

APEFZ	Alquist-Priolo Earthquake Fault Zone
APN	Assessor's Parcel Number
AQMP	Air Quality Management Plan
CAAQS	California Ambient Air Quality Standards
CalEEMod	California Emissions Estimator Model
CAP	Climate Action Plan
CARB	California Air Resources Board
CEQA	California Environmental Quality Act
CHRIS	California Historical Resources Information System
CNDDB	California Natural Diversity Data Base
CRA	Colorado River Aqueduct
CRHR	California Register of Historical Resources
CRPR	California Rare Plant Rank
CO_2	carbon dioxide
CO_2e	carbon dioxide equivalents
DOC	California Department of Conservation
DPM	diesel particulate matter
dB	decibel
dBA	A-weighted decibel
EIR	environmental impact report
EMWD	Eastern Municipal Water District
FTA	Federal Transit Administration
GHG	greenhouse gas
in/sec	inches per second
IPCC	Intergovernmental Panel on Climate Change
IS-MND	Initial Study-Mitigated Negative Declaration
Metropolitan	The Metropolitan Water District of Southern California
NAAQS	National Ambient Air Quality Standards
NAHC	Native American Heritage Commission
NPDES	National Pollutant Discharge Elimination System
NRHP	National Register of Historic Places
PM_{10}	particulate matter with diameters of 10 microns or less
$PM_{2.5}$	particulate matter with diameters of 2.5 microns or less
PPV	peak particle velocity
PRC	California Public Resources Code
Rincon	Rincon Consultants, Inc.

RMS	root mean square
ROG	reactive organic gases
SCAB	South Coast Air Basin
SCAG	Southern California Association of Governments
SCAQMD	South Coast Air Quality Management District
SCIC	South Coast Information Center
SLF	Sacred Lands File
SR	State Route
SSC	California Species of Special Concern
SWPPP	Stormwater Pollution Prevention Plan
TAC	toxic air contaminants
USEPA	United States Environmental Protection Agency
VOC	volatile organic compounds

5. List of Preparers

5.1 The Metropolitan Water District of Southern California

- Jennifer Harriger, Manager, Environmental Planning Section
- Sean Carlson, Team Manager, Environmental Planning Section
- Michelle Morrison, Senior Environmental Specialist, Environmental Planning Section
- Alfredo Aguirre, Environmental Specialist
- Tania Asef, Environmental Specialist

5.2 Rincon Consultants, Inc.

- Jennifer Jacobus, PhD, Principal
- Steven Hongola, Principal Biologist
- Annaliese Torres, Supervising Environmental Planner
- Kholood Abdo, Senior Supervising Cultural Resources Specialist
- Andrea Maben, Senior Biologist
- Bill Vosti, Program Manager – Air Quality, GHG Emissions, and Noise
- Nicholas Carter, Environmental Planner
- Ryan Perry, Environmental Planner
- Lucas Carneiro, Air Quality and Greenhouse Gas Specialist
- Kyle Pritchard, Noise Specialist

6. References

Abdo, Kholood, Catherine Johnson, and Rachel Perzel. 2025. Casa Loma Siphon No. 1 and San Jacinto Pipeline Project Cultural Resources Technical Report, San Jacinto, Riverside County, California. Report on file at the South Coastal Information Center, San Diego State University, California.

California Air Resources Board. 2024. Table of Ambient Air Quality Standards. Last modified: July 16, 2024. https://ww2.arb.ca.gov/sites/default/files/2024-08/AAQS%20Table_ADA_FINAL_07222024.pdf (accessed June 2025).

_____. 2025. Ambient Air Quality Standards Designation Tool. https://ww2.arb.ca.gov/capp/cst/tch/ambient-air-quality-standards-designation-tool (accessed June 2025).

California Department of Conservation (DOC). 2022. California Important Farmland Finder. https://maps.conservation.ca.gov/DLRP/CIFF/ (accessed June 2025).

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

California Department of Fish and Wildlife (CDFW). 2012. Staff Report on Burrowing Owl Mitigation. March 7, 2012.

California Department of Forestry and Fire Protection. 2025. Fire Hazard Severity Viewer.https://experience.arcgis.com/experience/5065c998b4b0462f9ec3c6c226c610a9. (accessed June 2025).

California Department of Resources and Recycling Recovery. 2023. Riverside Countywide Integrated Waste Management Plan - 2023 Five-Year Review Report. https://rcwaste.org/sites/g/files/aldnop376/files/2024-04/2023_5-Year_Review_CIWMP_Submittal.pdf. (accessed June 2025).

_____. 2024. 2023 Riverside-Unincorporated Electronic Annual Report Summary. https://rcwaste.org/sites/g/files/aldnop376/files/2024-08/2023%20EAR%20-%20Jurisdiction%20Summary.pdf. (accessed June 2025).

_____. 2025. Solid Waste Information System: Lamb Canyon Sanitary Landfill. https://www2.calrecycle.ca.gov/SolidWaste/SiteActivity/Details/2246?siteID=2368. (accessed June 2025).

California Department of Toxic Substances Control. 2025. EnviroStor Database. https://www.envirostor.dtsc.ca.gov/public/map/?myaddress=State+Street+%26+Soboba+Road%2C+California%2C+USA (accessed June 2025).

California Department of Transportation (Caltrans). 2013. *Technical Noise Supplement to the Traffic* Noise Analysis Protocol. (CT-HWANP-RT-13-069.25.2) September. http://www.dot.ca.gov/hq/env/noise/pub/TeNS_Sept_2013B.pdf (accessed June 2025).

_____. 2018. California State Scenic Highway System Map. https://caltrans.maps.arcgis.com/apps/webappviewer/index.html?id=465dfd3d807c46cc8e8057116f1aacaa (accessed June 2025).

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

_____. 2020b. Transportation Analysis under CEQA, First Edition. https://dot.ca.gov/-/media/dot-media/programs/transportation-planning/documents/sb-743/2020-09-10-1st-edition-tac-fnl-a11y.pdf (accessed July 2025).

California, State of. 2018. California's Fourth Climate Change Assessment Statewide Summary Report. https://www.energy.ca.gov/sites/default/files/2019-11/Statewide_Reports-SUM-CCCA4-2018-013_Statewide_Summary_Report_ADA.pdf (accessed June 2025).

Crocker, Malcom J (Editor). 2007. *Handbook of Noise and Vibration Control Book*, ISBN: 978-0-471-39599-7, Wiley-VCH, October.

Eastern Municipal Water District. 2021. Groundwater Sustainability Plan for the San Jacinto Groundwater Basin. https://cawaterlibrary.net/document/groundwater-sustainability-plan-for-the-san-jacinto-groundwater-basin/ (accessed July 2025).

Federal Emergency Management Agency. 2018. National Flood Hazard Layer Viewer. https://www.arcgis.com/apps/webappviewer/index.html?id=8b0adb51996444d4879338b5529aa9cd (accessed June 2025).

Federal Transit Administration (FTA). 2018. Transit Noise and Vibration Impact Assessment Manual. https://www.transit.dot.gov/sites/fta.dot.gov/files/docs/research-innovation/118131/transit-noise-and-vibration-impact-assessment-manual-fta-report-no-0123_0.pdf (accessed June 2025).

Intergovernmental Panel on Climate Change (IPCC). 2007. Summary for Policymakers. In: Climate Change 2007: The Physical Science Basis. Contribution of Working Group I to the Fourth Assessment Report of the Intergovernmental Panel on Climate Change. https://www.ipcc.ch/site/assets/uploads/2018/02/ar4-wg1-spm-1.pdf (accessed June 2025).

_____. 2021. IPCC Sixth Assessment Report. https://www.ipcc.ch/report/ar6/wg1/downloads/report/IPCC_AR6_WGI_FullReport.pdf (accessed June 2025).

Metropolitan Water District of Southern California. 2022. Climate Action Plan. May 2022. https://d1q0afiq12ywwq.cloudfront.net/media/12469/final-cap.pdf (accessed June 2025).

_____. 2023. Colorado River Aqueduct - Casa Loma Siphon No. 1, San Jacinto Pipeline, Pipeline Protection Study Report. December 2023.

_____. 2025. 2024 Climate Action Plan Implementation Third Annual Progress Report. April 2025. https://d1q0afiq12ywwq.cloudfront.net/media/d0mleczm/cap_annualreport_2025_finalremediated_opt.pdf (accessed June 2025).

Natural Resources Conservation Service. 2025. Web Soil Survey. https://websoilsurvey.nrcs.usda.gov/app/WebSoilSurvey.aspx (accessed July 2025).

National Weather Service. 2025. NWS Forecast for: San Jacinto CA. https://forecast.weather.gov/MapClick.php?lat=33.7839&lon=-116.958&unit=0&lg=english&FcstType=text&TextType=2. (accessed June 2025).

Riverside, County of. 1996. Habitat Conservation Agency. Habitat Conservation Plan for the Stephens' Kangaroo Rat in Western Riverside County California. March 1996.

_____. 2003. Final Western Riverside County Multiple Species Habitat Conservation Plan. June 2003. www.wrc-rca.org (accessed June 2025).

_____. 2020. Transportation Analysis Guidelines for Level of Service Vehicle Miles Traveled. https://trans.rctlma.org/sites/g/files/aldnop401/files/migrated/Portals-7-2020-12-15-20--20Transportation-20Analysis-20Guidelines.pdf (accessed July 2025).

_____. 2021a. San Jacinto Valley Area Plan. https://planning.rctlma.org/sites/g/files/aldnop416/files/migrated/Portals-14-genplan-GPA-2022-Compiled-SJVAP-4-2022-rev.pdf (accessed June 2025).

_____. 2021b. Riverside County General Plan Land Use Element. https://planning.rctlma.org/sites/g/files/aldnop416/files/2024-05/Portals-14-Ch03-Land-Use-2019-28-21_0.pdf (accessed November 2025).

_____. 2024a. Riverside County General Plan Safety Element. https://planning.rctlma.org/sites/g/files/aldnop416/files/2024-07/Safety%20Element.pdf (accessed June 2025).

_____. 2024b. County of Riverside Operational Area Emergency Operations Plan. https://rivcoready.org/sites/g/files/aldnop181/files/users/user41/2024%20EOP%20Update%208.5.24.pdf (accessed June 2025).

_____. 2024c. Riverside County General Plan Circulation Element. https://planning.rctlma.org/sites/g/files/aldnop416/files/migrated/Portals-14-genplan-2019-elements-Ch04-Circulation-072720v2.pdf (accessed June 2025).

_____. 2024d. "Projects". https://planning.rctlma.org/projects#2741959481-1910932254 (accessed July 2025).

_____. 2025a. Riverside County: Map My County. https://gis1.countyofriverside.us/Html5Viewer/?viewer=MMC_Public (accessed June 2025).

_____. 2025b. "Active Planning Projects". https://planning.rctlma.org/active-projects#2741959481-3739474888 (accessed July 2025).

San Jacinto, City of.

_____. 2018. San Jacinto Trails Master Plan. https://www.sanjacintoca.gov/city_departments/community-development/general-plan (accessed June 2025).

_____. 2022. San Jacinto General Plan. https://cdnsm5hosted.civiclive.com/UserFiles/Servers/Server_10384345/File/City%20Government/Community%20Development/Planning/General%20Plan%202040/Published%20Envision%20San%20Jacinto_2024.pdf (accessed June 2025).

Santa Ana Regional Water Quality Control Board (RWQCB). 2025. Water Quality Control Plan for the Santa Ana River Basin. https://www.waterboards.ca.gov/santaana/water_issues/programs/basin_plan/ (accessed July 2025).

South Coast Air Quality Management District (SCAQMD). 1993. CEQA Air Quality Handbook.

_____. 2022. 2022 Air Quality Management Plan. http://www.aqmd.gov/home/air-quality/clean-air-plans/air-quality-mgt-plan (accessed June 2025).

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

State Water Resources Control Board. 2025. GeoTracker Database. https://geotracker.waterboards.ca.gov/ (accessed July 2025).

Southern California Association of Governments. 2024. Connect SoCal 2024: Regional Transportation Plan/Sustainable Communities Strategy. https://scag.ca.gov/connect-socal (accessed June 2025).

United States Environmental Protection Agency (U.S. EPA). 2024. National Ambient Air Quality Standards (NAAQS) for PM. https://www.epa.gov/pm-pollution/national-ambient-air-quality-standards-naaqs-pm (accessed June 2025).

_____. 2025a. California Nonattainment/Maintenance Status for Each County by Year for All Criteria Pollutants. https://www3.epa.gov/airquality/greenbook/anayo_ca.html (accessed June 2025).

_____. 2025b. "Climate Change Indicators: Atmospheric Concentrations of Greenhouse Gases." Last modified: March 26, 2025. epa.gov/climate-indicators/climate-change-indicators-atmospheric-concentrations-greenhouse-gases (accessed June 2025).

United States Geological Survey. 2021. San Jacinto Quadrangle: California - Riverside County 7.5-Minute Series.

Western Riverside Council of Governments. 2025. WRCOG/SBCTA Sustainability Toolkit Evacuation Routes. https://www.arcgis.com/apps/webappviewer/index.html?id=4168a1efbdca40f889ea9dba43e04b4e&extent=-13138981.0556%2C4022288.1589%2C-12669351.9538%2C4239369.3193%2C102100 (accessed July 2025).

This page intentionally left blank.

Appendix A

Metropolitan Standard Practices

SECTION 01065
ENVIRONMENTAL COMPLIANCE REQUIREMENTS

Note to Specifier (NTS): This Master Specification is not a "standard" specification but a baseline template to tailor for specific project needs. Ensure that editing is consistent with other contract documents.

1. ***Revise text or numbers in brackets [ ].***
2. ***If there is text that does not apply to the project, including optional text identified with a ★, delete the text and type "(Not Used)" next to the article heading. Do not delete article section headings.***
3. ***Verify cross-references when adding or deleting any text.***

Consult the Metropolitan discipline technical lead with any questions.

NTS: Ensure all CEQA mitigation measures and/or permit conditions which must be implemented by Contractor are covered in this section.

NTS: When using this section, include the following sections in the project specifications as applicable:
01010, Summary of Work
01060, Safety and Regulatory Requirements
★01070, Storm Water Pollution Prevention Plan (SWPPP)
★01072, Water Pollution Control Plan (WPCP)
★01300, Submittals
★01530, Temporary Fences
★01550, Access, Parking, and Traffic
★01565, Noise Control
★02110, Clearing, Grubbing, and Stripping
★02140, Dewatering

PART 1 GENERAL

1.01 GENERAL

NTS: Fill in all areas as appropriate or identify these areas on the drawings. ERAs/ESAs requirements must be project specific (e.g., Fenced? Flagged? Staked? Subject to EPS review).

A. Metropolitan holds the Contractor and all subcontractors liable for meeting the conditions stated herein and in all of Metropolitan's permits and local, state, and federal environmental regulations, acts, laws, and ordinances.

B. The Contractor shall obtain necessary local, state and federal environmental permits and shall comply with the requirements of all such permits and laws, regulations, acts, codes and ordinances. Metropolitan will provide Contractor with copies of all environmental permits obtained by Metropolitan.

C. The Contractor shall perform all construction activities only within the construction boundaries shown on the drawings.[The construction boundaries shall be fenced as specified in this section[and Section 01530, Temporary Fences], unless otherwise directed by the Engineer.] The Contractor shall submit in writing a request to use any area outside the construction boundaries for any activity for authorization by the Engineer.

D. ★The Contractor and all employees shall attend an Employee Orientation Meeting with the Engineer and Metropolitan's designated environmental monitor. The Employee Orientation Meeting will inform all employees of the potential for encountering cultural resources; the sensitivity of the area in which they will be working; environmental measures and requirements; the prevention of harm, harassment, injury, or death of wildlife; and minimization or avoidance measures for sensitive resources.

E. ★The Contractor shall notify the Engineer two weeks prior to any activity within 500 feet of Environmentally Sensitive Areas (ESAs) or Environmental Restricted Areas (ERAs). The Contractor shall notify the Engineer of all proposed activities within ESAs to ensure compliance with all conditions and mitigation measures. The Engineer will, or the Contractor shall as directed by the Engineer, flag or stake the limits of ESAs/ERAs. The Contractor shall fence the ESAs/ERAs limits, as required by the Engineer.

F. ★Metropolitan is responsible for contracting any environmental monitors, mitigation monitors, qualified biologists, qualified archaeologist, qualified paleontologist, or qualified architectural historians required under this specification.

1.02 SUBMITTALS

A. ★Submittals shall be in accordance with Section 01300, Submittals, and this section.

B. ★Action Submittals

1. ★All environmental or otherwise applicable permits procured by the Contractor.
2. A current copy of each construction vehicle's certified tier specifications and Best Available Control Technology (BACT) documentation.
3. Annual copies of the CARB Certificate of Reported Compliance for the Off-Road Diesel Vehicle and Advanced Clean Fleet Regulations.
4. ★All local air quality management district permits or CARB certifications for equipment and vehicles being used by the Contractor.
5. ★Noise Control Plan: The plan shall address requirements specified in this section[and Section 01565, Noise Control].
6. ★Rideshare Plan: A Rideshare Plan for construction employees shall be developed and implemented. The trip reduction plan shall be applicable during the full term of the contract. The trip reduction plan must include rideshare and transit incentives for construction personnel. The plan shall address requirements specified in this section[and Section 01550, Access, Parking, and Traffic].

1.03 SITE ACTIVITIES

NTS: Review and coordinate with Section 02110 to ensure project specific conditions are included (i.e., stripping depth).

A. ★The Contractor shall clear, grub, and strip construction areas as specified in Section 02110, Clearing, Grubbing, and Stripping.

B. ★Staging, stockpiling, and storage areas for vehicles, equipment, and material shall be located outside of any surface water body, drainage channel, [★or ESAs/ERAs].

C. ★The Contractor shall not enter or drive through any surface water body, drainage channel, [★or ESAs/ERAs], unless noted otherwise.

D. ★No debris, soil, silt, sand, bark, slash, sawdust, asphalt, rubbish, paint, oil, cement or concrete or washings thereof, oil or petroleum products, or other organic or earthen materials from construction activities, including stockpiles, shall be allowed to enter into or placed where it can be washed into any surface water body, drainage channel, [★the Colorado River Aqueduct (CRA),] [★or ESAs/ERAs].

E. ★The Contractor shall implement measures to prevent debris, dust, liquid, and other objects from falling into the water while working over or near water surfaces.

F. ★No excess materials, rubbish, or debris shall be deposited within [choose appropriate project-specific distance] feet of any surface water body or drainage channel [★or ESAs/ERAs].

NTS: Use the following paragraph only for desert locations.

G. ★No excess materials, rubbish, or debris shall be deposited within 300 feet of the CRA.

H. ★No fueling or maintenance shall be done within [choose appropriate project-specific distance] feet of any surface water body or drainage channel [★or ESAs/ ERAs] or where petroleum products or other pollutants may enter these areas under any flow.

NTS: Use the following paragraph only for desert locations.

I. ★No fueling or maintenance shall be done within 500 feet of natural drainage swales or the CRA or where petroleum products or other pollutants may enter these areas under any flow.

J. ★Any equipment or vehicle to be driven and/or operated within a surface water body, drainage channel, or drainage swale shall be checked and maintained daily to prevent leaks of materials.

K. Stationary equipment such as motors, pumps, and generators, shall be equipped with drip pans, which are secured to prevent shifting or overturning in the event of high winds.

L. ★The Contractor shall dispose of excess materials, debris, and rubbish in approved off-site locations consistent with the requirements of issued disposal permits and applicable local, state, and federal laws and regulations.

1. The Contractor is responsible for obtaining all environmental permits and submitting them to the Engineer for authorization prior to site preparation or disposal of the materials at the approved off-site location.

2. Permission of property owner does not preclude the Engineer from rejecting a disposal site.

M. The Contractor shall dispose of all hazardous materials in accordance with Section 01060, Safety and Regulatory Requirements.

N. The Contractor shall handle, store, apply, and dispose of chemicals and/or herbicides consistent with all applicable federal, state, and local regulations.

O. The Contractor shall clean up all spills in accordance with all applicable environmental laws and regulations and notify the Engineer immediately in the event of a spill.

P. Unless otherwise shown on the drawings, the Contractor shall return all Contractor yard and laydown areas to the original topographic conditions.

Q. ★The Contractor shall stabilize exposed slopes, streambeds, and streambanks that are located within the construction limits.

R. The Contractor shall not create a nuisance or pollution as defined in the California Water Code. The Contractor shall not cause a violation of any applicable water quality standard for receiving waters adopted by the Regional Water Quality Control Board or the State Water Resources Control Board, as required by the Clean Water Act.

S. ★Dewatering activities (e.g., for nuisance water or groundwater) shall not affect any vegetation outside of the construction limits. Dewatering shall be in accordance with Section 02140, Dewatering.

T. ★The Contractor shall ensure that vehicles and equipment brought on-site shall be decontaminated in accordance with federal and state publications for controlling the spread of noxious weeds, invasive species, and disease, which includes inspecting all vehicles, tools, boots, and other project-related equipment, and removing all visible soil/mud, plant materials, and animal remnants prior to entering and exiting the project site. Rules and guidelines are available at: https://www.fs.fed.us/eng/pubs/pdf/05511203.pdf

1. The Contractor shall complete the Certification of Clean Equipment prior to any vehicles or equipment entering the project site (see Attachment A).

2. The Contractor shall decontaminate all tools, boots, and other equipment prior to entering and exiting the project site and/or between each use at different sites to avoid the introduction and transfer of organisms between locations.

   a. The Contractor shall decontaminate project gear and equipment by thoroughly scrubbing equipment, especially small crevices such as bootlaces, seams, net corners, etc., with a stiff-bristled brush to remove all organisms. Guidelines are available at: https://www.cal-ipc.org/docs/bmps/dd9jwo1ml8vttq9527zjhek99qr/BMPsTransportUtilityCorridors.pdf

3. The Contractor shall power-wash all vehicles and equipment prior to entering the project site.

   a. Power-washing vehicles includes washing all mud and debris on and under the vehicle (powertrain), bumpers, and especially, tires. Guidelines are available at: https://www.cal-ipc.org/docs/bmps/dd9jwo1ml8vttq9527zjhek99qr/BMPLandManager.pdf

b. The Contractor shall repeat the decontamination process and re-certify a vehicle or piece of equipment if it has been removed from the site, used at a different site then later returned to the project site, or as deemed necessary by the Engineer.

NTS: Consult with Safety and Regulatory Services (SRS) for requirements in below article.

1.04 AIR POLLUTION CONTROL

A. ★The Contractor shall not discharge smoke, dust, or other air contaminants into the atmosphere in a quantity that is greater than 20% opacity (Ringlemann 1) for more than 3 minutes in a 1-hour time period as required by [SCAQMD/MDAQMD Rule 401].

B. The Contractor shall use renewable diesel (R99 or R100) for all construction vehicles and equipment as required by CARB where feasible. The Contractor must demonstrate that renewable diesel is not available through normal fueling mechanisms for the Engineer's authorization to use ultra-low sulfur diesel (ULSD). [Include additional mitigation measures required by CEQA.]

C. ★The Contractor shall use low emission mobile construction equipment during site preparation, grading, excavation, and construction of the project.

D. The Contractor shall not idle the vehicle primary diesel engine for greater than 5 minutes at any location, except as allowed by CARB regulation: Title 13 CCR, Division 3, Chapter 10, Section 2485.

E. Construction equipment shall be maintained, and properly tuned and operated in a manner to reduce peak emission levels.

F. Dust Control

1. The Contractor shall provide effective measures to prevent operations from producing dust in amounts damaging to personnel, property, Metropolitan plant operations, plants, or animals, and to prevent causing a nuisance to persons living or occupying buildings in the vicinity.

2. Construction methods shall include dust reduction activities, including the use of water trucks in construction areas dust suppressants, and track-out control devices (e.g., gravel and tire cleaning grids).

3. The Contractor shall spray water as often as required to minimize dust and particulates or apply a dust inhibiting surface treatment to avoid production of dust as determined by the Engineer in areas used as construction roads or other purposes in connection with the work.

   a. The Contractor shall continuously maintain this surface condition during the entire construction period.

   b. The Contractor's construction facilities shall be operated in a manner ensuring minimum dust production.

   c. The Contractor shall water or mist soil as it is being excavated and stockpiled or loaded onto transportation trucks.

4. Paved streets shall be swept if silt is carried onto these roads from construction activities. Track-out shall not extend greater than 25 feet cumulatively in any direction.

5. The Contractor shall cover or moisten with water trucks transporting soil or debris to suppress the dispersion of dust.

6. The Contractor shall cover all trucks transporting earthen material or maintain at least 2 feet of freeboard.

G. The Contractor shall use existing onsite power sources (e.g., power poles) rather than portable generators when feasible; or clean fuel generators shall be used rather than temporary generators powered by fossil-fuel when feasible. If a portable generator is powered by an engine rated over 50 bhp, it shall be CARB registered or permitted by the local air district.

H. The Contractor shall use 2010 model year engines or 2010 model year equivalent emissions engines on diesel haul trucks, where available. At a minimum, the Contractor shall use engines that adhere to the CARB Truck and Bus Regulation: Title 13 CCR, Division 3, Chapter 1, Article 4.5, Section 2025.

NTS: Use following paragraph if mitigation measures are required under CEQA.

I. ★All off-road diesel-fueled construction vehicles greater than 25 horsepower (hp) shall be compliant with federally mandated clean diesel engines emissions (US Environmental Protection Agency Tier 4), where available. [Include additional mitigation measures required by CEQA.]

J. All off-road diesel-fueled construction vehicles shall be in accordance with CARB's In-use Off-road Diesel-fueled Fleet Regulation: Title 13 CCR, Division 3, Chapter 9, Article 4.8.

1. The Contractor shall submit a current copy of each construction vehicle's certified tier specifications, BACT documentation, or the CARB Certificate of Reported Compliance Off-Road Diesel Vehicle Regulation and be labeled with the CARB issued Equipment Identification number (EIN).

K. All portable engines greater than 50 hp and equipment shall be compliant with CARB's Portable Equipment Registration Program (PERP) Regulation: Title 13 CCR, Division 3, Chapter 9, Article 5; the Portable Engine Air Toxics Control Measures of Title 17 CCR, Division 3, Chapter 1, Subchapter 7.5, Section 93116; and local air district rules.

1. All applicable equipment must have valid CARB registrations or local air quality management district permits.

L. ★The Contractor shall notify the local air district in accordance with the CARB PERP Regulations specified timeframes for any construction projects that have fleets of PERP engines that exceed 2,500 combined hp or greater and if units are scheduled to be onsite for more than 5 days.

1. The Contractor shall ensure that project Particulate Matter (PM) emissions shall not exceed more than 82 pounds per day as required by CARB regulations: CCR Title 13, Division 3, Chapter 9, Article 5, Sections 2455-2459.

M. ★For sites contaminated with Volatile Organic Compounds (VOCs) and/or toxic air contaminants, the Contractor shall follow all requirements of SCAQMD Rule 1166 for VOC Emissions from Decontamination of Soil and/or Rule 1466 for Control of Particulate Emissions from Soils with Toxic Air Contaminants, including but not limited, to providing authorized mitigation plans and conducting dust monitoring, and required notifications.

N. ★Traffic speeds on all unpaved roads shall be [20] mph or less as posted.

NTS: Delete Rule 403.1, if not within the Coachella Valley Blowsand Zone.

O. The Contractor shall comply with [SCAQMD and/or MDAQMD] Rules 401 (Visible Emissions), 402 (Nuisance), and 403 (Fugitive Dust)[, and SCAQMD Rule 403.1 (Supplemental Fugitive Dust Control Requirements for Coachella Valley Sources)]. Copies of the Rules shall be kept at the site. Special attention shall be directed toward the following:

NTS: Delete if within MDAQMD.

1. ★The Contractor shall not discharge from any source air contaminants (e.g., smoke or dust) which exceed the legal limits endanger, or cause injury, detriment, nuisance, or annoyance to any considerable number of persons or to the public.

NTS: Delete if within MDAQMD. Delete Rule 403.1, if not within the Coachella Valley Blowsand Zone.

2. ★The Contractor shall implement the Best Available Control Measures (BACM) listed in Table 1 of SCAQMD Rule 403[and Rule 403.1].

3. ★The Contractor shall comply with the Large Operation requirements (50 or more acres of disturbed surface area or earth moving operations of 5,000 cubic yards/day for more than 3 days) which include but are not limited to notification to SCAQMD and use of BACM listed in Table 2 of SCAQMD Rule 403.

NTS: Delete if within MDAQMD. Delete Rule 403.1, if not within the Coachella Valley Blowsand Zone.

4. ★When wind speeds, including instantaneous gusts, exceed 25 miles per hour, the Contractor shall implement and record Contingency Control Measures listed in Table 3 of SCAQMD Rule 403[and Rule 403.1].

P. ★For sites conducting abrasive blasting, only CARB certified abrasives shall be used. The abrasive blasting equipment shall possess a local air district permit or CARB registration. Blasting of any materials that may contain toxics shall be confined and be used in conjunction with a permitted negative air machine. The Contractor shall comply with the following opacity/Ringlemann limits based off activity:

1. Confined blasting--20% opacity/Ringlemann 1

2. Unconfined blasting--40% opacity/Ringlemann 2

NTS: Delete if within MDAQMD.

Q. ★Any temporary batch plant located on site shall have the appropriate local air district operating permit. The operator of the plant shall use dust suppressants or other dust control measures at each source during loading, unloading, or transferring activities to limit fugitive dust emissions. These control measures shall apply to conveyors, crushing equipment, screening equipment, and storage piles. The operator shall comply with all requirements of SCAQMD Rule 1157.

NTS: Delete if within MDAQMD.

R. ★The Contractor shall use only approved asbestos removal procedures as identified in SCAQMD Rule 1403, including but not limited to, notification of the intent to conduct any demolition or renovation no later than 10 days prior to the activity.

NTS: Delete if within SCAQMD.

S. ★ The Contractor shall complete the MDAQMD Asbestos Checklist (available at: ca.gov) and, as applicable, submit a Notification of Demolition/Renovation to MDAQMD 10 working days prior to the start of any demolition or renovation work. The Contractor shall adhere to all work practices as specified in the Asbestos National Emission Standards for Hazardous Air Pollutants (NESHAP), CFR Title 40 Part 61, Subpart M.

NTS: Use Article 1.05 for non-desert locations.

1.05 BIOLOGICAL RESOURCES

A. As part of the project, the following procedures shall be implemented to avoid adverse impacts to sensitive biological resources, especially the [identify sensitive species (e.g., coastal California gnatcatcher)].

1. ★Prior to commencing construction or mobilization activities, a Metropolitan biologist will conduct a survey(s) to ensure avoidance of any sensitive resources during construction activities. Following the survey(s), Metropolitan may provide sensitive resource avoidance recommendations as appropriate.A Metropolitan biologist may be present onsite throughout the duration of the work at the discretion of Metropolitan to monitor all construction activities.

   a. ★The biologist will oversee compliance with protective stipulations for [list sensitive species], as necessary.

   b. The biologist shall be present when the Contractor establishes the construction limits as shown on the drawings and/or installs temporary fencing or other site boundary markers. All temporary fencing or other markers shall be clearly visible to construction personnel.

   c. Prior to any construction or grading activities, the biologist will provide education to all project personnel regarding the prevention of harm, harassment, injury, or death of wildlife and minimization or avoidance of sensitive resources. The instruction shall be given as often as necessary to ensure that all personnel working on site are adequately briefed in the matter.

   d. The biologist will be empowered to temporarily halt construction activities and make recommendations to ensure impact minimization, compliance with the relevant provisions of all environmental permits and regulations, and that work does not take place in habitat areas outside the clearing limits.

   e. ★No construction access, parking, or storage of equipment or materials is permitted within ESAs/ERAs, unless authorized by the Engineer.

   f. The Contractor shall cover all open trenches when not in use at the end of each workday.

B. ★As part of the project, the following procedures shall be implemented to avoid adverse impacts to trees located within the project work limits:

1. ★The Contractor shall avoid stockpiling of materials and driving or parking vehicles and equipment under the canopy of existing trees to protect tree root systems and avoid damage to the trees, where trees and work limits are not on concrete or asphalt.

2. No trees within project work limits shall be removed, cut, or trimmed unless identified on the drawings, or authorized in advance by Metropolitan.

   a. Per applicable local tree ordinances, required permits shall be obtained prior to any tree removal, cutting, or trimming.

3. Trees designated for removal shall be removed in accordance with the Migratory Bird Treaty Act and California Fish and Game Code §3503.

NTS: Use Article 1.06 for desert locations.

1.06 ★BIOLOGICAL RESOURCES (DESERT LOCATIONS)

A. As part of the project, the following standard operating procedures will be implemented to avoid adverse impacts to sensitive biological resources, especially the desert tortoise [and other sensitive species, as necessary].

1. ★Prior to commencing construction or mobilization activities, a Metropolitan biologist will conduct a survey(s) to ensure avoidance of any sensitive resources during construction activities. Following the survey(s), Metropolitan may provide sensitive resource avoidance recommendations as appropriate.

2. A Metropolitan biologist may be present onsite throughout the duration of the work at the discretion of Metropolitan to monitor all construction activities.

   a. The biologist will oversee compliance with protective stipulations for the desert tortoise [and other sensitive species, as necessary].

NTS: If other sensitive species are identified in addition to the desert tortoise, include any additional protective stipulations below, as necessary.

   b. Prior to commencing construction or mobilization activities, the biologist will survey for desert tortoise burrows or other desert tortoise sign at all work sites, including laydown and storage areas, and site access routes. Surveys shall be conducted according to the U.S. Fish and Wildlife Service document "Preparing for Any Action that May Occur Within the Range of the Mojave Desert Tortoise. Any desert tortoise burrows located during these surveys will be flagged and/or fenced to ensure avoidance during construction activities as specified in this section[and Section 01530, Temporary Fences].

   c. All Contractor's, subcontractors,' and suppliers' personnel who work onsite during construction shall participate in a desert tortoise awareness training program given by Metropolitan prior to being allowed to work on the site, which covers the following topics:

      (1) Distribution, occurrence and habitat requirements of the desert tortoise in the southwestern United States,

      (2) General behavior and ecology of the tortoise,

      (3) Sensitivity to human activities,

      (4) Legal protection,

      (5) Penalties for violations of state or federal laws,

      (6) Reporting requirements, and

      (7) Project protective measures.

   d. The biologist shall be present when the Contractor establishes the construction limits shown on the drawings and any necessary access routes, and installs temporary fencing or other site boundary markers. All temporary fencing or other markers shall be clearly visible to construction personnel. Special habitat features, such as burrows, identified by the biologist shall be avoided.

   e. Access to the project sites shall be restricted to existing routes of travel as shown on the drawings, or as designated by the Engineer in the field. Driving off-road is prohibited at all times.

   f. Prior to commencing any dewatering operations, the biologist will survey the discharge water flow path to ensure that no desert tortoises are at risk from the discharge.

   g. All workers shall inspect for tortoises under vehicles or stationary equipment prior to moving them. If a desert tortoise is present, the worker shall carefully move the vehicle or equipment only when the desert tortoise would not be injured or shall wait for the desert tortoise to move away on its own.

   h. The Contractor shall cover all open trenches when not in use at the end of each workday.

   i. Dogs or any other pets or animals shall not be allowed in any work area.

j. All trash and food items shall be promptly contained within closed, raven-proof containers and regularly removed from the site to reduce the attractiveness of the area to wildlife, especially ravens, and other tortoise predators.

k. The biologist will be empowered to temporarily halt construction activities and make recommendations to ensure impact minimization, compliance with the relevant provisions of all environmental permits, and that work does not take place in habitat areas outside the clearing limits.

NTS: Use the following if there are ESAs/ERAs.

l. ★The Contractor shall not allow access, parking, or storage of equipment or materials within ESAs and ERAs unless authorized by the Engineer.

B. Traffic speed limit shall be [20] miles per hour on all unpaved roads. The purpose of this speed limit is to enable drivers sufficient time to identify and to avoid striking and killing desert tortoises. Metropolitan will issue the Contractor a warning for the first violation of the speed limit by any of his/her employees, subcontractors, and/or suppliers. Subsequently, Metropolitan reserves the rights to expel from the project repeat speeding offenders, or a first-time offender depending on the severity of the violation as determined by Metropolitan.

C. ★As part of the project, the following procedures shall be implemented to avoid adverse impacts to trees located within the project work limits:

1. ★The Contractor shall avoid stockpiling of materials and driving or parking vehicles and equipment under the canopy of existing trees to protect tree root systems and avoid damage to the trees, where trees and work limits are not on concrete or asphalt.

2. No trees within project work limits shall be removed, cut, or trimmed unless identified for removal on project drawings, or authorized in advance by Metropolitan.

a. Per applicable local tree ordinances, required permits shall be obtained prior to any tree removal, cutting, or trimming.

3. Trees designated for removal shall be removed in accordance with the Migratory Bird Treaty Act and California Fish and Game Code §3503.

1.07 ★MIGRATORY BIRD TREATY ACT AND CALIFORNIA FISH AND GAME CODE §3503

A. No physical disturbance of vegetation, operational structures (e.g., inlet/outlet towers, overhangs, etc.), buildings, or other potential habitat (e.g., open ground, gravel, construction equipment or vehicles, etc.) that may support nesting birds protected by the Migratory Bird Treaty Act and California Fish and Game Code §3503 shall occur in the breeding season, unless authorized by the Engineer.

NTS: Use the following paragraph only for desert locations. Change breeding period based on project location, local and annual climatic conditions, and in consultation with a qualified biologist, as needed.

1. ★The breeding season in the desert typically extends from January 15 through July 15 but can vary based on local and annual climatic conditions.

NTS: Change breeding period based on project location, local and annual climatic conditions, and in consultation with a qualified biologist, as needed.

2. The breeding season extends from [specify date] to [specify date].

3. If nesting habitat must be cleared or project activities must occur in the vicinity of nesting habitat within the breeding season as defined above, a qualified biologist will perform a nesting bird survey no more than [insert number of days; typically between 3-5 days] days prior to clearing or removal of nesting habitat or start of project activities.

4. If active nests for sensitive species, raptors, and/or migratory birds are observed, an adequate buffer zone or other avoidance and minimization measures may be established until the young have fledged and are no longer reliant on the nest, as identified by a qualified biologist and authorized by the Engineer. If a buffer is necessary it will be clearly marked in the field by the Contractor, as directed by the Engineer, and construction or clearing will not be conducted within this zone.

5. A qualified biologist will monitor active nests or nesting bird habitat within or immediately adjacent to project construction areas and the Engineer will provide necessary recommendations to the Contractor to minimize or avoid impacts to protected nesting birds.
6. If implementation of avoidance and minimization measures is not feasible, the qualified biologist responsible for monitoring will be empowered to temporarily halt construction activities, until the young have fledged and are no longer reliant on the nest or biological monitoring indicates that construction can proceed with no impacts to the nest and/or young.

NTS: The following article is not necessary if there is no ground-disturbance.

1.08 ★CULTURAL AND PALEONTOLOGICAL RESOURCES

A. Cultural and paleontological resources may include, but are not limited to: prehistoric artifacts, grave goods, funerary objects, human remains, historic can scatters, building foundations, historic buildings, structures, objects, and fossils.

B. ★Archaeological and/or paleontological surveys of the project area have been conducted; however, discoveries of previously unknown archaeological and paleontological resources or buried deposits may be possible during construction.

C. ★The Contractor shall not infringe upon any areas identified as a cultural or paleontological area, whether they have been identified as an ESA/ERA or not. Any person identified trespassing upon restricted areas shall be immediately removed from the project.

D. If archaeological or paleontological resources are encountered at the project site, the Contractor shall not disturb the resources and shall immediately:

1. Cease all work within 50 feet of the discovery
2. Notify the Engineer
3. Protect the discovery area, as directed by the Engineer
4. The Engineer, with the qualified architectural historian, archaeologist and/or paleontologist, will make a decision of validity of the discovery and designate an area surrounding the discovery as a restricted area. The Contractor shall not enter or work in the restricted area until the Engineer provides written authorization.

E. ★Ground-disturbing activities will be monitored by a qualified archaeologist or paleontologist.

1. The Engineer and monitor will conduct a review of the location for the boundaries of the archaeological/paleontological monitoring area.
2. Temporary fencing or other restricting features may be used to define the boundaries of the monitoring area. The Contractor shall not work within the monitoring area boundaries unless the monitor is present.
3. The Contractor shall submit to the Engineer, a schedule of days to be worked, at least five working days prior to work within the monitoring area.
4. If any cultural materials are observed during ground disturbance, the Contractor shall follow the procedures outlined hereinabove.

1.09 ★HUMAN REMAINS

A. In the event that human remains are discovered during excavation/construction activity, Health and Safety Code Section 7050.5, CEQA Guidelines Section 15064.5 (e), and Public Resources Code Section 5097.98 shall apply. The Contractor shall notify the Engineer at once and not enter or work in the restricted area until the Engineer provides written authorization.

1.10 WILDFIRE PROTECTION

A. Gasoline-powered or diesel-powered machinery used during construction shall be equipped with standard exhaust controls and muffling devices that also act as spark arrestors.

1.11 HAZARDOUS MATERIALS

A. Handling of hazardous materials shall be in accordance with Section 01060.

1.12 LIGHT ABATEMENT

A. The Contractor shall exercise special care to direct floodlights to shine downward. Floodlights shall be shielded to avoid a nuisance to the surrounding areas.

B. No lighting shall include a residence or native area in its direct beam.

C. The Contractor shall correct lighting nuisance whenever it occurs.

1.13 ★MONITORING

A. Metropolitan is required to comply with the state and federal environmental regulations, which may require monitoring.

B. ★Metropolitan is required under the California Environmental Quality Act (CEQA) to provide mitigation monitoring in accordance with the [insert CEQA document name], [and to comply with the USFW S/ACOE/CDFW/RWQCB (10(a) *or* Section 7/1602/404/401, etc.) permit(s) issued for this project] [if permit is required]. The Contractor shall comply with the mitigation monitoring plan as specified herein and as directed by the Engineer.

C. Metropolitan's monitors will monitor construction activities to ensure that all conditions are implemented; however, the Contractor is responsible for their implementation. Monitors shall be allowed access to observe all construction.

D. The Contractor shall submit required documentation (e.g., equipment list and maintenance logs, noise monitoring logs, seed labels) demonstrating compliance with applicable regulations.

1.14 ★NATIVE AREAS

A. The Contractor is cautioned that wildlife may traverse the work limits. The Contractor shall conduct his/her operations to facilitate the well-being of all wildlife affected by the project.

B. The Contractor shall not feed or harass wildlife.

C. The Contractor shall keep the work area free of trash and food waste. All food waste and trash shall be removed from the work area daily.

1.15 NOISE CONTROL

A. The Contractor shall comply with all requirements of governmental agencies having jurisdiction.

B. All site preparation, grading, excavation, and construction activities shall be limited to the hours specified in Section 01010, Summary of Work, and shall be in accordance with local jurisdiction's noise ordinances.

1. ★Deliveries in residential areas shall only be conducted between [insert time period (i.e., 7 a.m. and 5 p.m. Monday through Saturday, and between 9 a.m. and 3 p.m. on Sunday)][hours specified in Section 01010].

2. ★Queuing of trucks and/or delivery of construction materials to any part of the construction site will not be allowed in residential areas outside of designated hours.

C. ★The Contractor shall comply with all requirements of the authorized Noise Control Plan, as specified in this section.

D. The Contractor shall perform all work without undue noise and shall make every effort to abate or prevent noise nuisances.

E. Construction vehicle equipment shall be kept in proper working order for the duration of the construction activities.

F. The Contractor shall equip all construction equipment, fixed and mobile, including internal combustion engines, with properly operating and maintained noise mufflers and intake silencers, consistent with the manufacturers' standards.

G. Stationary noise-generating equipment, such as generators and compressors, shall be housed or covered and located as far possible as practicable from the nearest residential/institutional property lines to attenuate noise.

H. If electrical services are available within 150 feet, electrical power shall be used to run air compressors and similar power tools at all construction activity locations, in lieu of gas or diesel-powered compressors.

1.16 SURFACE AND STORM WATER CONTROL

A. Surface and storm water control shall be in accordance with Section [01070, Storm Water Pollution Prevention Plan (SWPPP) / 01072, Water Pollution Control Plan (WPCP)].

1.17 ★TRAFFIC

A. The Contractor shall set up temporary traffic control as specified in the Contractor's authorized traffic control plan, and as specified in Section 01550, Access, Parking, and Traffic. See Submittals article.

B. ★The Contractor shall cover all open trenches when not in use at the end of each workday, where feasible and necessary.

1. In residential areas, plating shall be recessed to reduce noise impacts to residents.

1.18 ★WELL-BEING OF DOMESTIC ANIMALS

A. The Contractor is cautioned that domestic animals (cattle, horses, and others) may traverse the work limits or are kept on surrounding properties. The Contractor shall conduct his/her operations to avoid unnecessary disturbances and facilitate the well-being of all animals affected by the project. The Contractor shall consult with the Engineer and affected animal owners and shall cooperate in using construction methods and establishing operating procedures to avoid unnecessary disturbances to animals.

PART 2 PRODUCTS (NOT USED)

PART 3 EXECUTION (NOT USED)

ATTACHMENT A

CERTIFICATION OF CLEAN EQUIPMENT

Project Name:_____

I certify that the following equipment is clean of soil, seeds, vegetative matter, other debris, or adult, juvenile, or eggs of aquatic invasive animals, and has been decontaminated. Cleaning and decontamination were performed outside of the bed, bank, or channel of a stream and the bed or shore of a lake. Rinse water was properly contained and disposed of according to applicable federal, state, and local laws and ordinances enacted and in force at time.

Equipment Description	License Plate/Identification #		Cleaning Location	Date Cleaned
		IN		
		OUT		
		IN		
		OUT		
		IN		
		OUT		
		IN		
		OUT		
		IN		
		OUT		
		IN		
		OUT		
		IN		
		OUT		
		IN		
		OUT		
		IN		
		OUT		
		IN		
		OUT		
		IN		
		OUT		

_____ _____

Signature of Permittee or Designee Date

Certification is needed any time equipment is moved into the project work area and prior to leaving the project work area for this project.

END OF SECTION

SECTION 01070
STORM WATER POLLUTION PREVENTION PLAN (SWPPP)

Note to Specifier (NTS): This Master Specification is not a "standard" specification but a baseline template to tailor for specific project needs. Ensure that editing is consistent with other contract documents.
1. Revise text or numbers in brackets [ ].
2. If there is text that does not apply to the project, including optional text identified with a ★, delete the text and type "(Not Used)" next to the article heading. Do not delete article section headings.
3. Verify cross-references when adding or deleting any text.
Consult the Metropolitan discipline technical lead with any questions.

NTS: If the project requires a SWPPP, include Section 01070. If a SWPPP is not required, then use Section 01072, Water Pollution Control Plan (WPCP), instead of Section 01070.

NTS: When using this section, include the following sections in the project specifications as applicable:
★00120, Supplementary Instructions to Bidders
01300, Submittals
★02952, Erosion Control – Post Construction BMPs

PART 1 GENERAL

1.01 REFERENCES

NTS: Delete references from Part 1 if they are not cited in the spec section. If new references are cited in the text, add the new references in Part 1.

A. General

1. The publications listed below form a part of this specification to the extent referenced. In the event of a conflict between the text of this specification and the references cited herein, the text of this specification shall take precedence.

2. Where a date is given for reference standards, the edition of that date shall be used. Where no date is given for reference standards, the latest edition available on the date of Notice Inviting Bids shall be used.

B. California State Water Resources Control Board (SWRCB)

1. Storm Water Program

C. California Stormwater Quality Association (CASQA)

2. Construction Best Management Practices (BMP) Online Handbook

1.02 SUBMITTALS

NTS: Coordinate with Document 00120, Supplementary Instructions to Bidders, regarding the timing of the SWPPP submittal. If the project requires an extensive SWPPP (typically for a large project), Document 00120 provides more time for the Contractor to prepare and submit, and for Metropolitan to review the SWPPP.

A. Submittals shall be in accordance with Section 01300, Submittals, and this section.

B. Action Submittals

1. The Contractor shall submit an SWPPP to the Engineer for authorization. ★[The timing for the SWPPP submittal shall be as specified in Document 00120, Supplementary Instructions to Bidders]. The submitted SWPPP shall be fully compliant with the requirements of the SWRCB, Storm Water Program. The SWPPP shall be resubmitted if

determined unacceptable by the Engineer. Two paper copies and one electronic PDF format copy of the SWPPP shall be submitted. The SWPPP shall contain the following:

a. Names and qualifications of the Contractor's SWPPP Manager, Qualified SWPPP Developer (QSD), and Qualified SWPPP Practitioner (QSP).

b. Statement indicating the Contractor's intent to comply with the terms of the Construction General Permit (CGP) for storm water discharges associated with construction activity until the Contractor-prepared SWPPP is authorized by the Engineer.

2. The Contractor shall submit all necessary revisions and amendments to the SWPPP to the Engineer for authorization. Two paper copies and one electronic PDF format copy of SWPPP amendments shall be submitted.

C. Information Submittals

1. All annual compliance certifications, monitoring program reports, inspection logs, and data shall be submitted as electronic PDF format copies to the Engineer as required by terms and conditions of the CGP and SWPPP. The Contractor shall also provide the Engineer access to a maintained paper copy of inspection logs and reports.

1.03 RELATED ACTIVITIES BY METROPOLITAN

A. Metropolitan has provided site maps of the project to assist the Contractor with its preparation of the SWPPP.

B. Upon review and authorization of the Contractor-prepared SWPPP, Metropolitan will file the SWPPP together with the Notice of Intent (NOI) and obtain a Waste Discharge Identification number (WDID) from the SWRCB. It typically takes up to 10 working days for the SWRCB to issue a WDID after filing by Metropolitan.

C. Metropolitan will also file any revisions to the SWPPP that are submitted by the Contractor, and authorized by the Engineer during the course of the contract.

1.04 PERMIT REGISTRATION DOCUMENTS (PRDS)

A. The authorized SWPPP information will be posted electronically by Metropolitan on the State Water Board's Stormwater Multi-Application and Report Tracking System (SMARTS) website. Information submitted by Metropolitan may be viewed on SWRCB website.

1.05 STORM WATER POLLUTION PREVENTION PLAN PREPARATION AND IMPLEMENTATION

NTS: Confirm the risk level classification of the site. If the site has a risk level classification greater than 1, then include Paragraph 1.05A. Modify as necessary if the project has multiple sites.

A. ★Risk Level Classification

1. The site shall be considered to have a Risk Level [2 or 3] classification.

2. Contractor's QSD shall use this risk classification when developing the SWPPP.

B. The Contractor shall not mobilize or perform any work on the project site until the Engineer has authorized the Contractor's SWPPP and obtained a WDID from the SWRCB.

C. During the course of the contract, the Contractor shall revise and update the SWPPP as required by SWRCB and resubmit to the Engineer for authorization.

D. The Contractor shall prepare and implement a site specific SWPPP in accordance with the requirements of the SWRCB (http://www.swrcb.ca.gov/water_issues/programs/stormwater/constpermits.shtml), the CGP, and the Construction BMP Online Handbook developed by CASQA (https://www.casqa.org/programs-initiatives/bmp-handbooks/construction). The SWPPP and all Contractor activities shall be coordinated with other construction activities and SWPPPs at the site.

1. The SWPPP for this project shall conform to the requirements which include:

a. Eliminate/reduce non-storm water discharges to storm systems and other U.S. waters.

b. Develop and implement a site specific SWPPP that specifies BMPs to prevent all construction pollutants from contacting storm water, limit erosion and sediment transport, and keep all products of erosion and pollutants from moving off site.

c. Perform inspections and maintenance of all BMPs (storm water control structures and pollution prevention measures) and comply with the risk level requirements set-forth by the CGP.

d. Comply with post-construction BMPs for post-construction erosion and sediment control prepared by Metropolitan.

2. The SWPPP shall adequately address these requirements and shall contain as required:

a. Site and source descriptions (including the elements and characteristics specific to the site)

b. Descriptions of BMPs for erosion and sediment control

c. BMPs for construction waste handling and disposal

d. Implementation of authorized local plans

e. A sampling plan and/or sampling contingency plan, as required and based on project risk level

f. Non-storm water management

3. Erosion and sediment control shall include the following practices:

a. Prevent runoff from flowing over unprotected slopes.

b. Keep disturbed areas to the minimum necessary for construction.

c. Control sediment transport within the site and prevent sediment transport from the site, using appropriate BMPs, including but not limited to check dams, fiber rolls, sand bags, and siltation fences. Reduce sediment transport off site though construction of appropriately designed desilting and retention ponds.

d. Remove and dispose of all construction-generated siltation collected within or behind BMPs, including retention ponds.

e. Confine soil disturbance activities to the dry season, whenever possible. If construction needs to be scheduled for the wet season, ensure that erosion and sediment transport control measures are implemented prior to disturbance of soil and/or vegetation.

f. Stabilize disturbed areas as quickly as possible but in no case shall the time of stabilization exceed the time limits specified by the Regional Water Quality Control Board and the requirements of the CGP.

g. Maintain existing temporary controls until they are replaced with permanent controls.

h. Maintain and improve existing controls as necessary to comply with the CGP for construction activity.

E. Storm water management and erosion/sediment controls shall be installed in accordance with the authorized SWPPP and the requirements of the CGP. Controls and procedures shall conform to the latest edition of CASQA's Construction BMP Online Handbook (Web-based portal).

F. The Contractor shall amend the SWPPP prior to and during the course of the work as required by field conditions, construction procedures, or the Engineer. Changes shall be properly documented in the SWPPP. Copies of all amendments shall be submitted to the Engineer for authorization.

G. Maintenance and Inspections

1. The Contractor shall make visual inspections of all erosion control and sediment transport devices as necessary to ensure proper operation not less than once per week, and promptly before and after every rainstorm and at least every 24 hours during an extended rainfall event. If such inspection reveals that additional measures are needed to prevent erosion and sediment transport, the Contractor shall promptly maintain, modify, or install additional devices as needed. The Contractor shall use the forms in the SWPPP for all inspections, and all completed forms shall be included in the SWPPP and submitted to the Engineer.

2. The Contractor shall perform routine maintenance, which shall include maintenance and repair of BMPs, debris removal, silt/sediment removal, clearing of vegetation around flow control devices to prevent clogging, and maintenance of healthy vegetative cover.

H. Removal and Formal Clean-up

1. Once the site has been successfully stabilized against erosion and sediment transport, and post construction BMPs have been established, the Contractor shall remove temporary sediment control devices and all accumulated silt and debris. The Contractor shall dispose of silt and waste materials in a proper manner. The Contractor shall restore all areas disturbed during this process and stabilize against erosion with surfacing materials.

I. Post-Construction BMPs Installation

4/14/2026 Board Meeting

1. Post-Construction BMPs, as described in the authorized SWPPP★[and as specified in Section 02952, Erosion Control – Post Construction BMPs], shall be installed before the end of the project.

J. Failure to Adopt and/or Implement an Acceptable SWPPP

1. If the Contractor fails to adopt and implement an acceptable SWPPP, Metropolitan reserves the right to stop the Contractor's work without recompense, and withhold payments owed to the Contractor until such time as an acceptable SWPPP is adopted and implemented, and/or design and implement an acceptable SWPPP, using Metropolitan or other Contractor forces with costs for same deducted from monies owed the Contractor. In addition, Metropolitan reserves the right to suspend work for failure of the Contractor to adopt and implement an acceptable SWPPP in accordance with Article 13 of the General Conditions.

2. Fines levied by authorities having jurisdiction for failure of the Contractor to adopt and implement an acceptable SWPPP shall be deducted from monies owed the Contractor.

PART 2 PRODUCTS

2.01 EROSION CONTROL MATS AND FIBER ROLLS

A. Erosion control mats, fiber rolls and other BMP components containing plastic netting shall not be allowed. The Contractor shall use products containing biodegradable netting.

PART 3 EXECUTION (NOT USED)

END OF SECTION

SECTION 01565
NOISE CONTROL

Note to Specifier (NTS): This Master Specification is not a "standard" specification but a baseline template to tailor for specific project needs. Ensure that editing is consistent with other contract documents.

1. ***Revise text or numbers in brackets [ ].***
2. ***If there is text that does not apply to the project, including optional text identified with a ★, delete the text and type "(Not Used)" next to the article heading. Do not delete article section headings.***
3. ***Verify cross-references when adding or deleting any text.***

Consult the Metropolitan discipline technical lead with any questions.

NTS: When using this section, include the following sections in the project specifications as applicable:
01010, Summary of Work

PART 1 GENERAL

1.01 GENERAL

A. Metropolitan holds the Contractor and all subcontractors liable for meeting the conditions stated herein and in all permits referenced in the specifications and all applicable local, state, and federal regulations, acts, laws, and ordinances.

B. The Contractor shall obtain noise variances from [name of city or county] for nighttime and/or weekend work as required.

C. Implementation of noise control measures required in this section does not relieve the Contractor from complying with the local noise ordinances shown in the following table.

Table 1. Noise Limits

Location / Jurisdiction	Noise Limits	Work Hour Restrictions

1.02 REFERENCES

NTS: Delete references from Part 1 if they are not cited in the spec section. If new references are cited in the text, add the new references in Part 1.

A. General

1. The publications listed below form a part of this specification to the extent referenced. In the event of a conflict between the text of this specification and the references cited herein, the text of this specification shall take precedence.

2. Where a date is given for reference standards, the edition of that date shall be used. Where no date is given for reference standards, the latest edition available on the date of the Notice Inviting Bids shall be used.

B. American National Standards Institute (ANSI)

1. ANSI S1.1, Acoustical Terminology

2. ANSI S1.4, Specifications for Sound Meters

C. American Plywood Association (APA)

D. California Building Standards Commission

1. California Building Code (CBC)

E. International Electrotechnical Commission (IEC)

1. IEC 60942, Electroacoustics - Sound Calibrators

1.03 DEFINITIONS

A. Decibel (dB) - A unit of level which denotes the ratio between 2 quantities which are proportional to power; the number of decibels corresponding to the ratio of 2 amounts of power is 10 times the logarithm to the base (10) of this ratio.

B. Average Hourly Noise (dBA L_{EQ}) – The time period average equivalent A-weighted noise level during the stated measurement period.

C. A-Weighted Sound Level (dBA) – The sound level in decibels as measured on a sound level meter using the A-weighted network.

D. Equivalent Noise Level, L_{EQ} – The average A-weighted noise level during the stated measurement period.

E. NRC – Noise Reduction Coefficient

F. Property Line – For the purposes of this section the property line is the point where a residential or business property begins and extends vertically to the height of the tallest structure on the property, and horizontally to the limits of the property.

G. Sensitive Receptors – Human or animal that can be negatively impacted by high levels and/or durations of noise.

H. Sound Level Meter – an instrument including a microphone, an amplifier, an output meter, and "A" frequency weighting network for the measurement of sound levels which satisfies the pertinent requirements for Type S2A meters in American Standard Specifications for sound level meters in the most recent version of ANSI S1.4.

I. STC – Sound Transmission Class

J. Work Site – An area designated by the Contractor that encompasses the limits of where workers and equipment will be operating.

1.04 SOUND LEVEL MEASUREMENTS

A. Noise level measuring instruments shall comply with the latest version of ANSI S1.4 specifications for sound meters, and be capable of meeting accuracy standards as defined by ANSI Type 1 or Type 2 for sound metering instruments.

B. Noise level measuring instruments shall be maintained per the manufacturer’s calibration recommendations,

C. Sound level measurement shall be measured with a sound level meter using A-weighting and a "slow" response time as defined in the latest version of the most recent version of ANSI S1.1.

D. All noise measurement meters must be equipped with a manufacturer’s recommended wind noise shield at all times during a measurement.

E. All measurements unless stated otherwise shall be provided in the format of the time period average equivalent noise level (L_{EQ}) noting the time period if less than 1-hour.

F. A calibrator as defined by the latest version of IEC 60942 shall be used for checking the calibration of hand-held noise measuring instruments in the field.

G. Noise measuring instruments shall not be exposed to extremes of humidity, and any condensation shall be carefully avoided.

1.05 SUBMITTALS

A. Submittals shall be in accordance with Section 01300, Submittals, and this section.

B. Action Submittals

1. The Contractor shall submit a Noise Control Plan stamped as applicable by a Professional Engineer, including drawings and calculations for noise control structures, 30 working-days prior to mobilization at access sites and

ventilation locations. The Noise Control Plan shall be authorized by the Engineer prior to start of site construction work and shall be implemented prior to site construction work unless otherwise stated in the plan. The Noise Control Plan shall include but not necessarily be limited to the following, to the extent feasible to protect the interests of the public, and to allow for project completion in light of critical work schedules, necessary work methods, and the physical constraints of Metropolitan's right-of-way and available work areas:

a. Identification of sensitive receptors, receptor locations and elevations, and the location and approximate elevation of noise-generating activities (i.e., excavating, staging, parking, meeting areas) and equipment.

(1) Noise levels shall be measured at the nearest property lines.

(2) The Engineer may relocate or add additional locations to monitor noise levels.

b. Pre-construction noise measurements detailing location, time, frequency, results of measurements, and source of noise.

c. Detailed noise attenuation measures, including description of proposed construction activities, description and location of noise control measures, description of how, when, frequency, and where noise measurements shall be taken, and a sample noise monitoring form.

d. Drawings for the types of noise control barriers to be erected for all noise-generating and stationary construction equipment showing the methods of support and anchoring, along with calculations.

e. Proposed noise barriers with required STC ratings and noise reduction methods, modeling results, monitoring strategy, and procedures for mitigation when the noise limits specified in this section are exceeded.

(1) Noise levels shall be calculated/modeled at a height of 5 feet above grade at the property boundary wall at single story residences or businesses.

(a) If the property has a wall which meets the requirement for consideration as a noise control element, the noise level should be calculated at least 10 feet inside the wall, as authorized by the Engineer.

(2) Noise levels shall be calculated/modeled at a height equivalent to 5 feet above each floor level located above the first floor at multi-storied residences or businesses.

f. Qualifications of the person utilizing the instrument to measure the noise levels demonstrating prior experience or training by an experienced professional measuring noise levels with type of instrument being used.

g. A Nighttime Construction Management Plan, if any work is conducted during nighttime hours.

PART 2 PRODUCTS

2.01 GENERAL

A. Noise control materials may be new or used.

1. Used materials shall be sound and free of damage and defects and shall be of a quality and condition to perform their designed function while providing a suitable appearance.

2. Used material must last for the duration of construction.

B. Unless otherwise specified, noise control barrier or material shall have a minimum STC rating of 25.

1. STC 25 requirement may be fulfilled with:

a. Flexible noise control curtains/blankets with a laboratory test specification of STC 25.

b. A double layer system consisting of two curtains/blankets with a minimum test specification of STC 18 with a 6-inch gap between them and ¾ inch thick plywood backing each of the curtains/blankets.

c. An alternative material with proof of STC 25 or greater noise control value.

2. STC 32 requirement may be fulfilled with:

a. Flexible noise control curtains/blankets with a laboratory test specification of STC 32

b. A double layer system consisting of two curtains/blankets with a minimum test specification of STC 25 with a 6-inch gap between them and ¾ inch thick plywood backing each of the curtains/blankets.

c. Two layers of 3/4-inch thick plywood barrier material separated by stud wall constructed with 2 by 4 inch (nominal) studs, 16 inches on center with gaps between studs filled with insulation rated no less than R30.

d. An alternative material with proof of STC 32 or greater noise control value.

C. Noise control barriers may be constructed of plywood or alternate materials meeting STC ratings.

1. All plywood used shall meet the minimum APA specification standard rating of C-D exterior grade.

D. Noise control barriers shall be designed to withstand, and anchored properly to handle, the loading generated by high sustained winds and gusts to which the project area can be subjected. Wind speeds, both sustained and gusts, used to determine loading on noise control barriers shall be in accordance with the CBC and current local building codes and ordinances.

E. Noise control barriers must be maintained in compliance with this specification for the duration of the Contract.

1. Damage, gaps, holes, or weaknesses in the noise control barrier, or any openings between the barriers or barrier and the ground shall be promptly repaired by the Contractor.

F. The Contractor is responsible for maintaining the safety and appearance of the noise control barrier.

G. Noise control barriers must have flush mating surfaces of wall sides when walls are joined together or at corners.

1. Gaps or cracks between wall sections and between the bottom edge of walls and grade shall be closed with material that shall completely close the gaps and be dense enough to attenuate noise.

H. Gates and/or doors in the noise control barrier that are either hinged or rolling shall be constructed of the same or equally effective material as the noise control barrier.

1. Gates and doors in the noise control barrier shall be constructed to ensure that the edges overlap the noise control barrier to eliminate gaps.

I. Noise control barriers that do not provide an NRC rating of 0.85 for the barrier side facing the equipment shall have a construction liner provided on the equipment side of glass fiber or other appropriate type of noise-absorbing material at least two inches thick with a manufacturer's NRC rating of 0.85 or better. Construction liner coverage must be at least 85 percent of the total noise control barrier area.

J. Noise control curtain/blanket shall be constructed of durable, flexible composite material featuring a noise barrier layer bonded to a sound-absorptive material on one side.

1. Noise barrier layer shall be constructed with rugged, impervious material with a surface weight of at least one pound per square foot.

2. Sound-absorptive material shall include a protective facing and securely attached to one side of the noise barrier layer over its entire surface.

3. Materials shall be fire-retardant with a class A fire rating for the composite material system.

K. Noise control curtain materials shall be corrosion-resistant to mild acids and alkalis, salts, oils, and grease. The materials shall also be abuse-resistant, exhibiting superior hanging and tear strength during construction.

1. Curtain/blanket barrier material shall have a minimum breaking strength of 120 lb/in and minimum tear strength of 30 lb/in.

2. Curtain/blanket absorptive material facing shall have a minimum breaking strength of 100 lb/in and minimum tear strength 7 lb/in.

3. Sound-absorptive material shall be mildew-resistant, vermin proof, and non-hygroscopic.

2.02 NOISE CONTROL – VENTILATION EQUIPMENT

A. Ventilation equipment shall be enclosed, or as directed by the Engineer.

B. Contractor shall use electric equipment instead of diesel equipment when possible.

C. Contractor shall implement intensive equipment maintenance program to reduce undue noise.

PART 3 EXECUTION

3.01 GENERAL

A. The Contractor is responsible for obtaining noise variances from [name of city or county] for work outside of standard noise ordinances as detailed in Section 01010, Summary of Work.

B. The Contractor is responsible for design, detailing, and adequacy of the footings, framework, supports, posts, attachment methods and other appurtenances required for the proper erection of noise barriers, with the applicable Professional Engineer stamp.

C. The Contractor is responsible for the maintenance, safety, and appearance of the noise control barrier for the duration of the construction.

D. The Contractor shall locate all noise-generating and stationary construction equipment as far as possible from near-site residential and sensitive receptors and situated so that emitted noise is directed away from the sensitive receptors.

E. Noise-generating equipment shall be oriented such that the source of noise is facing away from the nearest sensitive receptors to the extent possible.

F. The use of a work site noise control barrier, a barrier large enough to encompass the entire work site or a portion of the work site, shall not negate the use of noise control barriers for specific equipment, as noted herein.

G. Reduce equipment idling time to 5 minutes on cranes and construction equipment.

H. Areas where workers gather (break areas, shift-change areas, meeting areas, and sanitary stations) shall be located a minimum of 100 feet away from any residence, or to the greatest extent feasible.

I. Parking areas shall be located a minimum of 150 feet from sensitive receptors. Parking areas within 500 feet of sensitive receptors shall be posted, to prohibit workers from gathering during nighttime hours, and prohibiting radios and music at any time.

J. Fuel deliveries shall be a minimum of 500 feet from residences or to the greatest extent feasible.

K. The Contractor shall perform all work without undue noise and shall make every effort to alleviate or prevent noise nuisances.

L. Site preparation, excavation, site closure activities and delivery trucks shall be allowed during daytime hours only and in compliance with local noise and traffic ordinances.

M. The Contractor's construction vehicles and equipment shall have mufflers. The Contractor shall equip all construction equipment, fixed and mobile, with properly operating and maintained noise mufflers and intake silencers, consistent with the manufacturer standards. Equipment shall be maintained to a minimum standard that includes engine noise baffles and mufflers that meet or exceed the original manufacturer requirements.

N. The Contractor shall utilize the following types of equipment whenever possible: electrical instead of diesel powered equipment, hydraulic tools instead of pneumatic tools, and use of electric welders powered by remote generators.

O. The Contractor shall install a noise control barrier surrounding stationary noise generating equipment in addition to any noise control barriers installed to encompass or shield a portion of the general work site that may be installed by the Contractor as required under these specifications. Noise control barrier and enclosure construction criteria shall follow general guidelines listed in the following section.

1. Noise control barriers constructed by the Contractor shall be designed by a qualified professional with experience in designing noise control barriers.

2. Noise control barriers for equipment shall conform to the requirements for bag filters and large compressors, air humidifiers, and generators, as specified herein.

3. Noise control barriers and enclosures shall be implemented using the most appropriate material, configuration, and location, to achieve the maximum feasible noise reduction.

4. All inner surfaces, including any removable roof sections of a noise control barrier must have a noise absorptive inner layer.

5. Noise control barriers with gates or doors shall be kept closed, except for brief periods of time to allow access to the equipment or construction site.

6. Equipment that has noise control doors shall be operated only with the doors fully closed.

P. The Contractor shall handle, store, apply, and dispose of noise barriers consistent with all applicable federal, state, and local regulations.

3.02 NOISE MONITORING

A. General

1. The Contractor shall measure the noise level for single story and multi-storied residences or businesses in accordance with this section's submittal requirements for the Noise Control Plan.

B. Pre-Construction Noise Measurements

1. Prior to the start of construction, the Contractor shall measure noise levels at the nearest sensitive receptors, as identified in the Noise Control Plan, during daytime and nighttime hours (if nighttime work is required) and shall submit the measurements in the Noise Control Plan.

    a. If noise levels are in excess of the noise limits specified in this section, procedures identified in the Noise Control Plan must be implemented.

C. Noise Monitoring Recordation

1. All monitoring results shall be recorded on a form supplied by the Contractor and authorized by the Engineer.

    a. The noise monitoring form shall note the date and the time of day of the noise monitoring, noise level, noise threshold, location of measurement taken, elevation of where measurement was taken, construction activity being performed, and the person(s) performing the monitoring.

2. Monitoring results shall be submitted to the Engineer at the conclusion of the testing.

3. Only monitoring equipment with current and valid calibration dates/sticker shall be used for monitoring.

4. Monitors shall be experienced in operating the monitoring equipment.

D. Construction Noise Monitoring

1. The Contractor shall perform noise monitoring following initial setup of equipment and noise measurements to measure noise levels during work and to measure the effectiveness of noise control measures.

2. The Contractor shall plan noise measurement times to coincide with scheduled operations of onsite equipment expected to create the loudest noise impacts during the normal measurement schedule and at the beginning of each new equipment activity. Noise levels shall be measured in 30-minute increments noting the lowest and highest noise level measured within 30-minute intervals at the start of construction and at the beginning of each new activity, or as new equipment is used as directed by the Engineer. Should any equipment be in use during nighttime hours, noise levels must be measured in accordance with the above parameters.

3. If noise levels are in excess of the noise limits specified in this section, procedures identified in the Noise Control Plan must be implemented.

    a. After initial installation of noise control barriers and operation of equipment the Contractor shall measure the noise levels at the nearest sensitive receptors.

4. The Contractor may be required to conduct additional noise monitoring following the initial measurements taken, if there are any changes made to the noise control measures, noise generating equipment is relocated, noise control barriers are not properly maintained, or nearby sensitive receptors are impacted.

5. Where measured noise levels at the property line of residences are shown to exceed the noise limits specified in this section, additional feasible noise control measures shall be implemented in an effort to achieve the specified daytime and nighttime thresholds.

    a. Noise monitoring shall be performed to record the achieved level of noise reduction.

6. Metropolitan will have a monitor present during construction activities to ensure that all conditions are implemented and will be allowed to observe all construction activities; however, the Contractor is responsible for implementation.

END OF SECTION

THIS SECTION IS BEING UPDATED

A new version is being developed in the Master Spec Preparation for CCB folder in ProjectWise (Ctrl + Click to follow the link). Consult with the Discipline Tech Lead to determine which version to use for the project.

SECTION 02110
CLEARING, GRUBBING, AND STRIPPING

Note to Specifier (NTS): This Master Specification is not a "standard" specification but a baseline template to tailor for specific project needs. Ensure that editing is consistent with other contract documents.

1. ***Revise text or numbers in brackets [ ].***
2. ***If there is text that does not apply to the project, including optional text identified with a ★, delete the text and type "(Not Used)" next to the article heading. Do not delete article section headings.***
3. ***Verify cross-references when adding or deleting any text.***

Consult the Metropolitan discipline technical lead with any questions.

NTS: When using this section, include the following sections in the project specifications as applicable:
01070, Storm Water Pollution Control Plan (SWPPP) or 01072, Water Pollution Control Plan (WPCP)
★02010, Demolition
02200, Earthwork

NTS: Omit Submittals if the requirements in Part 3 of this section do not call for removing trees or shrubs, or the branches from existing trees.

PART 1 GENERAL

1.01 ★SUBMITTALS

A. Tree sealant: The proposed tree sealant shall be submitted for approval [30 days] prior to the removal of branches from trees that are designated to remain in place.

B. ★Contractor shall provide submittals for removal of trees and shrubs within the limits of the trimming requirements. Submittals shall document the tree and shrub types, and the number and size of trees and shrubs.

PART 2 PRODUCTS (NOT USED)

PART 3 EXECUTION

3.01 SCHEDULING

A. Clearing, grubbing, and stripping shall be completed as a separate item of work before the beginning of excavation, stockpiling, trenching, or fill operations. The completed cleared areas must be approved by the Engineer before the Contractor begins subsequent earthwork items.

B. Areas within the limits of excavation, embankment, building areas, roadways, sidewalks, and other facilities shall be cleared, grubbed, and stripped before earthwork begins.

C. Borrow areas shall be cleared, grubbed, and stripped prior to use. These areas shall be cleared, grubbed, and stripped in stages, as necessary, to ensure that the areas are not contaminated.

D. Areas to be used for stockpiling of material shall be cleared, grubbed, and stripped prior to stockpiling.

E. Clearing, grubbing, and stripping of the length of trench to be excavated each day shall be completed, and material from these operations shall be stockpiled away from the trench area, before the start of trenching.

3.02 PRESERVATION OF EXISTING CONDITIONS

A. ★Existing trees, shrubbery, other vegetation, structures, pavements, or utilities designated to remain in place shall be protected from damage resulting from the work.

NTS: Edit the following paragraphs as necessary to ensure that environmental and permit requirements are included.

B. ★Special protection shall be provided at [oak trees] [plant material requiring special protection].

C. ★Tree branches shall be cut and removed only where, in the opinion of the Engineer, such cutting is necessary to effect construction operations. Tree branches other than those that must be removed to perform the work shall be trimmed to provide a balanced appearance. Scars resulting from the removal of branches shall be treated with an approved tree sealant.

NTS: Ensure that no agreement exists contrary to the following requirements.

D. ★Trees, shrubs, or plants within the limits of [work] [the easement on private property] that interfere with excavation or trenching may be removed as long as they are kept intact with their root system and protected as described in this section.

1. Plant locations shall be documented and submitted to the Engineer before the plants are removed.

NTS: Confirm that topsoil exists on the project. If present, edit the following paragraph to ensure compatibility with its use as indicated.

2. The root system of the trees, shrubs, or plants shall be balled, bound in burlap, heeled into [suitable stripped materials or soils] [the stockpiled topsoil] from the excavation, and kept watered as required.

3. Upon completion of work in the affected areas, the trees, shrubs, or plants shall be replanted in their original positions.

4. When a tree, shrub, or plant that has been disturbed or otherwise damaged by the Contractor dies within 6 months from the time that it was disturbed, damaged, or replanted; the tree, shrub, or plant shall be replaced in kind and size.

3.03 CLEARING, GRUBBING, AND STRIPPING

A. General

1. Clearing, grubbing, and stripping shall extend to five feet beyond the limits of excavations and fill slopes, but not beyond the limits of work.

NTS: The project will have either a Storm Water Pollution Control Plan (SWPPP) per Section 01070 or a Water Pollution Control Plan (WPCP) per Section 01072 depending upon the amount of land disturbance. Select the appropriate reference in the following paragraph.

2. Temporary surface, storm water, and erosion control in conformance with the approved [Storm Water Pollution Prevention Plan (SWPPP) in accordance with Section 01070 / Water Pollution Control Plan (WPCP) in accordance with Section 01072] shall be implemented concurrent with the clearing, stripping, and grubbing operations.

3. Waste-disposal areas shall be cleared, grubbed, and stripped only as necessary for the disposal of waste material.

4. Areas that have been cleared, grubbed, and stripped shall be maintained free of objectionable growth until the work has been completed.

B. Clearing

1. Clearing shall consist of cutting, removing, and disposing of objectionable material from the ground surface, such as trash, trees, brush, logs, stumps, weeds, grasses, fences, structures, and natural or artificial obstructions of any kind.

2. During the clearing process, trees shall be cut so that they fall into the area to be cleared. Trees and stumps requiring removal shall not be cut to ground level but shall be pulled completely from the ground.

3. Clearing shall also include the removal and disposal from the jobsite of trash piles and rubbish created prior to and during the construction work.

NTS: If the removal of pavements and structures is required during clearing activities for the project, then include Section 02010, Demolition, in the project specifications and include the following article.

4. ★Prior to removal of pavement or structures, scoring or sawcutting is required as specified in Section 02010, Demolition.

C. Grubbing

1. Grubbing shall consist of digging up, removing, and disposing of objectionable material found at or below the ground surface such as trash, trees, brush, logs, stumps, roots, and natural or artificial obstructions of any kind that will interfere with the required excavations and construction.

2. Unless otherwise shown or specified, stumps, roots over one inch in diameter, buried logs, and all other objectionable materials shall be removed to a depth of 3 feet below the existing ground surface, or the structure or pipeline subgrade, whichever is deeper.

NTS: Confirm that topsoil exists on the project. If present, edit the following section to ensure that special provisions for its use are included. Section 02200, Earthwork, should also be edited to ensure compatibility with the reference indicated herein.

D. Stripping

1. Stripping shall consist of the removal of organic materials, sod, ★[topsoil,] grass, and grass roots from the areas designated to be stripped.

2. Except under previously existing paving or structures, or when otherwise shown on the drawings, existing soil materials shall be stripped to a depth of 8 inches below the original ground surface.

3. Stripped materials ★[and topsoil] shall be stored in accordance with Section 02200, Earthwork, and shall not be mixed with borrow materials, but shall be retained for placement in the top 12 inches of fill in the areas to be landscaped.

4. The Contractor shall ensure that stripped materials ★[and stockpiled topsoil] are identified and marked so that they are not incorporated into fill or embankment.

3.04 DISPOSAL OF CLEARING, GRUBBING, AND STRIPPING DEBRIS

A. Burning of combustible materials will not be permitted.

B. Material removed from the jobsite shall be disposed of legally.

END OF SECTION

Appendix B

Air Quality and Greenhouse Gas Modeling

Casa Loma Siphon AQ Detailed Report

Table of Contents

1. Basic Project Information

1.1. Basic Project Information

1.2. Land Use Types

1.3. User-Selected Emission Reduction Measures by Emissions Sector

2. Emissions Summary

2.1. Construction Emissions Compared Against Thresholds

2.2. Construction Emissions by Year, Unmitigated

3. Construction Emissions Details

3.1. Site Preparation (2027) - Unmitigated

3.3. Vegetation Removal (2026) - Unmitigated

3.5. Excavation (2027) - Unmitigated

3.7. Infrastructure Installation (2027) - Unmitigated

3.9. Site Restoration (2027) - Unmitigated

4. Operations Emissions Details

4.10. Soil Carbon Accumulation By Vegetation Type

4.10.1. Soil Carbon Accumulation By Vegetation Type - Unmitigated

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

4.10.3. Avoided and Sequestered Emissions by Species - Unmitigated

5. Activity Data

5.1. Construction Schedule

5.2. Off-Road Equipment

5.2.1. Unmitigated

5.3. Construction Vehicles

5.3.1. Unmitigated

5.4. Vehicles

5.4.1. Construction Vehicle Control Strategies

5.5. Architectural Coatings

5.6. Dust Mitigation

5.6.1. Construction Earthmoving Activities

5.6.2. Construction Earthmoving Control Strategies

5.7. Construction Paving

5.8. Construction Electricity Consumption and Emissions Factors

5.18. Vegetation

5.18.1. Land Use Change

5.18.1.1. Unmitigated

5.18.1. Biomass Cover Type

5.18.1.1. Unmitigated

5.18.2. Sequestration

5.18.2.1. Unmitigated

6. Climate Risk Detailed Report

6.1. Climate Risk Summary

6.2. Initial Climate Risk Scores

6.3. Adjusted Climate Risk Scores

6.4. Climate Risk Reduction Measures

7. Health and Equity Details

7.1. CalEnviroScreen 4.0 Scores

7.2. Healthy Places Index Scores

7.3. Overall Health & Equity Scores

7.4. Health & Equity Measures

7.5. Evaluation Scorecard

7.6. Health & Equity Custom Measures

8. User Changes to Default Data

1. Basic Project Information

1.1. Basic Project Information

Data Field	Value
Project Name	Casa Loma Siphon AQ
Construction Start Date	10/1/2026
Lead Agency	—
Land Use Scale	Project/site
Analysis Level for Defaults	County
Windspeed (m/s)	2.50
Precipitation (days)	22.4
Location	33.821051809520895, -116.96955052869573
County	Riverside-South Coast
City	Unincorporated
Air District	South Coast AQMD
Air Basin	South Coast
TAZ	5574
EDFZ	11
Electric Utility	Southern California Edison
Gas Utility	Southern California Gas
App Version	2022.1.1.29

1.2. Land Use Types

Land Use Subtype	Size	Unit	Lot Acreage	Building Area (sq ft)	Landscape Area (sq ft)	Special Landscape Area (sq ft)	Population	Description
Other Non-Asphalt Surfaces	8.81	1000sqft	5.50	0.00	0.00	—	—	—

1.3. User-Selected Emission Reduction Measures by Emissions Sector

No measures selected

2. Emissions Summary

2.1. Construction Emissions Compared Against Thresholds

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

Un/Mit.	TOG	ROG	NOx	CO	SO2	PM10E	PM10D	PM10T	PM2.5E	PM2.5D	PM2.5T	BCO2	NBCO2	CO2T	CH4	N2O	R	CO2e
Daily, Summer (Max)	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Unmit.	2.97	2.48	22.6	29.2	0.05	0.78	3.37	4.15	0.72	1.52	2.23	—	5,962	5,962	0.21	0.19	3.49	6,026
Daily, Winter (Max)	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Unmit.	2.58	2.17	18.6	22.9	0.04	0.74	2.82	3.40	0.68	1.37	1.91	—	4,119	4,119	0.16	0.06	0.04	4,137
Average Daily (Max)	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Unmit.	0.81	0.68	6.15	7.72	0.01	0.20	0.50	0.70	0.19	0.22	0.41	—	1,436	1,436	0.05	0.04	0.24	1,448
Annual (Max)	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Unmit.	0.15	0.12	1.12	1.41	< 0.005	0.04	0.09	0.13	0.03	0.04	0.07	—	238	238	0.01	0.01	0.04	240

2.2. Construction Emissions by Year, Unmitigated

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

Year	TOG	ROG	NOx	CO	SO2	PM10E	PM10D	PM10T	PM2.5E	PM2.5D	PM2.5T	BCO2	NBCO2	CO2T	CH4	N2O	R	CO2e
Daily - Summer (Max)	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
2027	2.97	2.48	22.6	29.2	0.05	0.78	3.37	4.15	0.72	1.52	2.23	—	5,962	5,962	0.21	0.19	3.49	6,026

Daily - Winter (Max)	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
2026	1.96	1.65	14.5	16.1	0.03	0.58	2.82	3.40	0.53	1.37	1.91	—	2,911	2,911	0.11	0.03	0.02	2,923
2027	2.58	2.17	18.6	22.9	0.04	0.74	0.42	1.17	0.68	0.10	0.78	—	4,119	4,119	0.16	0.06	0.04	4,137
Average Daily	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
2026	0.06	0.05	0.44	0.49	< 0.005	0.02	0.08	0.10	0.02	0.04	0.06	—	87.8	87.8	< 0.005	< 0.005	0.01	88.2
2027	0.81	0.68	6.15	7.72	0.01	0.20	0.50	0.70	0.19	0.22	0.41	—	1,436	1,436	0.05	0.04	0.24	1,448
Annual	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
2026	0.01	0.01	0.08	0.09	< 0.005	< 0.005	0.02	0.02	< 0.005	0.01	0.01	—	14.5	14.5	< 0.005	< 0.005	< 0.005	14.6
2027	0.15	0.12	1.12	1.41	< 0.005	0.04	0.09	0.13	0.03	0.04	0.07	—	238	238	0.01	0.01	0.04	240

3. Construction Emissions Details

3.1. Site Preparation (2027) - Unmitigated

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

Location	TOG	ROG	NOx	CO	SO2	PM10E	PM10D	PM10T	PM2.5E	PM2.5D	PM2.5T	BCO2	NBCO2	CO2T	CH4	N2O	R	CO2e
Onsite	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Daily, Summer (Max)	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Off-Road Equipment	1.91	1.60	15.1	17.0	0.03	0.57	—	0.57	0.52	—	0.52	—	3,016	3,016	0.12	0.02	—	3,026
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	0.00

Daily, Winter (Max)	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Average Daily	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Off-Road Equipment	0.11	0.09	0.87	0.98	< 0.005	0.03	—	0.03	0.03	—	0.03	—	174	174	0.01	< 0.005	—	174
Dust From Material Movement	—	—	—	—	—	—	0.15	0.15	—	0.08	0.08	—	—	—	—	—	—	—
Onsite truck	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	—	0.00	0.00	0.00	0.00	0.00	0.00
Annual	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Off-Road Equipment	0.02	0.02	0.16	0.18	< 0.005	0.01	—	0.01	0.01	—	0.01	—	28.7	28.7	< 0.005	< 0.005	—	28.8
Dust From Material Movement	—	—	—	—	—	—	0.03	0.03	—	0.01	0.01	—	—	—	—	—	—	—
Onsite truck	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	—	0.00	0.00	0.00	0.00	0.00	0.00
Offsite	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Daily, Summer (Max)	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Worker	0.10	0.09	0.08	1.49	0.00	0.00	0.29	0.29	0.00	0.07	0.07	—	305	305	< 0.005	0.01	0.95	309
Vendor	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	—	0.00	0.00	0.00	0.00	0.00	0.00
Hauling	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	—	0.00	0.00	0.00	0.00	0.00	0.00
Daily, Winter (Max)	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—

Average Daily	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Worker	0.01	< 0.005	0.01	0.07	0.00	0.00	0.02	0.02	0.00	< 0.005	< 0.005	—	16.3	16.3	< 0.005	< 0.005	0.02	16.5
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	0.00
Hauling	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	—	0.00	0.00	0.00	0.00	0.00	0.00
Annual	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Worker	< 0.005	< 0.005	< 0.005	0.01	0.00	0.00	< 0.005	< 0.005	0.00	< 0.005	< 0.005	—	2.70	2.70	< 0.005	< 0.005	< 0.005	2.74
Vendor	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	—	0.00	0.00	0.00	0.00	0.00	0.00
Hauling	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	—	0.00	0.00	0.00	0.00	0.00	0.00

3.3. Vegetation Removal (2026) - Unmitigated

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

Location	TOG	ROG	NOx	CO	SO2	PM10E	PM10D	PM10T	PM2.5E	PM2.5D	PM2.5T	BCO2	NBCO2	CO2T	CH4	N2O	R	CO2e
Onsite	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Daily, Summer (Max)	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Daily, Winter (Max)	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Off-Road Equipment	1.87	1.57	14.4	15.0	0.03	0.58	—	0.58	0.53	—	0.53	—	2,658	2,658	0.11	0.02	—	2,667
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	0.00
Average Daily	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—

Off-Road	0.06	0.05	0.44	0.45	< 0.005	0.02	—	0.02	0.02	—	0.02	—	80.1	80.1	< 0.005	< 0.005	—	80.4
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	0.00
Annual	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Off-Road Equipment	0.01	0.01	0.08	0.08	< 0.005	< 0.005	—	< 0.005	< 0.005	—	< 0.005	—	13.3	13.3	< 0.005	< 0.005	—	13.3
Dust From Material Movement	—	—	—	—	—	—	0.01	0.01	—	0.01	0.01	—	—	—	—	—	—	—
Onsite truck	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	—	0.00	0.00	0.00	0.00	0.00	0.00
Offsite	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Daily, Summer (Max)	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Daily, Winter (Max)	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Worker	0.09	0.08	0.09	1.09	0.00	0.00	0.26	0.26	0.00	0.06	0.06	—	254	254	< 0.005	0.01	0.02	257
Vendor	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	—	0.00	0.00	0.00	0.00	0.00	0.00
Hauling	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	—	0.00	0.00	0.00	0.00	0.00	0.00
Average Daily	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Worker	< 0.005	< 0.005	< 0.005	0.03	0.00	0.00	0.01	0.01	0.00	< 0.005	< 0.005	—	7.74	7.74	< 0.005	< 0.005	0.01	7.84
Vendor	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	—	0.00	0.00	0.00	0.00	0.00	0.00
Hauling	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	—	0.00	0.00	0.00	0.00	0.00	0.00
Annual	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—

Worker	< 0.005	< 0.005	< 0.005	0.01	0.00	0.00	< 0.005	< 0.005	0.00	< 0.005	< 0.005	—	1.28	1.28	< 0.005	< 0.005	< 0.005	1.30
Vendor	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	—	0.00	0.00	0.00	0.00	0.00	0.00
Hauling	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	—	0.00	0.00	0.00	0.00	0.00	0.00

3.5. Excavation (2027) - Unmitigated

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

Location	TOG	ROG	NOx	CO	SO2	PM10E	PM10D	PM10T	PM2.5E	PM2.5D	PM2.5T	BCO2	NBCO2	CO2T	CH4	N2O	R	CO2e
Onsite	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Daily, Summer (Max)	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Off-Road Equipment	2.73	2.29	21.5	25.9	0.04	0.76	—	0.76	0.70	—	0.70	—	4,521	4,521	0.18	0.04	—	4,537
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	0.00
Daily, Winter (Max)	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Average Daily	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Off-Road Equipment	0.25	0.21	1.95	2.35	< 0.005	0.07	—	0.07	0.06	—	0.06	—	409	409	0.02	< 0.005	—	410
Dust From Material Movement	—	—	—	—	—	—	0.23	0.23	—	0.12	0.12	—	—	—	—	—	—	—

Onsite truck	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	—	0.00	0.00	0.00	0.00	0.00	0.00
Annual	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Off-Road Equipment	0.05	0.04	0.36	0.43	< 0.005	0.01	—	0.01	0.01	—	0.01	—	67.7	67.7	< 0.005	< 0.005	—	67.9
Dust From Material Movement	—	—	—	—	—	—	0.04	0.04	—	0.02	0.02	—	—	—	—	—	—	—
Onsite truck	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	—	0.00	0.00	0.00	0.00	0.00	0.00
Offsite	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Daily, Summer (Max)	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Worker	0.20	0.18	0.16	2.99	0.00	0.00	0.59	0.59	0.00	0.14	0.14	—	609	609	0.01	0.02	1.89	618
Vendor	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	—	0.00	0.00	0.00	0.00	0.00	0.00
Hauling	0.04	0.01	0.90	0.22	0.01	0.02	0.23	0.24	0.02	0.06	0.08	—	831	831	0.02	0.13	1.60	872
Daily, Winter (Max)	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Average Daily	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Worker	0.02	0.02	0.02	0.21	0.00	0.00	0.05	0.05	0.00	0.01	0.01	—	51.3	51.3	< 0.005	< 0.005	0.07	52.0
Vendor	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	—	0.00	0.00	0.00	0.00	0.00	0.00
Hauling	< 0.005	< 0.005	0.09	0.02	< 0.005	< 0.005	0.02	0.02	< 0.005	0.01	0.01	—	75.1	75.1	< 0.005	0.01	0.06	78.7
Annual	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Worker	< 0.005	< 0.005	< 0.005	0.04	0.00	0.00	0.01	0.01	0.00	< 0.005	< 0.005	—	8.49	8.49	< 0.005	< 0.005	0.01	8.60
Vendor	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	—	0.00	0.00	0.00	0.00	0.00	0.00
Hauling	< 0.005	< 0.005	0.02	< 0.005	< 0.005	< 0.005	< 0.005	< 0.005	< 0.005	< 0.005	< 0.005	—	12.4	12.4	< 0.005	< 0.005	0.01	13.0

3.7. Infrastructure Installation (2027) - Unmitigated

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

Location	TOG	ROG	NOx	CO	SO2	PM10E	PM10D	PM10T	PM2.5E	PM2.5D	PM2.5T	BCO2	NBCO2	CO2T	CH4	N2O	R	CO2e
Onsite	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Daily, Summer (Max)	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Off-Road Equipment	1.30	1.08	9.60	12.6	0.02	0.28	—	0.28	0.26	—	0.26	—	1,913	1,913	0.08	0.02	—	1,920
Dust From Material Movement	—	—	—	—	—	—	< 0.005	< 0.005	—	< 0.005	< 0.005	—	—	—	—	—	—	—
Onsite truck	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	—	0.00	0.00	0.00	0.00	0.00	0.00
Daily, Winter (Max)	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Off-Road Equipment	1.30	1.08	9.60	12.6	0.02	0.28	—	0.28	0.26	—	0.26	—	1,913	1,913	0.08	0.02	—	1,920
Dust From Material Movement	—	—	—	—	—	—	< 0.005	< 0.005	—	< 0.005	< 0.005	—	—	—	—	—	—	—
Onsite truck	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	—	0.00	0.00	0.00	0.00	0.00	0.00
Average Daily	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Off-Road Equipment	0.35	0.29	2.58	3.39	0.01	0.08	—	0.08	0.07	—	0.07	—	514	514	0.02	< 0.005	—	515

Dust From Material Movement	—	—	—	—	—	—	< 0.005	< 0.005	—	< 0.005	< 0.005	—	—	—	—	—	—	—
Onsite truck	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	—	0.00	0.00	0.00	0.00	0.00	0.00
Annual	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Off-Road Equipment	0.06	0.05	0.47	0.62	< 0.005	0.01	—	0.01	0.01	—	0.01	—	85.0	85.0	< 0.005	< 0.005	—	85.3
Dust From Material Movement	—	—	—	—	—	—	< 0.005	< 0.005	—	< 0.005	< 0.005	—	—	—	—	—	—	—
Onsite truck	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	—	0.00	0.00	0.00	0.00	0.00	0.00
Offsite	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Daily, Summer (Max)	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Worker	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	—	0.00	0.00	0.00	0.00	0.00	0.00
Vendor	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	—	0.00	0.00	0.00	0.00	0.00	0.00
Hauling	0.01	< 0.005	0.30	0.07	< 0.005	0.01	0.07	0.08	0.01	0.02	0.03	—	271	271	0.01	0.04	0.52	284
Daily, Winter (Max)	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Worker	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	—	0.00	0.00	0.00	0.00	0.00	0.00
Vendor	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	—	0.00	0.00	0.00	0.00	0.00	0.00
Hauling	0.01	< 0.005	0.31	0.07	< 0.005	0.01	0.07	0.08	0.01	0.02	0.03	—	271	271	0.01	0.04	0.01	284
Average Daily	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Worker	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	—	0.00	0.00	0.00	0.00	0.00	0.00
Vendor	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	—	0.00	0.00	0.00	0.00	0.00	0.00

Hauling	< 0.005	< 0.005	0.08	0.02	< 0.005	< 0.005	0.02	0.02	< 0.005	0.01	0.01	—	72.8	72.8	< 0.005	0.01	0.06	76.3
Annual	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Worker	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	—	0.00	0.00	0.00	0.00	0.00	0.00
Vendor	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	—	0.00	0.00	0.00	0.00	0.00	0.00
Hauling	< 0.005	< 0.005	0.02	< 0.005	< 0.005	< 0.005	< 0.005	< 0.005	< 0.005	< 0.005	< 0.005	—	12.0	12.0	< 0.005	< 0.005	0.01	12.6

3.9. Site Restoration (2027) - Unmitigated

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

Location	TOG	ROG	NOx	CO	SO2	PM10E	PM10D	PM10T	PM2.5E	PM2.5D	PM2.5T	BCO2	NBCO2	CO2T	CH4	N2O	R	CO2e
Onsite	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Daily, Summer (Max)	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Daily, Winter (Max)	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Off-Road Equipment	2.45	2.05	18.5	21.3	0.04	0.74	—	0.74	0.68	—	0.68	—	3,715	3,715	0.15	0.03	—	3,727
Paving	0.00	0.00	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Onsite truck	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	—	0.00	0.00	0.00	0.00	0.00	0.00
Average Daily	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Off-Road Equipment	0.07	0.06	0.56	0.64	< 0.005	0.02	—	0.02	0.02	—	0.02	—	112	112	< 0.005	< 0.005	—	112
Paving	0.00	0.00	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Onsite truck	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	—	0.00	0.00	0.00	0.00	0.00	0.00
Annual	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—

Off-Roa Equipment	0.01	0.01	0.10	0.12	< 0.005	< 0.005	—	< 0.005	< 0.005	—	< 0.005	—	18.5	18.5	< 0.005	< 0.005	—	18.6
Paving	0.00	0.00	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Onsite truck	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	—	0.00	0.00	0.00	0.00	0.00	0.00
Offsite	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Daily, Summer (Max)	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Daily, Winter (Max)	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Worker	0.14	0.12	0.13	1.63	0.00	0.00	0.42	0.42	0.00	0.10	0.10	—	405	405	0.01	0.02	0.04	409
Vendor	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	—	0.00	0.00	0.00	0.00	0.00	0.00
Hauling	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	—	0.00	0.00	0.00	0.00	0.00	0.00
Average Daily	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Worker	< 0.005	< 0.005	< 0.005	0.05	0.00	0.00	0.01	0.01	0.00	< 0.005	< 0.005	—	12.3	12.3	< 0.005	< 0.005	0.02	12.5
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	0.00
Hauling	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	—	0.00	0.00	0.00	0.00	0.00	0.00
Annual	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Worker	< 0.005	< 0.005	< 0.005	0.01	0.00	0.00	< 0.005	< 0.005	0.00	< 0.005	< 0.005	—	2.04	2.04	< 0.005	< 0.005	< 0.005	2.07
Vendor	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	—	0.00	0.00	0.00	0.00	0.00	0.00
Hauling	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	—	0.00	0.00	0.00	0.00	0.00	0.00

4. Operations Emissions Details

4.10. Soil Carbon Accumulation By Vegetation Type

4.10.1. Soil Carbon Accumulation By Vegetation Type - Unmitigated

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

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

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

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

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

4.10.3. Avoided and Sequestered Emissions by Species - Unmitigated

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

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

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

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

5. Activity Data

5.1. Construction Schedule

Phase Name	Phase Type	Start Date	End Date	Days Per Week	Work Days per Phase	Phase Description
Site Preparation	Site Preparation	5/1/2027	5/31/2027	5.00	21.0	—
Vegetation Removal	Site Preparation	10/1/2026	10/15/2026	5.00	11.0	—
Excavation	Grading	6/1/2027	7/15/2027	5.00	33.0	—
Infrastructure Installation	Building Construction	7/16/2027	11/30/2027	5.00	98.0	—
Site Restoration	Paving	12/1/2027	12/15/2027	5.00	11.0	—

5.2. Off-Road Equipment

5.2.1. Unmitigated

Phase Name	Equipment Type	Fuel Type	Engine Tier	Number per Day	Hours Per Day	Horsepower	Load Factor
Site Preparation	Tractors/Loaders/Backhoes	Diesel	Average	2.00	8.00	84.0	0.37
Site Preparation	Skid Steer Loaders	Diesel	Average	1.00	8.00	71.0	0.37
Site Preparation	Rubber Tired Dozers	Diesel	Average	1.00	8.00	367	0.40
Site Preparation	Excavators	Diesel	Average	1.00	8.00	36.0	0.38
Site Preparation	Generator Sets	Diesel	Average	3.00	8.00	14.0	0.74
Site Preparation	Rough Terrain Forklifts	Diesel	Average	1.00	8.00	96.0	0.40
Vegetation Removal	Tractors/Loaders/Backhoes	Diesel	Average	2.00	8.00	84.0	0.37
Vegetation Removal	Rubber Tired Dozers	Diesel	Average	1.00	8.00	367	0.40
Vegetation Removal	Excavators	Diesel	Average	1.00	8.00	36.0	0.38

Vegetation Removal	Generator Sets	Diesel	Average	3.00	8.00	14.0	0.74
Vegetation Removal	Skid Steer Loaders	Diesel	Average	1.00	8.00	71.0	0.37
Excavation	Tractors/Loaders/Backhoes	Diesel	Average	3.00	8.00	84.0	0.37
Excavation	Bore/Drill Rigs	Diesel	Average	2.00	8.00	83.0	0.50
Excavation	Rubber Tired Dozers	Diesel	Average	1.00	8.00	367	0.40
Excavation	Dumpers/Tenders	Diesel	Average	5.00	8.00	16.0	0.38
Excavation	Excavators	Diesel	Average	2.00	8.00	36.0	0.38
Excavation	Generator Sets	Diesel	Average	3.00	8.00	14.0	0.74
Excavation	Rough Terrain Forklifts	Diesel	Average	1.00	8.00	96.0	0.40
Excavation	Skid Steer Loaders	Diesel	Average	1.00	8.00	71.0	0.37
Infrastructure Installation	Tractors/Loaders/Backhoes	Diesel	Average	1.00	8.00	84.0	0.37
Infrastructure Installation	Plate Compactors	Diesel	Average	2.00	8.00	8.00	0.43
Infrastructure Installation	Air Compressors	Diesel	Average	2.00	8.00	37.0	0.48
Infrastructure Installation	Excavators	Diesel	Average	2.00	8.00	36.0	0.38
Infrastructure Installation	Generator Sets	Diesel	Average	3.00	8.00	14.0	0.74
Infrastructure Installation	Rough Terrain Forklifts	Diesel	Average	1.00	8.00	96.0	0.40
Infrastructure Installation	Skid Steer Loaders	Diesel	Average	1.00	8.00	71.0	0.37
Site Restoration	Tractors/Loaders/Backhoes	Diesel	Average	2.00	8.00	84.0	0.37
Site Restoration	Plate Compactors	Diesel	Average	2.00	8.00	8.00	0.43
Site Restoration	Rubber Tired Dozers	Diesel	Average	1.00	8.00	367	0.40
Site Restoration	Dumpers/Tenders	Diesel	Average	1.00	8.00	16.0	0.38
Site Restoration	Excavators	Diesel	Average	1.00	8.00	36.0	0.38
Site Restoration	Generator Sets	Diesel	Average	3.00	8.00	14.0	0.74

Site Restoration	Graders	Diesel	Average	1.00	8.00	148	0.41
Site Restoration	Rough Terrain Forklifts	Diesel	Average	1.00	8.00	96.0	0.40
Site Restoration	Skid Steer Loaders	Diesel	Average	1.00	8.00	71.0	0.37

5.3. Construction Vehicles

5.3.1. Unmitigated

Phase Name	Trip Type	One-Way Trips per Day	Miles per Trip	Vehicle Mix
Site Preparation	—	—	—	—
Site Preparation	Worker	22.5	18.5	LDA,LDT1,LDT2
Site Preparation	Vendor	—	10.2	HHDT,MHDT
Site Preparation	Hauling	0.00	20.0	HHDT
Site Preparation	Onsite truck	—	—	HHDT
Excavation	—	—	—	—
Excavation	Worker	45.0	18.5	LDA,LDT1,LDT2
Excavation	Vendor	—	10.2	HHDT,MHDT
Excavation	Hauling	12.5	20.0	HHDT
Excavation	Onsite truck	—	—	HHDT
Infrastructure Installation	—	—	—	—
Infrastructure Installation	Worker	0.00	18.5	LDA,LDT1,LDT2
Infrastructure Installation	Vendor	0.00	10.2	HHDT,MHDT
Infrastructure Installation	Hauling	4.08	20.0	HHDT
Infrastructure Installation	Onsite truck	—	—	HHDT
Site Restoration	—	—	—	—
Site Restoration	Worker	32.5	18.5	LDA,LDT1,LDT2
Site Restoration	Vendor	—	10.2	HHDT,MHDT
Site Restoration	Hauling	0.00	20.0	HHDT
Site Restoration	Onsite truck	—	—	HHDT

Vegetation Removal	—	—	—	—
Vegetation Removal	Worker	20.0	18.5	LDA,LDT1,LDT2
Vegetation Removal	Vendor	—	10.2	HHDT,MHDT
Vegetation Removal	Hauling	0.00	20.0	HHDT
Vegetation Removal	Onsite truck	—	—	HHDT

5.4. Vehicles

5.4.1. Construction Vehicle Control Strategies

Non-applicable. No control strategies activated by user.

5.5. Architectural Coatings

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

5.6. Dust Mitigation

5.6.1. Construction Earthmoving Activities

Phase Name	Material Imported (cy)	Material Exported (cy)	Acres Graded (acres)	Material Demolished (sq. ft.)	Acres Paved (acres)
Site Preparation	—	—	10.5	0.00	—
Vegetation Removal	—	—	5.50	0.00	—
Excavation	—	3,300	16.5	0.00	—
Infrastructure Installation	3,200	—	0.00	0.00	—
Site Restoration	0.00	0.00	0.00	0.00	5.50

5.6.2. Construction Earthmoving Control Strategies

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

5.7. Construction Paving

Land Use	Area Paved (acres)	% Asphalt
Other Non-Asphalt Surfaces	5.50	0%

5.8. Construction Electricity Consumption and Emissions Factors

kWh per Year and Emission Factor (lb/MWh)

Year	kWh per Year	CO2	CH4	N2O
2026	0.00	532	0.03	< 0.005
2027	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. Biomass Cover Type

5.18.1.1. Unmitigated

Biomass Cover Type	Initial Acres	Final Acres

5.18.2. Sequestration

5.18.2.1. Unmitigated

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

6. Climate Risk Detailed Report

6.1. Climate Risk Summary

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

Climate Hazard	Result for Project Location	Unit
Temperature and Extreme Heat	27.4	annual days of extreme heat
Extreme Precipitation	4.20	annual days with precipitation above 20 mm
Sea Level Rise	—	meters of inundation depth
Wildfire	18.2	annual hectares burned

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

6.2. Initial Climate Risk Scores

Climate Hazard	Exposure Score	Sensitivity Score	Adaptive Capacity Score	Vulnerability Score
Temperature and Extreme Heat	3	0	0	N/A
Extreme Precipitation	N/A	N/A	N/A	N/A
Sea Level Rise	1	0	0	N/A
Wildfire	1	0	0	N/A
Flooding	N/A	N/A	N/A	N/A
Drought	N/A	N/A	N/A	N/A
Snowpack Reduction	N/A	N/A	N/A	N/A
Air Quality Degradation	0	0	0	N/A

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

6.3. Adjusted Climate Risk Scores

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

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

6.4. Climate Risk Reduction Measures

7. Health and Equity Details

7.1. CalEnviroScreen 4.0 Scores

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

Indicator	Result for Project Census Tract
Exposure Indicators	—
AQ-Ozone	97.1

AQ-PM	35.8
AQ-DPM	7.39
Drinking Water	8.44
Lead Risk Housing	26.6
Pesticides	86.2
Toxic Releases	21.5
Traffic	28.0
Effect Indicators	—
CleanUp Sites	29.4
Groundwater	54.7
Haz Waste Facilities/Generators	72.0
Impaired Water Bodies	0.00
Solid Waste	0.00
Sensitive Population	—
Asthma	50.9
Cardio-vascular	70.4
Low Birth Weights	27.1
Socioeconomic Factor Indicators	—
Education	56.5
Housing	38.1
Linguistic	45.4
Poverty	74.0
Unemployment	88.7

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	35.91684845
Employed	23.88040549
Median HI	37.71333248
Education	—
Bachelor's or higher	21.19851148
High school enrollment	100
Preschool enrollment	28.57692801
Transportation	—
Auto Access	29.34684974
Active commuting	78.80148852
Social	—
2-parent households	47.46567432
Voting	31.05350956
Neighborhood	—
Alcohol availability	80.43115617
Park access	9.49570127
Retail density	10.65058386
Supermarket access	31.15616579
Tree canopy	1.270370846
Housing	—
Homeownership	74.72090337
Housing habitability	74.33594251
Low-inc homeowner severe housing cost burden	46.54176825
Low-inc renter severe housing cost burden	54.83125882
Uncrowded housing	63.4800462
Health Outcomes	—
Insured adults	31.56679071
Arthritis	0.0

Asthma ER Admissions	38.8
High Blood Pressure	0.0
Cancer (excluding skin)	0.0
Asthma	0.0
Coronary Heart Disease	0.0
Chronic Obstructive Pulmonary Disease	0.0
Diagnosed Diabetes	0.0
Life Expectancy at Birth	34.9
Cognitively Disabled	21.0
Physically Disabled	9.6
Heart Attack ER Admissions	14.2
Mental Health Not Good	0.0
Chronic Kidney Disease	0.0
Obesity	0.0
Pedestrian Injuries	81.4
Physical Health Not Good	0.0
Stroke	0.0
Health Risk Behaviors	—
Binge Drinking	0.0
Current Smoker	0.0
No Leisure Time for Physical Activity	0.0
Climate Change Exposures	—
Wildfire Risk	7.8
SLR Inundation Area	0.0
Children	47.4
Elderly	16.0
English Speaking	45.6
Foreign-born	42.9

Outdoor Workers	16.4
Climate Change Adaptive Capacity	—
Impervious Surface Cover	83.4
Traffic Density	25.7
Traffic Access	23.0
Other Indices	—
Hardship	55.8
Other Decision Support	—
2016 Voting	41.4

7.3. Overall Health & Equity Scores

Metric	Result for Project Census Tract
CalEnviroScreen 4.0 Score for Project Location (a)	49.0
Healthy Places Index Score for Project Location (b)	33.0
Project Located in a Designated Disadvantaged Community (Senate Bill 535)	No
Project Located in a Low-Income Community (Assembly Bill 1550)	No
Project Located in a Community Air Protection Program Community (Assembly Bill 617)	No

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

7.4. Health & Equity Measures

No Health & Equity Measures selected.

7.5. Evaluation Scorecard

Health & Equity Evaluation Scorecard not completed.

7.6. Health & Equity Custom Measures

No Health & Equity Custom Measures created.

8. User Changes to Default Data

Screen	Justification
Land Use	Area to be excavated modeled as non-asphalt surface. Total area of disturbance used for lot acreage input.
Construction: Construction Phases	Per applicant provided information for concurrent pipeline construction.
Construction: Off-Road Equipment	Per applicant provided information. Vegetation removal equipment assumed to be equivalent to site preparation equipment.
Construction: Dust From Material Movement	3,200 cubic yards of import material (concrete, riprap, and rebar) allocated to infrastructure installation phase. 3,300 cy of soil exported during excavation phase.

Casa Loma Siphon GHG Detailed Report

Table of Contents

1. Basic Project Information

1.1. Basic Project Information

1.2. Land Use Types

1.3. User-Selected Emission Reduction Measures by Emissions Sector

2. Emissions Summary

2.1. Construction Emissions Compared Against Thresholds

2.2. Construction Emissions by Year, Unmitigated

3. Construction Emissions Details

3.1. Site Preparation (2027) - Unmitigated

3.3. Vegetation Removal (2026) - Unmitigated

3.5. Excavation (2027) - Unmitigated

3.7. Infrastructure Installation (2027) - Unmitigated

3.9. Infrastructure Installation (2028) - Unmitigated

3.11. Site Restoration (2028) - Unmitigated

4. Operations Emissions Details

4.10. Soil Carbon Accumulation By Vegetation Type

4.10.1. Soil Carbon Accumulation By Vegetation Type - Unmitigated

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

4.10.3. Avoided and Sequestered Emissions by Species - Unmitigated

5. Activity Data

5.1. Construction Schedule

5.2. Off-Road Equipment

5.2.1. Unmitigated

5.3. Construction Vehicles

5.3.1. Unmitigated

5.4. Vehicles

5.4.1. Construction Vehicle Control Strategies

5.5. Architectural Coatings

5.6. Dust Mitigation

5.6.1. Construction Earthmoving Activities

5.6.2. Construction Earthmoving Control Strategies

5.7. Construction Paving

5.8. Construction Electricity Consumption and Emissions Factors

5.18. Vegetation

5.18.1. Land Use Change

5.18.1.1. Unmitigated

5.18.1. Biomass Cover Type

5.18.1.1. Unmitigated

5.18.2. Sequestration

5.18.2.1. Unmitigated

6. Climate Risk Detailed Report

6.1. Climate Risk Summary

6.2. Initial Climate Risk Scores

6.3. Adjusted Climate Risk Scores

6.4. Climate Risk Reduction Measures

7. Health and Equity Details

7.1. CalEnviroScreen 4.0 Scores

7.2. Healthy Places Index Scores

7.3. Overall Health & Equity Scores

7.4. Health & Equity Measures

7.5. Evaluation Scorecard

7.6. Health & Equity Custom Measures

8. User Changes to Default Data

1. Basic Project Information

1.1. Basic Project Information

Data Field	Value
Project Name	Casa Loma Siphon GHG
Construction Start Date	10/1/2026
Lead Agency	—
Land Use Scale	Project/site
Analysis Level for Defaults	County
Windspeed (m/s)	2.50
Precipitation (days)	22.4
Location	33.821051809520895, -116.96955052869573
County	Riverside-South Coast
City	Unincorporated
Air District	South Coast AQMD
Air Basin	South Coast
TAZ	5574
EDFZ	11
Electric Utility	Southern California Edison
Gas Utility	Southern California Gas
App Version	2022.1.1.29

1.2. Land Use Types

Land Use Subtype	Size	Unit	Lot Acreage	Building Area (sq ft)	Landscape Area (sq ft)	Special Landscape Area (sq ft)	Population	Description
Other Non-Asphalt Surfaces	8.81	1000sqft	5.50	0.00	0.00	—	—	—

1.3. User-Selected Emission Reduction Measures by Emissions Sector

No measures selected

2. Emissions Summary

2.1. Construction Emissions Compared Against Thresholds

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

Un/Mit.	TOG	ROG	NOx	CO	SO2	PM10E	PM10D	PM10T	PM2.5E	PM2.5D	PM2.5T	BCO2	NBCO2	CO2T	CH4	N2O	R	CO2e
Daily, Summer (Max)	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Unmit.	2.97	2.48	22.6	29.2	0.05	0.78	3.37	4.15	0.72	1.51	2.23	—	5,962	5,962	0.21	0.19	3.49	6,026
Daily, Winter (Max)	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Unmit.	2.41	2.02	18.0	21.3	0.04	0.71	2.82	3.40	0.65	1.37	1.91	—	3,715	3,715	0.15	0.06	0.02	3,728
Average Daily (Max)	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Unmit.	0.91	0.76	6.91	8.69	0.02	0.22	0.68	0.91	0.21	0.31	0.52	—	1,656	1,656	0.06	0.05	0.31	1,671
Annual (Max)	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Unmit.	0.17	0.14	1.26	1.59	< 0.005	0.04	0.12	0.17	0.04	0.06	0.09	—	274	274	0.01	0.01	0.05	277

2.2. Construction Emissions by Year, Unmitigated

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

Year	TOG	ROG	NOx	CO	SO2	PM10E	PM10D	PM10T	PM2.5E	PM2.5D	PM2.5T	BCO2	NBCO2	CO2T	CH4	N2O	R	CO2e
Daily - Summer (Max)	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
2027	2.97	2.48	22.6	29.2	0.05	0.78	3.37	4.15	0.72	1.51	2.23	—	5,962	5,962	0.21	0.19	3.49	6,026

Daily - Winter (Max)	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
2026	1.96	1.65	14.5	16.1	0.03	0.58	2.82	3.40	0.53	1.37	1.91	—	2,911	2,911	0.11	0.03	0.02	2,923
2027	1.31	1.08	9.91	12.7	0.02	0.29	0.07	0.36	0.26	0.02	0.28	—	2,184	2,184	0.08	0.06	0.01	2,204
2028	2.41	2.02	18.0	21.3	0.04	0.71	0.40	1.11	0.65	0.10	0.75	—	3,715	3,715	0.15	0.03	—	3,728
Average Daily	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
2026	0.06	0.05	0.44	0.49	< 0.005	0.02	0.08	0.10	0.02	0.04	0.06	—	87.8	87.8	< 0.005	< 0.005	0.01	88.2
2027	0.91	0.76	6.91	8.69	0.02	0.22	0.68	0.91	0.21	0.31	0.52	—	1,656	1,656	0.06	0.05	0.31	1,671
2028	0.15	0.12	1.12	1.41	< 0.005	0.04	0.02	0.05	0.03	< 0.005	0.04	—	228	228	0.01	< 0.005	—	229
Annual	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
2026	0.01	0.01	0.08	0.09	< 0.005	< 0.005	0.02	0.02	< 0.005	0.01	0.01	—	14.5	14.5	< 0.005	< 0.005	< 0.005	14.6
2027	0.17	0.14	1.26	1.59	< 0.005	0.04	0.12	0.17	0.04	0.06	0.09	—	274	274	0.01	0.01	0.05	277
2028	0.03	0.02	0.20	0.26	< 0.005	0.01	< 0.005	0.01	0.01	< 0.005	0.01	—	37.8	37.8	< 0.005	< 0.005	—	37.9

3. Construction Emissions Details

3.1. Site Preparation (2027) - Unmitigated

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

Location	TOG	ROG	NOx	CO	SO2	PM10E	PM10D	PM10T	PM2.5E	PM2.5D	PM2.5T	BCO2	NBCO2	CO2T	CH4	N2O	R	CO2e
Onsite	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Daily, Summer (Max)	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Off-Road Equipment	1.91	1.60	15.1	17.0	0.03	0.57	—	0.57	0.52	—	0.52	—	3,016	3,016	0.12	0.02	—	3,026

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	0.00
Daily, Winter (Max)	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Average Daily	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Off-Road Equipment	0.11	0.09	0.87	0.98	< 0.005	0.03	—	0.03	0.03	—	0.03	—	174	174	0.01	< 0.005	—	174
Dust From Material Movement	—	—	—	—	—	—	0.15	0.15	—	0.08	0.08	—	—	—	—	—	—	—
Onsite truck	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	—	0.00	0.00	0.00	0.00	0.00	0.00
Annual	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Off-Road Equipment	0.02	0.02	0.16	0.18	< 0.005	0.01	—	0.01	0.01	—	0.01	—	28.7	28.7	< 0.005	< 0.005	—	28.8
Dust From Material Movement	—	—	—	—	—	—	0.03	0.03	—	0.01	0.01	—	—	—	—	—	—	—
Onsite truck	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	—	0.00	0.00	0.00	0.00	0.00	0.00
Offsite	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Daily, Summer (Max)	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Worker	0.10	0.09	0.08	1.49	0.00	0.00	0.29	0.29	0.00	0.07	0.07	—	305	305	< 0.005	0.01	0.95	309

Vendor	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	—	0.00	0.00	0.00	0.00	0.00	0.00
Hauling	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	—	0.00	0.00	0.00	0.00	0.00	0.00
Daily, Winter (Max)	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Average Daily	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Worker	0.01	< 0.005	0.01	0.07	0.00	0.00	0.02	0.02	0.00	< 0.005	< 0.005	—	16.3	16.3	< 0.005	< 0.005	0.02	16.5
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	0.00
Hauling	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	—	0.00	0.00	0.00	0.00	0.00	0.00
Annual	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Worker	< 0.005	< 0.005	< 0.005	0.01	0.00	0.00	< 0.005	< 0.005	0.00	< 0.005	< 0.005	—	2.70	2.70	< 0.005	< 0.005	< 0.005	2.74
Vendor	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	—	0.00	0.00	0.00	0.00	0.00	0.00
Hauling	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	—	0.00	0.00	0.00	0.00	0.00	0.00

3.3. Vegetation Removal (2026) - Unmitigated

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

Location	TOG	ROG	NOx	CO	SO2	PM10E	PM10D	PM10T	PM2.5E	PM2.5D	PM2.5T	BCO2	NBCO2	CO2T	CH4	N2O	R	CO2e
Onsite	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Daily, Summer (Max)	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Daily, Winter (Max)	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Off-Road Equipment	1.87	1.57	14.4	15.0	0.03	0.58	—	0.58	0.53	—	0.53	—	2,658	2,658	0.11	0.02	—	2,667
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	0.00
Average Daily	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Off-Road Equipment	0.06	0.05	0.44	0.45	< 0.005	0.02	—	0.02	0.02	—	0.02	—	80.1	80.1	< 0.005	< 0.005	—	80.4
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	0.00
Annual	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Off-Road Equipment	0.01	0.01	0.08	0.08	< 0.005	< 0.005	—	< 0.005	< 0.005	—	< 0.005	—	13.3	13.3	< 0.005	< 0.005	—	13.3
Dust From Material Movement	—	—	—	—	—	—	0.01	0.01	—	0.01	0.01	—	—	—	—	—	—	—
Onsite truck	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	—	0.00	0.00	0.00	0.00	0.00	0.00
Offsite	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Daily, Summer (Max)	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Daily, Winter (Max)	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Worker	0.09	0.08	0.09	1.09	0.00	0.00	0.26	0.26	0.00	0.06	0.06	—	254	254	< 0.005	0.01	0.02	257
Vendor	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	—	0.00	0.00	0.00	0.00	0.00	0.00
Hauling	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	—	0.00	0.00	0.00	0.00	0.00	0.00

Average Daily	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Worker	< 0.005	< 0.005	< 0.005	0.03	0.00	0.00	0.01	0.01	0.00	< 0.005	< 0.005	—	7.74	7.74	< 0.005	< 0.005	0.01	7.84
Vendor	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	—	0.00	0.00	0.00	0.00	0.00	0.00
Hauling	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	—	0.00	0.00	0.00	0.00	0.00	0.00
Annual	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Worker	< 0.005	< 0.005	< 0.005	0.01	0.00	0.00	< 0.005	< 0.005	0.00	< 0.005	< 0.005	—	1.28	1.28	< 0.005	< 0.005	< 0.005	1.30
Vendor	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	—	0.00	0.00	0.00	0.00	0.00	0.00
Hauling	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	—	0.00	0.00	0.00	0.00	0.00	0.00

3.5. Excavation (2027) - Unmitigated

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

Location	TOG	ROG	NOx	CO	SO2	PM10E	PM10D	PM10T	PM2.5E	PM2.5D	PM2.5T	BCO2	NBCO2	CO2T	CH4	N2O	R	CO2e
Onsite	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Daily, Summer (Max)	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Off-Road Equipment	2.73	2.29	21.5	25.9	0.04	0.76	—	0.76	0.70	—	0.70	—	4,521	4,521	0.18	0.04	—	4,537
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	0.00
Daily, Winter (Max)	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Average Daily	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—

Off-Road	0.40	0.34	3.19	3.84	0.01	0.11	—	0.11	0.10	—	0.10	—	669	669	0.03	0.01	—	671
Dust From Material Movement	—	—	—	—	—	—	0.38	0.38	—	0.19	0.19	—	—	—	—	—	—	—
Onsite truck	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	—	0.00	0.00	0.00	0.00	0.00	0.00
Annual	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Off-Road Equipment	0.07	0.06	0.58	0.70	< 0.005	0.02	—	0.02	0.02	—	0.02	—	111	111	< 0.005	< 0.005	—	111
Dust From Material Movement	—	—	—	—	—	—	0.07	0.07	—	0.04	0.04	—	—	—	—	—	—	—
Onsite truck	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	—	0.00	0.00	0.00	0.00	0.00	0.00
Offsite	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Daily, Summer (Max)	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Worker	0.20	0.18	0.16	2.99	0.00	0.00	0.59	0.59	0.00	0.14	0.14	—	609	609	0.01	0.02	1.89	618
Vendor	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	—	0.00	0.00	0.00	0.00	0.00	0.00
Hauling	0.04	0.01	0.90	0.22	0.01	0.02	0.23	0.24	0.02	0.06	0.08	—	831	831	0.02	0.13	1.60	872
Daily, Winter (Max)	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Average Daily	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Worker	0.03	0.03	0.03	0.35	0.00	0.00	0.09	0.09	0.00	0.02	0.02	—	83.9	83.9	< 0.005	< 0.005	0.12	85.0
Vendor	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	—	0.00	0.00	0.00	0.00	0.00	0.00
Hauling	0.01	< 0.005	0.14	0.03	< 0.005	< 0.005	0.03	0.04	< 0.005	0.01	0.01	—	123	123	< 0.005	0.02	0.10	129
Annual	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—

Worker	0.01	< 0.005	0.01	0.06	0.00	0.00	0.02	0.02	0.00	< 0.005	< 0.005	—	13.9	13.9	< 0.005	< 0.005	0.02	14.1
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	0.00
Hauling	< 0.005	< 0.005	0.03	0.01	< 0.005	< 0.005	0.01	0.01	< 0.005	< 0.005	< 0.005	—	20.4	20.4	< 0.005	< 0.005	0.02	21.3

3.7. Infrastructure Installation (2027) - Unmitigated

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

Location	TOG	ROG	NOx	CO	SO2	PM10E	PM10D	PM10T	PM2.5E	PM2.5D	PM2.5T	BCO2	NBCO2	CO2T	CH4	N2O	R	CO2e
Onsite	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Daily, Summer (Max)	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Off-Road Equipment	1.30	1.08	9.60	12.6	0.02	0.28	—	0.28	0.26	—	0.26	—	1,913	1,913	0.08	0.02	—	1,920
Dust From Material Movement	—	—	—	—	—	—	< 0.005	< 0.005	—	< 0.005	< 0.005	—	—	—	—	—	—	—
Onsite truck	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	—	0.00	0.00	0.00	0.00	0.00	0.00
Daily, Winter (Max)	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Off-Road Equipment	1.30	1.08	9.60	12.6	0.02	0.28	—	0.28	0.26	—	0.26	—	1,913	1,913	0.08	0.02	—	1,920
Dust From Material Movement	—	—	—	—	—	—	< 0.005	< 0.005	—	< 0.005	< 0.005	—	—	—	—	—	—	—
Onsite truck	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	—	0.00	0.00	0.00	0.00	0.00	0.00

Average Daily	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Off-Road Equipment	0.35	0.29	2.59	3.41	0.01	0.08	—	0.08	0.07	—	0.07	—	517	517	0.02	< 0.005	—	518
Dust From Material Movement	—	—	—	—	—	—	< 0.005	< 0.005	—	< 0.005	< 0.005	—	—	—	—	—	—	—
Onsite truck	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	—	0.00	0.00	0.00	0.00	0.00	0.00
Annual	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Off-Road Equipment	0.06	0.05	0.47	0.62	< 0.005	0.01	—	0.01	0.01	—	0.01	—	85.5	85.5	< 0.005	< 0.005	—	85.8
Dust From Material Movement	—	—	—	—	—	—	< 0.005	< 0.005	—	< 0.005	< 0.005	—	—	—	—	—	—	—
Onsite truck	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	—	0.00	0.00	0.00	0.00	0.00	0.00
Offsite	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Daily, Summer (Max)	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Worker	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	—	0.00	0.00	0.00	0.00	0.00	0.00
Vendor	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	—	0.00	0.00	0.00	0.00	0.00	0.00
Hauling	0.01	< 0.005	0.30	0.07	< 0.005	0.01	0.07	0.08	0.01	0.02	0.03	—	271	271	0.01	0.04	0.52	284
Daily, Winter (Max)	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Worker	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	—	0.00	0.00	0.00	0.00	0.00	0.00
Vendor	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	—	0.00	0.00	0.00	0.00	0.00	0.00

Hauling	0.01	< 0.005	0.31	0.07	< 0.005	0.01	0.07	0.08	0.01	0.02	0.03	—	271	271	0.01	0.04	0.01	284
Average Daily	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Worker	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	—	0.00	0.00	0.00	0.00	0.00	0.00
Vendor	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	—	0.00	0.00	0.00	0.00	0.00	0.00
Hauling	< 0.005	< 0.005	0.08	0.02	< 0.005	< 0.005	0.02	0.02	< 0.005	0.01	0.01	—	73.2	73.2	< 0.005	0.01	0.06	76.7
Annual	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Worker	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	—	0.00	0.00	0.00	0.00	0.00	0.00
Vendor	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	—	0.00	0.00	0.00	0.00	0.00	0.00
Hauling	< 0.005	< 0.005	0.02	< 0.005	< 0.005	< 0.005	< 0.005	< 0.005	< 0.005	< 0.005	< 0.005	—	12.1	12.1	< 0.005	< 0.005	0.01	12.7

3.9. Infrastructure Installation (2028) - Unmitigated

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

Location	TOG	ROG	NOx	CO	SO2	PM10E	PM10D	PM10T	PM2.5E	PM2.5D	PM2.5T	BCO2	NBCO2	CO2T	CH4	N2O	R	CO2e
Onsite	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Daily, Summer (Max)	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Daily, Winter (Max)	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Off-Road Equipment	1.26	1.05	9.44	12.6	0.02	0.26	—	0.26	0.24	—	0.24	—	1,913	1,913	0.08	0.02	—	1,920
Dust From Material Movement	—	—	—	—	—	—	< 0.005	< 0.005	—	< 0.005	< 0.005	—	—	—	—	—	—	—
Onsite truck	—	—	—	—	—	—	0.00	0.00	—	0.00	0.00	—	—	—	—	—	—	—
Average Daily	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—

Off-Roa Equipment	0.08	0.06	0.57	0.76	< 0.005	0.02	—	0.02	0.01	—	0.01	—	116	116	< 0.005	< 0.005	—	116
Dust From Material Movement	—	—	—	—	—	—	< 0.005	< 0.005	—	< 0.005	< 0.005	—	—	—	—	—	—	—
Onsite truck	—	—	—	—	—	—	0.00	0.00	—	0.00	0.00	—	—	—	—	—	—	—
Annual	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Off-Roa d Equipm ent	0.01	0.01	0.10	0.14	< 0.005	< 0.005	—	< 0.005	< 0.005	—	< 0.005	—	19.2	19.2	< 0.005	< 0.005	—	19.3
Dust From Material Movement	—	—	—	—	—	—	< 0.005	< 0.005	—	< 0.005	< 0.005	—	—	—	—	—	—	—
Onsite truck	—	—	—	—	—	—	0.00	0.00	—	0.00	0.00	—	—	—	—	—	—	—
Offsite	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Daily, Summer (Max)	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Daily, Winter (Max)	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Worker	—	—	—	—	—	—	0.00	0.00	—	0.00	0.00	—	—	—	—	—	—	—
Vendor	—	—	—	—	—	—	0.00	0.00	—	0.00	0.00	—	—	—	—	—	—	—
Hauling	—	—	—	—	—	—	0.05	0.05	—	0.01	0.01	—	—	—	—	—	—	—
Average Daily	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Worker	—	—	—	—	—	—	0.00	0.00	—	0.00	0.00	—	—	—	—	—	—	—
Vendor	—	—	—	—	—	—	0.00	0.00	—	0.00	0.00	—	—	—	—	—	—	—
Hauling	—	—	—	—	—	—	< 0.005	< 0.005	—	< 0.005	< 0.005	—	—	—	—	—	—	—
Annual	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—

Worker	—	—	—	—	—	—	0.00	0.00	—	0.00	0.00	—	—	—	—	—	—	—
Vendor	—	—	—	—	—	—	0.00	0.00	—	0.00	0.00	—	—	—	—	—	—	—
Hauling	—	—	—	—	—	—	< 0.005	< 0.005	—	< 0.005	< 0.005	—	—	—	—	—	—	—

3.11. Site Restoration (2028) - Unmitigated

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

Location	TOG	ROG	NOx	CO	SO2	PM10E	PM10D	PM10T	PM2.5E	PM2.5D	PM2.5T	BCO2	NBCO2	CO2T	CH4	N2O	R	CO2e
Onsite	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Daily, Summer (Max)	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Daily, Winter (Max)	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Off-Road Equipment	2.41	2.02	18.0	21.3	0.04	0.71	—	0.71	0.65	—	0.65	—	3,715	3,715	0.15	0.03	—	3,728
Paving	0.00	0.00	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Onsite truck	—	—	—	—	—	—	0.00	0.00	—	0.00	0.00	—	—	—	—	—	—	—
Average Daily	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Off-Road Equipment	0.07	0.06	0.54	0.64	< 0.005	0.02	—	0.02	0.02	—	0.02	—	112	112	< 0.005	< 0.005	—	112
Paving	0.00	0.00	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Onsite truck	—	—	—	—	—	—	0.00	0.00	—	0.00	0.00	—	—	—	—	—	—	—
Annual	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—

Off-Road Equipment	0.01	0.01	0.10	0.12	< 0.005	< 0.005	—	< 0.005	< 0.005	—	< 0.005	—	18.5	18.5	< 0.005	< 0.005	—	18.6
Paving	0.00	0.00	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Onsite truck	—	—	—	—	—	—	0.00	0.00	—	0.00	0.00	—	—	—	—	—	—	—
Offsite	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Daily, Summer (Max)	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Daily, Winter (Max)	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Worker	—	—	—	—	—	—	0.40	0.40	—	0.10	0.10	—	—	—	—	—	—	—
Vendor	—	—	—	—	—	—	0.00	0.00	—	0.00	0.00	—	—	—	—	—	—	—
Hauling	—	—	—	—	—	—	0.00	0.00	—	0.00	0.00	—	—	—	—	—	—	—
Average Daily	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Worker	—	—	—	—	—	—	0.01	0.01	—	< 0.005	< 0.005	—	—	—	—	—	—	—
Vendor	—	—	—	—	—	—	0.00	0.00	—	0.00	0.00	—	—	—	—	—	—	—
Hauling	—	—	—	—	—	—	0.00	0.00	—	0.00	0.00	—	—	—	—	—	—	—
Annual	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Worker	—	—	—	—	—	—	< 0.005	< 0.005	—	< 0.005	< 0.005	—	—	—	—	—	—	—
Vendor	—	—	—	—	—	—	0.00	0.00	—	0.00	0.00	—	—	—	—	—	—	—
Hauling	—	—	—	—	—	—	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	TOG	ROG	NOx	CO	SO2	PM10E	PM10D	PM10T	PM2.5E	PM2.5D	PM2.5T	BCO2	NBCO2	CO2T	CH4	N2O	R	CO2e
Daily, Summer (Max)	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Total	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Daily, Winter (Max)	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Total	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Annual	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Total	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—

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

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

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

4.10.3. Avoided and Sequestered Emissions by Species - Unmitigated

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

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

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

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

5. Activity Data

5.1. Construction Schedule

Phase Name	Phase Type	Start Date	End Date	Days Per Week	Work Days per Phase	Phase Description
Site Preparation	Site Preparation	5/1/2027	5/31/2027	5.00	21.0	—
Vegetation Removal	Site Preparation	10/1/2026	10/15/2026	5.00	11.0	—
Excavation	Grading	6/1/2027	8/15/2027	5.00	54.0	—
Infrastructure Installation	Building Construction	8/16/2027	1/31/2028	5.00	121	—
Site Restoration	Paving	2/1/2028	2/15/2028	5.00	11.0	—

5.2. Off-Road Equipment

5.2.1. Unmitigated

Phase Name	Equipment Type	Fuel Type	Engine Tier	Number per Day	Hours Per Day	Horsepower	Load Factor
Site Preparation	Tractors/Loaders/Backhoes	Diesel	Average	2.00	8.00	84.0	0.37
Site Preparation	Skid Steer Loaders	Diesel	Average	1.00	8.00	71.0	0.37
Site Preparation	Rubber Tired Dozers	Diesel	Average	1.00	8.00	367	0.40
Site Preparation	Excavators	Diesel	Average	1.00	8.00	36.0	0.38
Site Preparation	Generator Sets	Diesel	Average	3.00	8.00	14.0	0.74
Site Preparation	Rough Terrain Forklifts	Diesel	Average	1.00	8.00	96.0	0.40
Vegetation Removal	Tractors/Loaders/Backhoes	Diesel	Average	2.00	8.00	84.0	0.37
Vegetation Removal	Rubber Tired Dozers	Diesel	Average	1.00	8.00	367	0.40
Vegetation Removal	Excavators	Diesel	Average	1.00	8.00	36.0	0.38

Vegetation Removal	Generator Sets	Diesel	Average	3.00	8.00	14.0	0.74
Vegetation Removal	Skid Steer Loaders	Diesel	Average	1.00	8.00	71.0	0.37
Excavation	Tractors/Loaders/Backhoes	Diesel	Average	3.00	8.00	84.0	0.37
Excavation	Bore/Drill Rigs	Diesel	Average	2.00	8.00	83.0	0.50
Excavation	Rubber Tired Dozers	Diesel	Average	1.00	8.00	367	0.40
Excavation	Dumpers/Tenders	Diesel	Average	5.00	8.00	16.0	0.38
Excavation	Excavators	Diesel	Average	2.00	8.00	36.0	0.38
Excavation	Generator Sets	Diesel	Average	3.00	8.00	14.0	0.74
Excavation	Rough Terrain Forklifts	Diesel	Average	1.00	8.00	96.0	0.40
Excavation	Skid Steer Loaders	Diesel	Average	1.00	8.00	71.0	0.37
Infrastructure Installation	Tractors/Loaders/Backhoes	Diesel	Average	1.00	8.00	84.0	0.37
Infrastructure Installation	Plate Compactors	Diesel	Average	2.00	8.00	8.00	0.43
Infrastructure Installation	Air Compressors	Diesel	Average	2.00	8.00	37.0	0.48
Infrastructure Installation	Excavators	Diesel	Average	2.00	8.00	36.0	0.38
Infrastructure Installation	Generator Sets	Diesel	Average	3.00	8.00	14.0	0.74
Infrastructure Installation	Rough Terrain Forklifts	Diesel	Average	1.00	8.00	96.0	0.40
Infrastructure Installation	Skid Steer Loaders	Diesel	Average	1.00	8.00	71.0	0.37
Site Restoration	Tractors/Loaders/Backhoes	Diesel	Average	2.00	8.00	84.0	0.37
Site Restoration	Plate Compactors	Diesel	Average	2.00	8.00	8.00	0.43
Site Restoration	Rubber Tired Dozers	Diesel	Average	1.00	8.00	367	0.40
Site Restoration	Dumpers/Tenders	Diesel	Average	1.00	8.00	16.0	0.38
Site Restoration	Excavators	Diesel	Average	1.00	8.00	36.0	0.38
Site Restoration	Generator Sets	Diesel	Average	3.00	8.00	14.0	0.74

Site Restoration	Graders	Diesel	Average	1.00	8.00	148	0.41
Site Restoration	Rough Terrain Forklifts	Diesel	Average	1.00	8.00	96.0	0.40
Site Restoration	Skid Steer Loaders	Diesel	Average	1.00	8.00	71.0	0.37

5.3. Construction Vehicles

5.3.1. Unmitigated

Phase Name	Trip Type	One-Way Trips per Day	Miles per Trip	Vehicle Mix
Site Preparation	—	—	—	—
Site Preparation	Worker	22.5	18.5	LDA,LDT1,LDT2
Site Preparation	Vendor	—	10.2	HHDT,MHDT
Site Preparation	Hauling	0.00	20.0	HHDT
Site Preparation	Onsite truck	—	—	HHDT
Excavation	—	—	—	—
Excavation	Worker	45.0	18.5	LDA,LDT1,LDT2
Excavation	Vendor	—	10.2	HHDT,MHDT
Excavation	Hauling	12.5	20.0	HHDT
Excavation	Onsite truck	—	—	HHDT
Infrastructure Installation	—	—	—	—
Infrastructure Installation	Worker	0.00	18.5	LDA,LDT1,LDT2
Infrastructure Installation	Vendor	0.00	10.2	HHDT,MHDT
Infrastructure Installation	Hauling	4.08	20.0	HHDT
Infrastructure Installation	Onsite truck	—	—	HHDT
Site Restoration	—	—	—	—
Site Restoration	Worker	32.5	18.5	LDA,LDT1,LDT2
Site Restoration	Vendor	—	10.2	HHDT,MHDT
Site Restoration	Hauling	0.00	20.0	HHDT
Site Restoration	Onsite truck	—	—	HHDT

Vegetation Removal	—	—	—	—
Vegetation Removal	Worker	20.0	18.5	LDA,LDT1,LDT2
Vegetation Removal	Vendor	—	10.2	HHDT,MHDT
Vegetation Removal	Hauling	0.00	20.0	HHDT
Vegetation Removal	Onsite truck	—	—	HHDT

5.4. Vehicles

5.4.1. Construction Vehicle Control Strategies

Non-applicable. No control strategies activated by user.

5.5. Architectural Coatings

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

5.6. Dust Mitigation

5.6.1. Construction Earthmoving Activities

Phase Name	Material Imported (cy)	Material Exported (cy)	Acres Graded (acres)	Material Demolished (sq. ft.)	Acres Paved (acres)
Site Preparation	—	—	10.5	0.00	—
Vegetation Removal	—	—	5.50	0.00	—
Excavation	—	3,300	16.5	0.00	—
Infrastructure Installation	3,200	—	0.00	0.00	—
Site Restoration	0.00	0.00	0.00	0.00	5.50

5.6.2. Construction Earthmoving Control Strategies

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

5.7. Construction Paving

Land Use	Area Paved (acres)	% Asphalt
Other Non-Asphalt Surfaces	5.50	0%

5.8. Construction Electricity Consumption and Emissions Factors

kWh per Year and Emission Factor (lb/MWh)

Year	kWh per Year	CO2	CH4	N2O
2026	0.00	532	0.03	< 0.005
2027	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. Biomass Cover Type

5.18.1.1. Unmitigated

Biomass Cover Type	Initial Acres	Final Acres

5.18.2. Sequestration

5.18.2.1. Unmitigated

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

6. Climate Risk Detailed Report

6.1. Climate Risk Summary

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

Climate Hazard	Result for Project Location	Unit
Temperature and Extreme Heat	27.4	annual days of extreme heat
Extreme Precipitation	4.20	annual days with precipitation above 20 mm
Sea Level Rise	—	meters of inundation depth
Wildfire	18.2	annual hectares burned

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

6.2. Initial Climate Risk Scores

Climate Hazard	Exposure Score	Sensitivity Score	Adaptive Capacity Score	Vulnerability Score
Temperature and Extreme Heat	3	0	0	N/A
Extreme Precipitation	N/A	N/A	N/A	N/A
Sea Level Rise	1	0	0	N/A
Wildfire	1	0	0	N/A
Flooding	N/A	N/A	N/A	N/A
Drought	N/A	N/A	N/A	N/A
Snowpack Reduction	N/A	N/A	N/A	N/A
Air Quality Degradation	0	0	0	N/A

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

6.3. Adjusted Climate Risk Scores

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

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

6.4. Climate Risk Reduction Measures

7. Health and Equity Details

7.1. CalEnviroScreen 4.0 Scores

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

Indicator	Result for Project Census Tract
Exposure Indicators	—
AQ-Ozone	97.1

AQ-PM	35.8
AQ-DPM	7.39
Drinking Water	8.44
Lead Risk Housing	26.6
Pesticides	86.2
Toxic Releases	21.5
Traffic	28.0
Effect Indicators	—
CleanUp Sites	29.4
Groundwater	54.7
Haz Waste Facilities/Generators	72.0
Impaired Water Bodies	0.00
Solid Waste	0.00
Sensitive Population	—
Asthma	50.9
Cardio-vascular	70.4
Low Birth Weights	27.1
Socioeconomic Factor Indicators	—
Education	56.5
Housing	38.1
Linguistic	45.4
Poverty	74.0
Unemployment	88.7

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	35.91684845
Employed	23.88040549
Median HI	37.71333248
Education	—
Bachelor's or higher	21.19851148
High school enrollment	100
Preschool enrollment	28.57692801
Transportation	—
Auto Access	29.34684974
Active commuting	78.80148852
Social	—
2-parent households	47.46567432
Voting	31.05350956
Neighborhood	—
Alcohol availability	80.43115617
Park access	9.49570127
Retail density	10.65058386
Supermarket access	31.15616579
Tree canopy	1.270370846
Housing	—
Homeownership	74.72090337
Housing habitability	74.33594251
Low-inc homeowner severe housing cost burden	46.54176825
Low-inc renter severe housing cost burden	54.83125882
Uncrowded housing	63.4800462
Health Outcomes	—
Insured adults	31.56679071
Arthritis	0.0

Asthma ER Admissions	38.8
High Blood Pressure	0.0
Cancer (excluding skin)	0.0
Asthma	0.0
Coronary Heart Disease	0.0
Chronic Obstructive Pulmonary Disease	0.0
Diagnosed Diabetes	0.0
Life Expectancy at Birth	34.9
Cognitively Disabled	21.0
Physically Disabled	9.6
Heart Attack ER Admissions	14.2
Mental Health Not Good	0.0
Chronic Kidney Disease	0.0
Obesity	0.0
Pedestrian Injuries	81.4
Physical Health Not Good	0.0
Stroke	0.0
Health Risk Behaviors	—
Binge Drinking	0.0
Current Smoker	0.0
No Leisure Time for Physical Activity	0.0
Climate Change Exposures	—
Wildfire Risk	7.8
SLR Inundation Area	0.0
Children	47.4
Elderly	16.0
English Speaking	45.6
Foreign-born	42.9

Outdoor Workers	16.4
Climate Change Adaptive Capacity	—
Impervious Surface Cover	83.4
Traffic Density	25.7
Traffic Access	23.0
Other Indices	—
Hardship	55.8
Other Decision Support	—
2016 Voting	41.4

7.3. Overall Health & Equity Scores

Metric	Result for Project Census Tract
CalEnviroScreen 4.0 Score for Project Location (a)	49.0
Healthy Places Index Score for Project Location (b)	33.0
Project Located in a Designated Disadvantaged Community (Senate Bill 535)	No
Project Located in a Low-Income Community (Assembly Bill 1550)	No
Project Located in a Community Air Protection Program Community (Assembly Bill 617)	No

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

7.4. Health & Equity Measures

No Health & Equity Measures selected.

7.5. Evaluation Scorecard

Health & Equity Evaluation Scorecard not completed.

7.6. Health & Equity Custom Measures

No Health & Equity Custom Measures created.

8. User Changes to Default Data

Screen	Justification
Land Use	Area to be excavated modeled as non-asphalt surface. Total area of disturbance used for lot acreage input.
Construction: Construction Phases	Per applicant provided information for concurrent pipeline construction.
Construction: Off-Road Equipment	Per applicant provided information. Vegetation removal equipment assumed to be equivalent to site preparation equipment.
Construction: Dust From Material Movement	3,200 cubic yards of import material (concrete, riprap, and rebar) allocated to infrastructure installation phase. 3,300 cy of soil exported during excavation phase.

Appendix C

Biological Resources Assessment

Casa Loma Siphon No. 1 and San Jacinto Pipeline Project

Biological Resources Assessment

prepared for

The Metropolitan Water District of Southern California
700 North Alameda Street
Los Angeles, California 90012

prepared by

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

November 2025

Table of Contents

1 Introduction 1
1.1 Project Location 1
1.2 Project Description 1
1.3 Regulatory Summary 1
1.3.1 Definition of Special Status Species 4
1.3.2 Environmental Statutes 4
1.3.3 Guidelines for Determining CEQA Significance 4
2 Methodology 6
2.1 Literature Review 6
2.2 Field Reconnaissance Survey 7
2.3 Special Status Species Assessment 7
3 Existing Conditions 8
3.1 Physical Characteristics 8
3.1.1 Topography and Geography 8
3.1.2 Watershed and Drainages 8
3.1.3 Soils 8
3.2 Vegetation and Other Land Cover Types 10
3.2.1 Fremont Cottonwood Woodland 10
3.2.2 Upland Mustards 10
3.2.3 Fourwing Saltbush Scrub 12
3.2.4 Disturbed Fourwing Saltbush Scrub 12
3.2.5 Developed/Disturbed 12
3.3 General Wildlife 12
4 Regulated Biological Resources 13
4.1 Special Status Species 13
4.1.1 Special Status Plant Species 13
4.1.2 Special Status Wildlife Species 13
4.2 Sensitive Natural Communities and Critical Habitat 14
4.3 Jurisdictional Waters and Wetlands 14
4.4 Wildlife Movement 15
4.5 Resources Protected by Local Policies and Ordinances 15
4.6 Habitat Conservation Plans 15
4.6.1 Stephens' Kangaroo Rat Habitat Conservation Plan 15
4.6.2 Western Riverside County Multiple Species Habitat Conservation Plan 16
5 Impact Analysis and Recommendations 17
5.1 Special Status Species 17

5.1.1 Special Status Plant Species....17
5.1.2 Special Status Wildlife Species....17
5.2 Sensitive Natural Communities and Critical Habitat....20
5.3 Jurisdictional Waters and Wetlands....21
5.4 Wildlife Movement....21
5.5 Habitat Conservation Plans....22
5.5.1 Stephens' Kangaroo Rat Habitat Conservation Plan....22
5.5.2 Western Riverside County Multiple Species Habitat Conservation Plan....22
6 Limitations, Assumptions, and Use Reliance....24
7 References....25
8 List of Preparers....27

Figures

Figure 1 Regional Location Map....2
Figure 2 Project Location Map....3
Figure 3 Soils Map....9
Figure 4 Vegetation Map and Biological Resource Observations....11

Appendices

Appendix A Regulatory Framework
Appendix B Site Photographs
Appendix C Special Status Species Evaluation Tables

1 Introduction

Rincon Consultants, Inc. (Rincon) prepared this Biological Resources Assessment (BRA) report for The Metropolitan Water District of Southern California (Metropolitan) to document existing conditions and to evaluate the potential for impacts to biological resources during the implementation of the Casa Loma Siphon No. 1 and San Jacinto Project (Project). The Project includes repair activities to provide a permanent engineering solution for the pipeline exposure within the San Jacinto River due to the heavy rains in early 2023. This report is intended to assist Metropolitan with developing its approach to California Environmental Quality Act (CEQA) compliance for the Project and will be updated following development of a specific project description and the findings of additional biological surveys.

1.1 Project Location

The Project site encompasses an approximate 20-acre area located within and adjacent to the San Jacinto River, between Soboba Road and State Street, near the city of San Jacinto, unincorporated Riverside County, California (Figure 1 and Figure 2). The Project site is depicted on the United States Geological Survey (USGS) *San Jacinto, California,* 7.5-minute topographic map within Township 4 South, Range 1 West, Section 15, San Bernardino Baseline and Meridian (33.820600°, -116.969914°).

1.2 Project Description

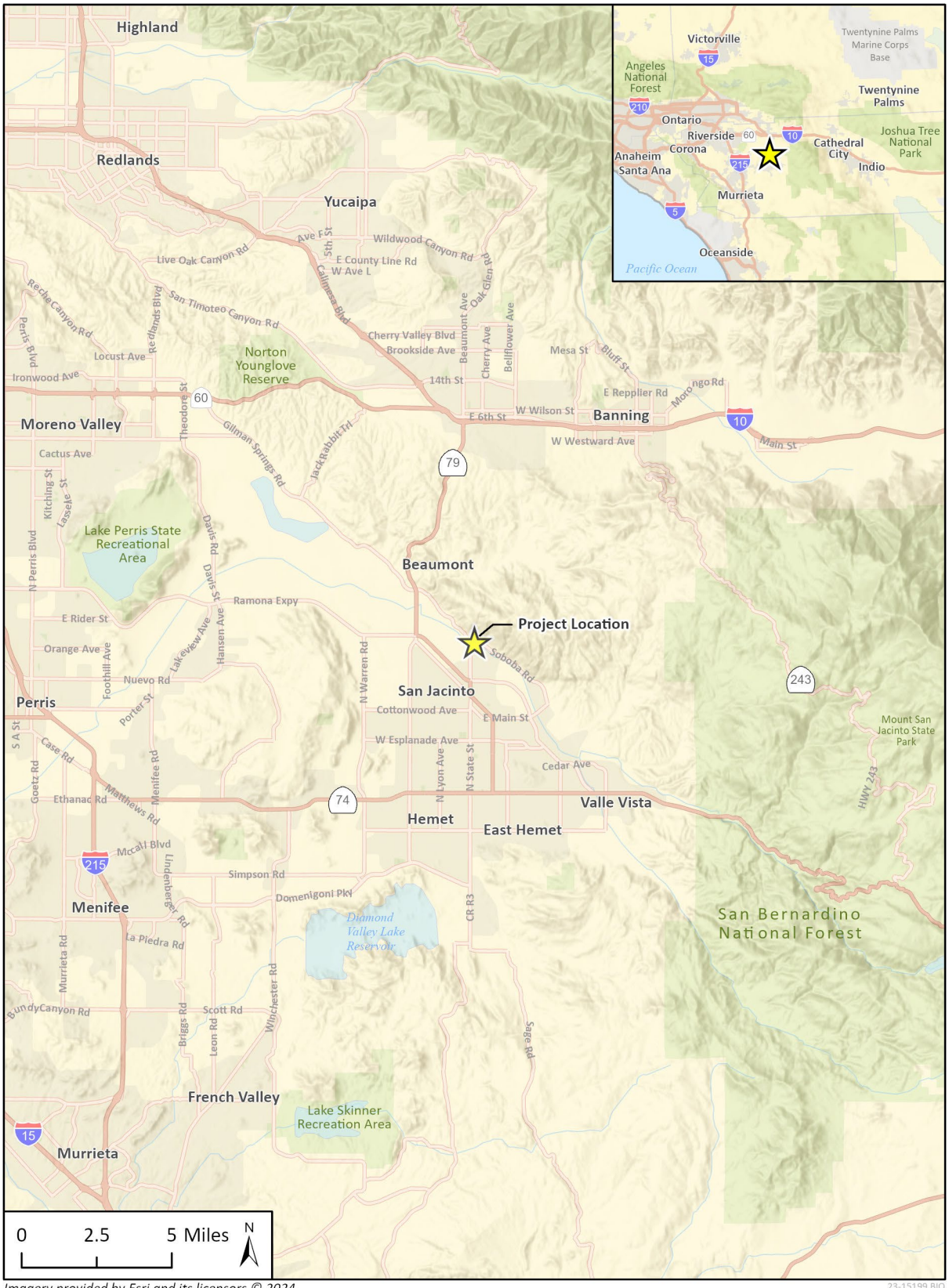
Metropolitan is a regional water wholesaler for 26 public agency members that provide drinking water to approximately 19 million people in parts of Los Angeles, Orange, Riverside, San Bernardino, San Diego, and Ventura counties.

During storm activity in early 2023, accelerated flows within the San Jacinto River exposed an approximate 200-foot-long segment of one of Metropolitan's Casa Loma Siphon No. 1 Pipeline. In response to the emergency, Metropolitan installed protective measures to achieve temporary protection of the pipelines until a permanent solution could be developed. Metropolitan is now proposing a permanent engineering solution within the approximate 20-acre Project site to properly cover the three existing pipelines (CRA Casa Loma Siphon No. 1, CRA Casa Loma Siphon No. 2, San Jacinto Pipeline). Figure 2 below shows the locations of the three pipelines.

1.3 Regulatory Summary

Regulated or sensitive resources studied and analyzed herein include special status plant and wildlife species, nesting birds and raptors, sensitive plant communities, jurisdictional waters and wetlands, wildlife movement, regionally protected resources (e.g., from county-wide Habitat Conservation Plans [HCPs] and Natural Community Conservation Plans [NCCPs]), and locally protected resources, such as protected trees. Regulatory authority over biological resources is shared by federal, state, and local authorities. Primary authority for regulation of general biological resources lies within the land use control and planning authority of local jurisdictions. In this instance, Metropolitan is the lead agency for Project implementation and CEQA compliance.

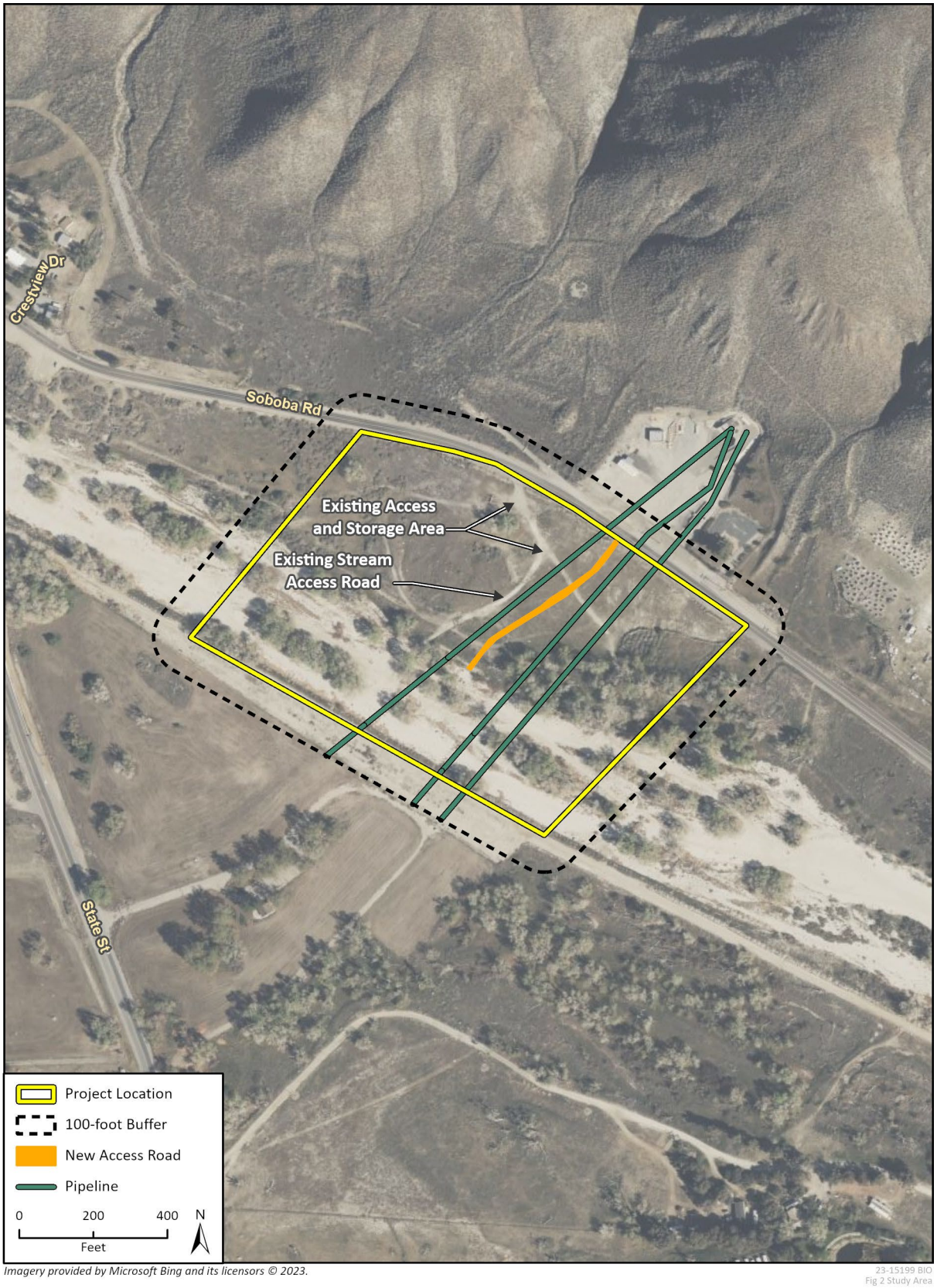
Figure 1 Regional Location Map



Imagery provided by Esri and its licensors © 2024.

23-15199 BIO
Fig 1 Regional Location

Figure 2 Project Location Map



Imagery provided by Microsoft Bing and its licensors © 2023.

23-15199 BIO
Fig 2 Study Area

1.3.1 Definition of Special Status Species

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

- Species listed as threatened or endangered under the Federal Endangered Species Act (FESA), including proposed and candidate species
- Species listed as candidate, threatened, or endangered under the California Endangered Species Act (CESA)
- Species designated as Fully Protected by the California Fish and Game Code (CFGC) and species designated as Species of Special Concern or Watch List by the California Department of Fish and Wildlife (CDFW)
- California Native Plant Society (CNPS) California Rare Plant Ranks (CRPR) 1A, 1B, 2A, and 2B
- Species designated as locally important by the Local Agency and/or otherwise protected through ordinance, local policy, or HCPs/NCCPs, such as Western Riverside Multiple Species Habitat Conservation Plan (MSHCP)

1.3.2 Environmental Statutes

For this report, potential impacts to biological resources were analyzed based on the following statutes (Appendix A):

- CEQA
- FESA
- CESA
- Federal Clean Water Act (CWA)
- CFGC
- Migratory Bird Treaty Act (MBTA)
- The Bald and Golden Eagle Protection Act
- Porter-Cologne Water Quality Control Act
- Western Riverside County MSHCP
- Riverside County Code of Ordinances

1.3.3 Guidelines for Determining CEQA Significance

The following threshold criteria, as defined by the CEQA Guidelines Appendix G Initial Study Checklist, were used to evaluate potential environmental impacts. Based on these criteria, the proposed project would have a significant impact 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.*

b) *Have a substantial adverse effect on any riparian habitat or other sensitive natural community identified in local or regional plans, policies, and regulations or by 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.

2 Methodology

Biological conditions were evaluated by confirming applicable regulations, policies, and standards; reviewing biological literature and querying available databases pertinent to the Project site and vicinity (within nine topographic quadrangles for CDFW's California Natural Diversity Data Base [CNDDB] and the CNPS Inventory of Rare and Endangered Plants); and conducting a reconnaissance-level biological survey of the Project site and 100-foot survey buffer. This assessment details the existing biological conditions of the Project site at the time of the literature review and reconnaissance survey. The methods employed are described in detail below. The findings and opinions conveyed in this report are based on this methodology. For purpose of this report, the Biological Survey Area (BSA) is defined as the approximate 20-acre work area where the proposed construction would occur (including two access routes to the work area as well as a staging area) and a 100-foot survey buffer (Figure 2). The BSA is approximately 29.7 acres in total area.

2.1 Literature Review

Rincon conducted a literature review to characterize the nature and extent of biological resources on and adjacent to the BSA. The literature review included an evaluation of current and historical aerial photographs of the site (Google Earth 2023), regional and site-specific topographic maps, and climatic data.

Queries of CDFW's CNDDB (2023a), CNPS's online Inventory of Rare and Endangered Plants of California (2023), and USFWS's Information for Planning and Consultation system (IPaC; USFWS 2023b) were conducted to obtain comprehensive information regarding state and federally listed species and other special status species considered to have potential to occur within the *San Jacinto, California,* USGS 7.5-minute topographic quadrangle and the surrounding eight quadrangles (*Beaumont*, *Blackburn Canyon*, *Cabazon*, *El Casco*, *Hemet*, *Lake Fulmor*, *Lakeview*, *Winchester*). The result of database queries and lists of special status species were reviewed by Rincon's regional biological experts for accuracy and completeness. The final list of special status biological resources (species and sensitive natural communities) was evaluated for potential to occur within the BSA based on documented occurrences within the nine-quadrangle search area and biologists' expert opinions on species known to occur in the region and the surrounding land uses (open space recreation, low density residential and mixed use).

The following resources were reviewed for additional information on existing conditions relating to biological resources within the BSA:

- United States Department of Agriculture (USDA), Natural Resources Conservation Service (NRCS) Web Soil Survey (2023a)
- USFWS Critical Habitat Portal (2023b)
- USFWS National Wetlands Inventory (2023c)
- CDFW Special Animals List (2023b)
- CDFW Biogeographic Information and Observation System (2023c)
- CDFW Special Vascular Plants, Bryophytes, and Lichens List (2023d)

2.2 Field Reconnaissance Survey

A field reconnaissance survey was conducted to document existing site conditions and to evaluate the potential presence of regulated biological resources, including special status plant and wildlife species, sensitive plant communities, potentially jurisdictional wetlands and aquatic resources, suitable habitat for federally and state protected species and nesting birds, and locally protected resources. The survey was conducted by Rincon biologists Jared Reed and Kevin Gugerty on October 24, 2023, between 9:50 a.m. and 12:00 p.m. Weather conditions during the survey included temperatures between 61 and 69 degrees Fahrenheit, no wind, and zero percent cloud cover. The biologists used a wandering pedestrian transect approach to survey the BSA. Rincon biologists mapped vegetation and land cover, noted wildlife observations, and took representative photographs within the BSA (Appendix B). Vegetation communities in the BSA were mapped according to *A Manual of California Vegetation, Second Edition* (MCV2; Sawyer et al. 2009). Potentially jurisdictional waters were noted, and a formal jurisdictional delineation is expected to be completed during the 2023/2024 rainy season.

2.3 Special Status Species Assessment

Local, state, and federal agencies regulate special status species and may require an assessment of their presence or potential presence to be conducted on site prior to the approval of a proposed project on a property. Assessments for the potential occurrence of special status species are based on known ranges, habitat preferences for the species, species occurrence records from the CNDDB and other sources, species occurrence records from other sites near the BSA, previous reports for the BSA, and the results of surveys of the BSA. The evaluation results and justification were compiled into a table, which is included as Appendix C. The potential for each special status species to occur in the BSA was evaluated according to the following criteria:

- **No Potential.** Habitat on and adjacent to the BSA is clearly unsuitable for the species requirements (foraging, breeding, cover, substrate, elevation, hydrology, plant community, site history, disturbance regime), and species would have been identifiable in the BSA if present (e.g., oak trees). Protocol surveys (if conducted) did not detect species.
- **Low Potential.** Few of the habitat components (foraging, breeding, cover, substrate, elevation, hydrology, plant community, site history, disturbance regime) meeting the species requirements are present, and/or the majority of habitat in and adjacent to the BSA is unsuitable or of very poor quality. The species is not likely to be found in the BSA. Protocol surveys (if conducted) did not detect species.
- **Moderate Potential**. Some of the habitat components (foraging, breeding, cover, substrate, elevation, hydrology, plant community, site history, disturbance regime) meeting the species requirements are present, and/or only some of the habitat on or adjacent to the BSA is unsuitable. The species has a moderate probability of being found in the BSA.
- **High Potential.** All the habitat components (foraging, breeding, cover, substrate, elevation, hydrology, plant community, site history, disturbance regime) meeting the species requirements are present and/or most of the habitat in or adjacent to the BSA is highly suitable. The species has a high probability of being found in the BSA.
- **Present.** Species was observed in the BSA during reconnaissance / protocol surveys or has been recorded (e.g., CNDDB, other reports) in the BSA recently (within the last 25 years).

3 Existing Conditions

This section provides an overview of existing conditions within the BSA, including physical characteristics, terrestrial habitat types, and biological resources, such as plant and wildlife species observed during the field survey.

3.1 Physical Characteristics

3.1.1 Topography and Geography

The BSA is located within the San Jacinto River at the north end of the San Jacinto River Valley and has a relatively uniform elevation at approximately 1,500 feet above mean sea level. Topographic features visible from the survey area include the San Jacinto Mountains adjoining the northeast side of the BSA. Existing land use within the BSA consists of recreational open space. Low- and medium-density residential areas are located to the west and south of the BSA, and mixed-use and open space areas are located to the north, northwest, and east of the BSA. Annual precipitation in the city of San Jacinto (the location of the closest monitoring station to the Project site) is typically about 13 inches, with most rainfall received between December and March in typical years. Mean annual temperatures range from 45 to 80°F (Western Regional Climate Center 2023). The BSA has a high level of disturbance, including soil compaction from vehicle use, within the existing storage area (Figure 2) and on the path (south of the river).

3.1.2 Watershed and Drainages

The BSA contains a portion of the San Jacinto River, which is classified by the National Wetlands Inventory as a Riverine System (USFWS 2023c). More specifically, this river is classified as an intermittent streambed that is intermittently flooded. The river is approximately 150 feet wide within the BSA and was dry (not flowing) at the time of the survey, which was conducted during the typical dry season for southern California. The vegetation communities present within the BSA are discussed in further detail below.

3.1.3 Soils

Four soil types occur within the BSA (USDA NRCS 2023a):

- Dello loamy sand, 0 to 5 percent slopes (DgB)
- Riverwash (RsC)
- Tujunga loamy sand, channeled, 0 to 8 percent slopes (TvC)
- Soboba cobbly loamy sand, 2 to 25 percent slopes (SrE)

The majority of the BSA is mapped as Riverwash, which is considered hydric (USDA NRCS 2023b; Figure 3).

Figure 3 Soils Map

Imagery provided by Microsoft Bing and its licensors © 2023.
Additional data provided by Natural Resource Conservation Service Soil Survey Geography, 2023.

23-15199 BIO
Fig 3 USGS NRCS Soils Map

3.2 Vegetation and Other Land Cover Types

Vegetation communities documented in the BSA during the reconnaissance survey include Fremont cottonwood woodland, upland mustards, and fourwing saltbush scrub. Developed/disturbed was the only other land cover type documented in the BSA. One special status plant species, chaparral sand verbena (*Abronia villosa* var. *aurita*), was also observed during the field survey. An individual plant as well as a small population of this species were observed in the Fremont cottonwood woodland. Another individual plant was also observed on the edge of a developed/disturbed area adjacent to upland mustards (Figure 4). Brief descriptions of the vegetation communities present in the BSA are provided below.

3.2.1 Fremont Cottonwood Woodland

Fremont cottonwood woodland (*Populus fremontii* Woodland Alliance) is a vegetation community characterized by dominant Fremont cottonwood (*Populus fremontii* ssp. *Fremontii*) in the tree canopy (approximately 10 to 80 percent absolute cover, and greater than 50 percent relative cover, in the tree layer) with willows (*Salix* spp.) and other riparian trees, such as western sycamore (*Platanus racemosa*). The tree canopy is typically continuous to open, the shrub layer intermittent to open, and the herbaceous layer variable (Sawyer et al. 2009). This alliance can be found on floodplains; along low-gradient rivers, perennial or seasonally intermittent streams, and springs; and in canyons, alluvial fans, and valleys with a dependable subsurface water supply that varies considerably during the year. This community is ranked G4S3 and is considered sensitive (CDFW 2023e). Please see Section 4.2, Sensitive Natural Communities and Critical Habitat, for an explanation of this ranking.

Fremont cottonwood woodland is found throughout the BSA, within the San Jacinto River. Fremont cottonwood is dominant in the tree layer, with Goodding's black willow (*Salix gooddingii*) a common species. The shrub layer is not dense and contains large areas of unvegetated river channel with scattered stands of mulefat (*Baccharis salicifolia*). This community comprises approximately 11.77 acres of the BSA.

3.2.2 Upland Mustards

Upland mustards (*Brassica nigra* Herbaceous Semi-Natural Alliance) is a vegetation community typically found in fallow fields, grasslands, roadsides, levee slopes, disturbed coastal scrub, riparian areas, cleared roadsides, and waste places at elevations between 0 and 9,186 feet (0 and 2,800 meters) above mean sea level. Black mustard (*Brassica nigra*), summer mustard (*Hirschfeldia incana*), wild radish (*Raphanus sativus*), or other mustards occur with non-native plants at over 80 percent cover in the herbaceous layer. This vegetation community has a sensitivity ranking of GNASNA (Global/State Ranking Not Applicable; community is not suitable target for conservation) due to the dominance of non-native species and is not considered sensitive (CDFW 2023e).

In the BSA, shortpod mustard (*Hirschfeldia incana*) is co-dominant with Russian thistle (*Salsola tragus*) and common Stork's bill (*Erodium cicutarium*) forming a dense herbaceous layer. This alliance occupies areas outside the main channel of the San Jacinto River that appear to have been disturbed in the past, especially throughout the northeastern portion of the BSA. The BSA contains 6.73 acres of this alliance.

Figure 4 Vegetation Map and Biological Resource Observations

Imagery provided by Microsoft Bing and its licensors © 2023.

23-15199 BIO
Fig 4 Vegetation Map and Biological Resource Observations

3.2.3 Fourwing Saltbush Scrub

Fourwing saltbush scrub (*Atriplex canescens* Shrubland Alliance) is a vegetation community typically found on playas, old beaches and shores, lake deposits, dissected alluvial fans, rolling hills or channel beds at elevations between 246 and 4,921 feet (74 and 1,500 meters) above mean sea level. Soils are generally carbonate rich, alkaline, sandy, or sandy clay loams. Fourwing saltbush scrub is characterized by an open to intermittent shrub canopy and a variable herbaceous layer composed of seasonal herbs and non-native grasses. Fourwing saltbush has over two percent absolute cover and over 50 percent relative cover in the shrub layer (Sawyer et al. 2009). This community is ranked G5S4 and is not classified as sensitive (CDFW 2023e).

In the BSA, this vegetation community is co-dominated by fourwing saltbush (*Atriplex canescens*), red brome (*Bromus rubens*) and horsewheat (*Triticum aestivum*). It is found in the northwest buffer of the BSA, and in a few areas in the northeast portion of the Project site. This alliance occupies approximately 3.06 acres of the BSA.

3.2.4 Disturbed Fourwing Saltbush Scrub

Stands of disturbed fourwing saltbush scrub occur in the northern portion of the BSA in the buffer area across Soboba Road. This community is similar in species composition to fourwing saltbush scrub, as described above, but is sparser with large areas of bare or disturbed ground between shrubs and herbaceous vegetation. The BSA contains 0.81 acre of disturbed fourwing saltbush scrub.

3.2.5 Developed/Disturbed

The developed/disturbed land cover type typically includes residential buildings, other infrastructure, and paved areas with little to no vegetation (e.g., paved roads). Developed/disturbed areas are present throughout the BSA, specifically within Soboba Road and dirt roads within the Project site as well as along the northern and southern buffers of the BSA. The BSA contains approximately 7.29 acres of developed/disturbed land cover.

3.3 General Wildlife

Rincon's biologists observed several common wildlife species during the field reconnaissance survey, including western fence lizard (*Sceloporus occidentalis*), black phoebe (*Sayornis nigricans*), common raven (*Corvus corax*), Bewick's wren (*Thryomanes bewickii*), Nuttall's woodpecker (*Dryobates nuttallii*), American crow (*Corvus brachyrhynchos*), California towhee (*Melozone crissalis*), lesser goldfinch (*Spinus psaltria*), red-tailed hawk (*Buteo jamaicensis*), and bushtit (*Psaltriparus minimus*). The biologists also observed several small mammal burrows near the center of the BSA; however, no small mammals or their sign were observed.

4 Regulated Biological Resources

This section discusses special status biological resources observed within the BSA and evaluates the potential for the BSA to support other regulated resources. This assessment is based on the existing biological conditions of the BSA at the time of the literature review and reconnaissance survey.

4.1 Special Status Species

The literature review identified 61 special status plant species and 48 special status wildlife species within the nine quadrangles surrounding the BSA (Appendix C).

4.1.1 Special Status Plant Species

The literature review identified 61 special status plant species within the nine-quadrangle search area of the BSA. One special status plant species, chaparral sand-verbena, was observed in the BSA during the reconnaissance survey conducted on October 24, 2023. Three special status plant species have moderate potential to occur within the BSA due to presence of specific habitat requirements (e.g., riparian woodland, sandy washes), relatively recent occurrences on CNDDB (<25 years), and/or observations from past project-specific surveys. These species include smooth tarplant (*Centromadia pungens* ssp*. laevis*; CRPR 1B.1), Mojave tarplant (*Deinandra mohavensis*; SE, CRPR 1B.3) and white rabbit-tobacco (*Pseudognaphalium leucocephalum*; CRPR 2B.2). The remaining 57 special status plant species have low potential or are not expected to occur in the BSA.

4.1.2 Special Status Wildlife Species

The literature review identified 48 special status wildlife species within nine quadrangles of the Project site.

Six special status species have a moderate potential to occur within the BSA due to presence of specific habitat requirements (e.g., small mammal burrows, riparian woodland, sandy washes), relatively recent occurrences on CNDDB (<25 years), and/or observations from past project-specific surveys. These species include least Bell's vireo (*Vireo bellii pusillus*), pallid bat (*Antrozous pallidus*), Townsend's big-eared bat (*Corynorhinus townsendii*), western yellow bat (*Lasiurus xanthinus*) Stephens' kangaroo rat (*Dipodomys stephensi*) and Los Angeles pocket mouse (*Perognathus longimembris brevinasus*).

Two special status wildlife species have high potential to occur within the BSA: San Bernardino kangaroo rat (*Dipodomys merriami parvus*) and Cooper's hawk (*Accipiter cooperii*). The BSA is located within USFWS designated critical habitat for San Bernardino kangaroo rat and several small mammal burrows were observed near the center of the BSA (Figure 4). Such burrows could support San Bernardino kangaroo rat, although no individuals or their sign were observed during the reconnaissance survey. For the Cooper's hawk, the BSA contains suitable nesting trees and there have been several sightings on eBird of this species near the BSA and one within the BSA (eBird 2023).

One special status wildlife species, yellow warbler (*Setophaga petechia*), is present within the BSA. This species was observed during the biological monitoring conducted for the prior emergency repairs on July 25, and July 26, 2023.

The remaining 39 special status wildlife species have low or no potential to occur within the BSA.

Nesting Birds

While common birds are not designated as special status species, destruction of their eggs, active nests, and nestlings is prohibited by federal and state law, specifically the MBTA and CFGC Section 3503. The BSA contains woodland and shrubland communities that could provide suitable nesting habitat for passerine avian species and raptors.

4.2 Sensitive Natural Communities and Critical Habitat

Plant communities are considered sensitive if they have limited distributions, have high wildlife value, include special status species, or are particularly susceptible to disturbance. CDFW ranks sensitive communities as “threatened” or “very threatened” and keeps records of their occurrences in the CNDDB. The CNDDB vegetation alliances are ranked 1 through 5 based on NatureServe’s (2023) methodology, with those alliances ranked globally (G) or statewide (S) as 1 through 3 considered sensitive, though there are some exceptions. One sensitive natural community was observed within the BSA, Fremont cottonwood woodland, which has a state rarity ranking of S3 and a global rarity ranking of G4. No other sensitive natural communities occur within the BSA.

USFWS designated critical habitat for San Bernardino kangaroo rat occurs within most of the BSA (USFWS 2023a). Suitable habitat for this species occurs within the BSA and small mammal burrows were also observed during the reconnaissance survey.

4.3 Jurisdictional Waters and Wetlands

The United States Army Corp of Engineers (USACE) asserts jurisdiction under Section 404 of the CWA over non-wetland (e.g., streams, lakes, oceans) and wetland (e.g., marshes, estuaries) waters of the U.S. that typically exhibit a hydrologic surface connection to traditionally navigable waters. The limits of jurisdiction extend to the Ordinary High Water Mark (OHWM) for non-tidal waters or High Tide Line (HTL) for tidal waters. The limits of jurisdiction also extend to the edge of those wetlands abutting or, in some cases, adjacent to non-wetland waters of the U.S. that exhibit all three criteria defining federal wetlands: hydric soils, hydrophytic vegetation, and wetland hydrology. Adjacent wetlands are “waters of the U.S.” only if there is a continuous surface connection between the potential wetland and a navigable or relatively permanent water body (USACE et. al 2023). The Santa Ana Regional Water Quality Control Board (RWQCB) has jurisdiction over waters of the U.S. under Section 401 of the CWA. The RWQCB may also assert jurisdiction over waters of the state, typically considered “isolated,” under the Porter-Cologne Water Quality Control Act. The CDFW has regulatory authority over activities that divert, obstruct, or alter the channel, bed, or bank of any river, stream, or lake under Section 1600 et seq. of the CFGC. Therefore, perennial, intermittent, and ephemeral streams and associated riparian vegetation also fall under the jurisdiction of the CDFW.

A portion of the BSA contains the San Jacinto River, which is classified as a riverine system. The portions of the BSA in the river are likely considered waters of the U.S. and state and would potentially be subject to the jurisdictions of the USACE, RWQCB, and CDFW. A formal jurisdictional delineation to confirm the location and extent of agency jurisdiction was performed on January 8, 2024. Based on the field delineation, the portion of the San Jacinto River within the BSA is likely subject to the jurisdiction of the USACE, RWQCB, and CDFW. Recommendations for avoidance and

minimization of impacts to jurisdictional waters are discussed in the Jurisdictional Delineation Letter Report prepared for the Project (Rincon 2024).

4.4 Wildlife Movement

Wildlife movement corridors, or habitat linkages, are generally defined as connections between areas of suitable habitat that allow for physical and genetic exchange between otherwise isolated wildlife 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 wildlife periodically move away from an area and then subsequently return. Others may be important as dispersal corridors for young wildlife. A group of habitat linkages in an area can form a wildlife corridor network. The California Essential Habitat Connectivity Project, commissioned by the California Department of Transportation (Caltrans) and CDFW, identifies "Natural Landscape Blocks" which support native biodiversity and the "Essential Connectivity Areas" which link them (Spencer et al. 2010).

The BSA is not in an Essential Connectivity Area; however, it is less than one mile south of the Natural Landscape Block that includes the San Jacinto Mountains. Wildlife associated with riparian and adjacent scrub habitats could move through the BSA as the San Jacinto River serves as a habitat linkage in the area at large. The BSA is surrounded by undeveloped land and open space, including the San Jacinto Mountain foothills, which provide a multitude of regional wildlife movement opportunities within and adjacent to the BSA. Disturbance-tolerant species, such as California ground squirrel (*Spermophilus beecheyi*), raccoon (*Procyon lotor*), and coyote (*Canis latrans*), are most likely to utilize these local wildlife corridors; however, the BSA could also be utilized for movement by special status wildlife species associated with riparian woodland habitats.

4.5 Resources Protected by Local Policies and Ordinances

County of Riverside Ordinance No. 663 (Stephens' Kangaroo Rat Mitigation Fee Ordinance) is addressed in Section 4.6, *Habitat Conservation Plans*. No other local policies or ordinances protecting sensitive biological resources were determined to be applicable to the Project. Therefore, local policies and ordinances are not analyzed further in this report.

4.6 Habitat Conservation Plans

4.6.1 Stephens' Kangaroo Rat Habitat Conservation Plan

The proposed Project is located within the Stephens' Kangaroo Rat HCP, including the Fee Area. County of Riverside Ordinance No. 663 (Stephens' Kangaroo Rat Mitigation Fee Ordinance) requires all proposed development projects located within the fee area be reviewed to determine the most appropriate course of action to ensure the survival of the species. The applicability of the Stephens' Kangaroo Rat HCP to the proposed Project is addressed in Section 5.5.1, *Stephen's Kangaroo Rat Habitat Conservation Plan*.

4.6.2 Western Riverside County Multiple Species Habitat Conservation Plan

The BSA is located within the boundaries of the Western Riverside County MSHCP, specifically within Criteria Cells 2568 and 2569 and within the designated survey areas for burrowing owl, Los Angeles pocket mouse and San Bernardino kangaroo rat, pursuant to MSHCP Section 6.3.2. The BSA is not located within any other designated survey areas, including those for narrow endemic or criteria area plant species. As of December 2023, the BSA is not located within any existing conservation lands, specifically Public/Quasi Public Lands or Additional Reserve Lands. Public/Quasi-Public Lands are located approximately 0.9 mile southeast of the BSA in the San Jacinto River and approximately 1.5 miles northeast of the BSA (Western Riverside County Regional Conservation Authority 2023). Additional Reserve Lands are located approximately 0.7 mile north of the BSA and approximately 1.4 miles southeast of the BSA.

Because Metropolitan is not a Permittee in the MSHCP, nor are they seeking a local discretionary permit from a Permittee in the MSHCP, Metropolitan is not subject to MSHCP policies or payment of standard mitigation fees. However, because Metropolitan is not a Permittee nor seeking a local discretionary permit from a Permittee, if authorization for incidental take of any federally or state-listed species covered under the MSHCP would be needed, additional actions would be required. Please refer to Section 5.5.2, *Western Riverside County Multiple Species Habitat Conservation Plan*, for further discussion.

5 Impact Analysis and Recommendations

This section discusses the potential adverse impacts to regulated biological resources that may occur from implementation of the Project and provides recommendations for additional surveys and actions to further evaluate or avoid/minimize potential impacts.

5.1 Special Status Species

5.1.1 Special Status Plant Species

As discussed in Section 4.1.1, *Special Status Plant Species*, one special status plant species is present within the BSA, chaparral sand-verbena. Three other special status plant species, smooth tarplant, Mojave tarplant, and white rabbit-tobacco, have moderate potential to occur within the BSA. Due to the disturbed nature of much of the BSA, it is generally unsuitable for rare plants that require specialized habitats or minimal disturbance. Furthermore, sandy soils are not suitable for many of the special status plant species with potential to occur within the BSA. Therefore, the remaining special status plant species with potential to occur in the BSA were determined to have low or no potential to occur.

Direct impacts to chaparral sand-verbena or other special status plants, if present, could include removing or running over individual plants during project activities. Indirect impacts could include spreading invasive species or dust, which can negatively impact individual plants or suitable habitat for the species at a later time. The temporary emergency work completed within the BSA did not appear to directly affect the individuals or population of chaparral sand-verbena within the BSA. One rare plant survey between August and September is recommended to document the location and extent of the chaparral sand-verbena population during the blooming season and confirm the presence/absence of smooth tarplant, Mojave tarplant, and white rabbit-tobacco.

5.1.2 Special Status Wildlife Species

As discussed in Section 4.1.2, *Special Status Wildlife Species*, nine special status wildlife species have a moderate or high potential to occur within the BSA or were documented as present (Appendix C). Six special status species have a moderate potential to occur due to presence of specific habitat requirements (e.g., small mammal burrows, riparian woodland, sandy washes), relatively recent occurrences on CNDDB (<25 years), and/or observations from past project-specific surveys. These species include least Bell's vireo, pallid bat, Townsend's big-eared bat, western yellow bat, Stephens' kangaroo rat, and Los Angeles pocket mouse.

Two special status species, San Bernardino kangaroo rat and Cooper's hawk, have high potential to occur on the site. The BSA is located within the USFWS designated critical habitat for San Bernardino kangaroo rat and several small mammal burrows were observed near the center of the BSA within the new access road and upland mustards (Figure 4). Such burrows could support San Bernardino kangaroo rat, although no observations of sign or individuals were made during the reconnaissance survey.

Yellow warbler was observed in the BSA during prior monitoring for emergency repair activities.

Potential impacts to each of these special status wildlife species are described below. In addition, an assessment of burrowing owl is included given its status as a regionally important special status species.

Burrowing Owl

Burrowing owl has low potential to occur within the BSA. Although elements of suitable habitat for this species are present, no suitable burrows (i.e., burrows greater than 4 inches in diameter) or observations of sign or individuals were made within the BSA during the field reconnaissance survey or prior monitoring for emergency repairs. Therefore, the potential for direct and indirect impacts to the species is low. Although currently it is unlikely that burrowing owl would be present within the BSA at the time construction commences, pre-activity surveys, performed as part of Metropolitan's standard contractor specifications, would be conducted within the BSA to confirm the continued absence of this species. Should construction not commence within the next 1 to 2 years, a focused survey for suitable burrows would be recommended followed by a focused survey for owls, if needed.

Cooper's Hawk

Cooper's Hawk has high potential to occur within the BSA. Suitable nesting trees occur within the BSA, and there are 2 recent CNDDB occurrences approximately 7 miles northwest and 7 miles southwest of the BSA. Furthermore, several sightings of this species are documented on eBird, one of which occurred within the BSA in 2019. Potential direct impacts to the species could include mortality through tree removal that affects active nests. Indirect impacts could include disturbance to active nests or nesting activity through dust, vibration, or noise. Project activities have some potential to impact the species during the nesting season and can be avoided and/or minimized through implementation of pre-activity nesting bird surveys, performed as part of Metropolitan's standard contractor specifications (Standard Specification *1.07 Migratory Bird Treaty Act and California Fish and Game Code §3503*) within the BSA no more than five days before the start of Project activities, to confirm the presence/absence of this species and avoid or minimize potential impacts.

Yellow Warbler

Yellow warbler was observed during monitoring for the emergency repair activities on July 24, 2023, within the southern buffer of the BSA, outside of the San Jacinto River channel. Yellow warbler was also observed on July 25, 2023, within the San Jacinto River channel in the BSA. Given these observations, yellow warbler is considered present in the BSA. The Fremont cottonwood woodland provides suitable nesting and foraging habitat for this species. Potential direct impacts to the species could include mortality through vegetation or tree removal that affects active nests. Indirect impacts could include disturbance to active nests or nesting activity through dust, vibration, or noise. Project activities have some potential to impact the species during the nesting season and can be avoided and/or minimized through implementation of pre-activity nesting bird surveys, performed as part of Metropolitan's standard contractor specifications (Standard Specification *1.07 Migratory Bird Treaty Act and California Fish and Game Code §3503*) within the BSA no more than five days before the start of Project activities, to confirm the presence/absence of this species and avoid or minimize potential impacts.

Least Bell's Vireo

Least Bell's vireo has moderate potential to occur within the BSA. Stands of suitable riparian woodland habitat occur within the BSA. There are several recent occurrences documented in the CNDDB search, one of which from 2011 overlaps with the BSA where 25 individuals were observed. Further, eBird documents sightings of least Bell's vireo two miles downstream and three miles upstream from the Project site in the San Jacinto River from 2019. Potential direct impacts to the species could include mortality if vegetation or trees with active nests are removed. Indirect impacts could include disturbance to active nests or disturbance to breeding, feeding, foraging, or nesting behavior from dust, vibration, or noise. Project activities have some potential to impact least Bell's vireo during the nesting season; therefore, protocol surveys are recommended to determine the presence/absence of the species. The USFWS survey protocol for least Bell's vireo requires eight site visits between April 10 and July 31, each conducted at least 10 days apart (USFWS 2001). Impacts to least Bell's vireo can be avoided or minimized through implementation of avoidance measures, such as conducting Project activities outside of the species' breeding season.

Pallid Bat

Pallid bat has moderate potential to occur within the BSA. The riparian woodland habitat and wash within the BSA could support seasonal roosting and foraging of this species. The BSA's proximity to Lake Perris and Diamond Valley Lake increases the likelihood for this species to occur within the BSA. Potential direct impacts to the species could include mortality through tree removal that affects active roosts. Indirect impacts could include disturbance to active roosts or roosting activity through dust, vibration, or noise. Project activities have some potential to impact this species.

Townsend's Big-Eared Bat

Townsend's big-eared bat has moderate potential to occur within the BSA. The riparian woodland habitat and the wash within the BSA could support seasonal roosting and foraging of this species. The BSA's proximity to Lake Perris and Diamond Valley Lake increases the likelihood for this species to occur within the BSA. Potential direct impacts to the species could include mortality through tree removal that affects active roosts. Indirect impacts could include disturbance to active roosts or roosting activity through dust, vibration, or noise. Project activities have some potential to impact this species.

Western Yellow Bat

Western yellow bat has moderate potential to occur within the BSA. The Fremont cottonwood trees and wash within the BSA could support seasonal roosting and foraging of this species. The BSA's proximity to Lake Perris and Diamond Valley Lake increases the likelihood for this species to occur within the BSA. Potential direct impacts to the species could include mortality through tree removal that affects active roosts. Indirect impacts could include disturbance to active roosts or roosting activity through dust, vibration, or noise. Project activities have some potential to impact this species.

Los Angeles Pocket Mouse

Los Angeles pocket mouse has moderate potential to occur within the BSA. Suitable burrows were observed within the BSA and there are several recent occurrences within the CNDDB 9-quadrangle search. Direct impacts to Los Angeles pocket mouse may include crushing/killing of individuals with

equipment or vehicles or disturbing existing burrows. Indirect impacts could include increased sound and vibration levels that displace individuals, and exposure to dust. Further, vegetation loss could impact the species by reducing available habitat. Therefore, Project activities have some potential for direct and indirect impacts to the Los Angeles pocket mouse, and protocol small-mammal trapping surveys are recommended to determine presence/absence of the species.

Stephens' Kangaroo Rat

Stephens' kangaroo rat has moderate potential to occur within the BSA. Suitable burrows were observed in the BSA and there are several recent CNDDB occurrences within the San Jacinto quadrangle. Direct impacts to Stephens' kangaroo rat may include crushing/killing of individuals with equipment or vehicles or disturbing existing burrows. Indirect impacts could include increased sound and vibration levels that displace individuals, as well as exposure to dust. Furthermore, vegetation loss could impact the species by reducing available habitat. Therefore, Project activities have some potential for direct and indirect impacts to Stephen's kangaroo rat, and protocol small-mammal trapping surveys are recommended determine presence/absence of the species.

San Bernardino Kangaroo Rat

San Bernardino kangaroo rat has high potential to occur within the BSA. Suitable burrows were observed within the BSA (Figure 4) and there are several recent CNDDB occurrences within the San Jacinto quadrangle. In addition, the BSA occurs within USFWS designated critical habitat for this species. Direct impacts to San Bernardino kangaroo rat may include crushing/killing of individuals with equipment or vehicles or disturbing existing burrows. Indirect impacts could include increased sound and vibration levels that displace individuals, and exposure to dust. Furthermore, vegetation loss could impact the species by reducing available habitat. Therefore, Project activities have some potential for direct and indirect impacts to San Bernardino kangaroo rat, and protocol small-mammal trapping surveys are recommended to determine presence/absence of the species.

Nesting Birds

Several common bird species may nest in trees and shrubs within the BSA. While common birds are not special status species, the destruction of active nests, eggs, and nestlings is prohibited by the MBTA and CFGC 3503. Project activities may result in direct or indirect impacts to nesting birds, should they be present within or adjacent to areas of disturbance at the time of construction. Potential direct impacts to nesting birds could include mortality through vegetation or tree removal that affects active nests. Indirect impacts could include disturbance to active nests or nesting activity through dust, vibration, or noise. Therefore, there is some potential for direct and indirect impacts to nesting birds if Project activities occur during the nesting bird season (generally February – August). Impacts can be avoided or minimized through implementation of pre-activity nesting bird surveys, performed as part of Metropolitan's standard contractor specifications (Standard Specification *1.07 Migratory Bird Treaty Act and California Fish and Game Code §3503*).

5.2 Sensitive Natural Communities and Critical Habitat

The only sensitive natural community observed within the BSA is the Fremont cottonwood woodland, which has a state rarity ranking of S3 and a global rarity ranking of G4. This vegetation community comprises approximately 11.8 acres of the BSA. Tree removal would include up to 17 Fremont cottonwood trees, two Goodding's black willows, four dead/unidentifiable trunks, and

several clusters of tamarisk. Based on the proposed limits of disturbance, the Project is anticipated to impact up to 1.92 acres of Fremont cottonwood woodland, including up to approximately 0.75 acre of permanent impacts and approximately 1.17 acres of temporary impacts. In accordance with Metropolitan standard practice outlined in Section 01065 of the construction contractor specifications (see Section 1.6.7, *Environmental Requirements for Construction*), the Project contractor(s) would be required to avoid or minimize any additional tree disturbances outside of those identified for trimming or removal in construction drawings. No other sensitive natural communities occur within the BSA.

USFWS designated critical habitat for federally listed San Bernardino kangaroo rat (*Dipodomys merriami parvus*) occurs within the BSA (USFWS 2023b). Suitable habitat for this species occurs within the BSA and small mammal burrows were also observed during the reconnaissance survey. This species has high potential to occur within the BSA. Potential effects to critical habitat can be addressed through pre-activity protocol small mammal trapping surveys recommended in Section 5.1, *Special Status Species*, to determine the presence/absence of the species, and either the FESA Section 7 consultation process between USACE and the USFWS during acquisition of a CWA Section 404 permit from the USACE, or Western Riverside County MSHCP compliance (discussed further in Section 5.61).

5.3 Jurisdictional Waters and Wetlands

Portions of the BSA in the San Jacinto River are likely waters of the U.S. and state and would be potentially subject to the jurisdictions of USACE, RWQCB, and CDFW. Project activities are expected to directly and indirectly potentially jurisdictional waters, although impacts would likely be temporary. Direct impacts may include vegetation removal and alteration of the channel of the San Jacinto River by heavy equipment, vehicles, foot traffic, and/or revegetation. Indirect impacts could include water quality effects from spills or sediment runoff from adjacent areas. These impacts would be addressed through the acquisition of regulatory permits and agreements from USACE, RWQCB, and CDFW, and implementation of a restoration plan for impacts to jurisdictional waters, if required. The location and extent of agency jurisdiction and potential impacts will be addressed further in a jurisdictional delineation expected to be completed during the 2023/2024 rainy season.

5.4 Wildlife Movement

The BSA is surrounded by undeveloped land and open space providing a multitude of regional wildlife movement options within and adjacent to the BSA. Permanent direct impacts to wildlife movement include those that fragment the existing habitat within the BSA (i.e., putting up fences), which would not occur as part of the Project. Temporary direct impacts could include the use of lights when working at night. To address this potential temporary impact of light on wildlife movement, Metropolitan would implement standard Best Management Practices (BMPs) (in this case, *Standard Specification 1012. Light Abatement*). Given the significant amount of open space in the surrounding area and the temporary nature of the project, impacts to wildlife movement are expected to be minimal and temporary. Therefore, implementation of the Project would not result in permanent impacts to existing wildlife movement patterns.

5.5 Habitat Conservation Plans

5.5.1 Stephens' Kangaroo Rat Habitat Conservation Plan

The proposed Project is located within the Plan Area of the *Habitat Conservation Plan for the Stephens' Kangaroo Rat in Western Riverside County California*, a permit/agreement between the Riverside County Habitat Conservation Agency (RCHCA) and USFWS/CDFW. The BSA contains suitable burrows and scrub habitat that could support Stephens' kangaroo rat. The proposed modifications would involve excavation, underground installation, and equipment use that could potentially cause temporary impacts to suitable habitat for Stephens' kangaroo rat, as well as direct impacts on Stephens' kangaroo rat individuals. It is anticipated that disturbed surfaces would be returned to pre-Project conditions following the completion of construction; therefore, the Project is not expected to have permanent impacts to Stephens' kangaroo rat habitat.

The typical approach for water districts that are not Participants in the Stephens' Kangaroo Rat HCP, but need to obtain take authorization for the species, is to establish a "special agreement" with the RCHCA, the agency that oversees implementation of the Stephens' Kangaroo Rat HCP. However, although Metropolitan is not a Participant in the HCP, Metropolitan is covered for Operations and Maintenance activities. The Project is essential to the continued provision of adequate water supplies for present and future residents of western Riverside County, and it can be considered an Operations and Maintenance project because no new development is proposed. This allows for incidental take of Stephens' kangaroo rat occurring in conjunction with all operations and maintenance activities conducted by Metropolitan (County of Riverside 1996).

5.5.2 Western Riverside County Multiple Species Habitat Conservation Plan

The BSA is located within designated survey areas for burrowing owl, Los Angeles pocket mouse, and San Bernardino kangaroo rat. The potential for burrowing owl to occur is low due to the BSA's lack of suitable burrows (i.e., no observed burrows were greater than 4 inches in diameter), and no observations of sign or individuals made during the reconnaissance survey. Although burrowing owl presence is low, pre-activity surveys, performed as part of Metropolitan's standard contractor specifications, would be conducted within the BSA to confirm the continued absence of this species. Should construction not commence within the next 1 to 2 years, a focused survey for suitable burrows would be recommended followed by a focused survey for owls, if needed.

Los Angeles pocket mouse has moderate potential to occur within the BSA, but no observations of sign or individuals were made. The potential for San Bernardino kangaroo rat is high and small mammal burrows were observed within the BSA; however, as previously discussed, no observations of sign or individuals were made. Project activities have some potential to impact Los Angeles pocket mouse and San Bernardino kangaroo rat. Based on the results of protocol small-mammal trapping surveys, if San Bernardino kangaroo rat is determined present within the Project disturbance footprint, and avoidance is not possible, incidental take authorization would be needed. One potential option for obtaining federal incidental take authorization is through the FESA Section 7 consultation process between the USFWS and USACE, as part of acquiring a Section 404 CWA permit from the USACE.

For entities that are not Permittees in the MSHCP, nor seeking a local discretionary permit from a Permittee, the MSHCP offers the Participating Special Entity (PSE) process to obtain take

authorization of 146 species, most being special-status species, including Los Angeles pocket mouse and San Bernardino kangaroo rat. For impacts to some MSHCP-covered species (burrowing owl, Los Angeles pocket mouse, and San Bernardino kangaroo rat) and sensitive habitats (e.g., riparian/riverine resources), mitigation is required to be proposed in the form a Determination of Biologically Equivalent or Superior Preservation (DBESP) report. Relative to regulated waters, a DBESP for riparian/riverine impacts serves as precursor for regulated waters permitting which can result in streamlining the permitting process. Payment of mitigation fees based on a percentage of project capital costs is also required. The PSE process is overseen by the Regional Conservation Authority (RCA), followed by review and approval by CDFW and USFWS, with the permit issued being referred to as a Certificate of Inclusion. Typically, obtaining take authorization pursuant to the PSE process is substantially shorter than going through the FESA Section 7 take authorization process and the California Fish and Game Code Section 2081 subdivision (b).

6 Limitations, Assumptions, and Use Reliance

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

7 References

Calflora. 2023. Information on wild California plants for conservation, education, and appreciation. Berkeley, CA. Updated online and accessed via: www.calflora.org.

California Department of Fish and Wildlife (CDFW). 2023a. California Natural Diversity Database, Rarefind V. Accessed October 2023.

_____. 2023b. Special Animals List. Biogeographic Data Branch, California Natural Diversity Database. October 2023.

_____. 2023c. Biogeographic Information and Observation System (BIOS). Retrieved November 2023 from www.wildlife.ca.gov/data/BIOS.

_____. 2023d. Special Vascular Plants, Bryophytes, and Lichens List. Biogeographic Data Branch, California Natural Diversity Database. October 2023.

_____. 2023e. Natural Communities List. https://wildlife.ca.gov/Data/VegCAMP/Natural-Communities/List - natural%20communities%20lists. Accessed November 2023.

California Native Plant Society. 2023. Inventory of Rare and Endangered Plants. V.7-08c-Interim 8-22-02. Updated online and accessed via: www.rareplants.cnps.org.

eBird. 2023. The Cornell Lab of Ornithology. https://ebird.org/home. Accessed November 2023.

Google Earth Pro. 2023. U.S. Department of State Geographer. https://www.google.com/earth/. Accessed November 2023.

NatureServe. 2023. NatureServe Conservation Status Assessments: Methodology for Assigning Ranks. Retrieved from: https://www.natureserve.org/sites/default/files/publications/files/natureserveconservationstatusmethodology_jun12_0.pdf. November 2023.

Rincon Consultants, Inc. February 2024. Jurisdictional Delineation for the Casa Loma Siphon No. 1 and San Jacinto Pipeline Project.

Riverside, County of. 1985. Ordinance of the County of Riverside Amending the Ordinance No. 559 Amending the Removal of Trees. https://www.rivcocob.org/ords/500/559.7.pdf. Accessed November 2023.

_____. 1996. Habitat Conservation Agency. Habitat Conservation Plan for the Stephens' Kangaroo Rat in Western Riverside County California. March 1996.

_____. 2003. Final Western Riverside County Multiple Species Habitat Conservation Plan. June 2003. www.wrc-rca.org. Accessed November 2023.

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

Spencer et al. 2010. California Essential Habitat Connectivity Project: A Strategy for Conserving a Connected California. Available at: https://nrm.dfg.ca.gov/FileHandler.ashx?DocumentID=18366&inline. Accessed November 2023.

United States Army Corps of Engineers, Department of Defense, and Environmental Protection Agency. 2023. Revised Definition of "Waters of the United States"; Conforming. 88 FR 61964, 61964-61969 (September 8, 2023) (to be codified at Voume 33 CFR 328 and 33 CFR 328). https://www.federalregister.gov/documents/2023/09/08/2023-18929/revised-definition-of-waters-of-the-united-states-conforming. Accessed November 2023.

United States Department of Agricultural, Natural Resources Conservation Service (USDA NRCS). 2023a. Web Soil Survey. Accessed November 2023. Soil Survey Area: Riverside County, California. Soil Survey Data: November 2023. Available at: https://websoilsurvey.sc.egov.usda.gov/App/HomePage.htm.

_____. 2023b. Lists of Hydric Soils. National Cooperative Soil Survey, U.S. Department of Agriculture. Accessed November 2023 via: https://www.nrcs.usda.gov/wps/portal/nrcs/main/soils/use/hydric/.

United States Fish and Wildlife Service (USFWS). 1973. The Endangered Species Act of 1973, as amended (16 U.S.C 1531 et seq.).

_____. 2001. Least Bell's Vireo Survey Guidelines. Available at: https://www.fws.gov/sites/default/files/documents/survey-protocol-for-least-bells-vireo.pdf.

_____. 2023a. Critical Habitat Portal. Available at: https://ecos.fws.gov/ecp/report/table/critical-habitat.html

_____. 2023b. Information for Planning and Consultation online project planning tool. Available at: https://ecos.fws.gov/ipac/

_____ 2023c. National Wetland Inventory. http://www.fws.gov/wetlands/Data/Mapper.html. Accessed November 2023.

United States Geological Survey (USGS). 2023. National Hydrography Dataset. https://viewer.nationalmap.gov/advanced-viewer/index.html?p=nhd. Accessed November 2023.

Western Regional Climate Center. 2023. Climate of California. Retrieved from http://www.wrcc.dri.edu/narratives/CALIFORNIA.htm. Accessed November 2023.

Western Riverside County Regional Conservation Authority. 2023. MSHCP Information App. http://wrcrca.maps.arcgis.com/apps/webappviewer/index.html?id=2ba3285ccc8841ed978d2d825e74c5fa. Accessed November 2023.

8 List of Preparers

Rincon Consultants, Inc.

Primary Author

- Stella Moore, Biologist

Secondary Authors

- Kevin Gugerty, Biologist
- Andrea Maben, Project Manager

Technical Review

- Brenna Vredeveld, Supervising Biologist
- Steven J. Hongola, Principal Biologist
- Wendy Worthey, Principal

Graphics

- Bryan Valladares, GIS Analyst

Publishing

- Debra Jane Seltzer, Formatting Specialist

Field Reconnaissance Survey

- Jared Reed, Senior Biologist
- Kevin Gugerty, Biologist

This page intentionally left blank.

Appendix A

Regulatory Setting

Regulatory Setting

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 that guides the protection of biological resources. Agencies with the responsibility for protection of biological resources within the project site include:

- U.S. Army Corps of Engineers (wetlands and other waters of the United States);
- U.S. Fish and Wildlife Service (federally listed species and migratory birds);
- National Marine Fisheries Service (marine animals and anadromous fishes);
- Los Angeles Regional Water Quality Control Board (waters of the State);
- California Department Fish and Wildlife (riparian areas, streambeds, and lakes; state-listed species; nesting birds, marine resources); and
- County of Ventura

United States Army Corps of Engineers

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, 2020 Navigable Waters Protection Rule, and the most recent effort promulgated by the USACE and USEPA on January 18, 2023 (88 FR 3004-3144)), 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 although it is currently being interpreted consistent with the recent Sackett v. Environmental Protection Agency Supreme Court decision as described below. The USACE and USEPA have announced their intent to issue revised regulations defining "waters of the United States" by September 1, 2023.

Waters of the U.S.

In summary, USACE and USEPA regulations define "waters of the United States" as follows:

1. All waters which are 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.

2. All interstate waters including interstate wetlands.
3. All other waters such as intrastate lakes, rivers, streams (including intermittent streams), mudflats, sandflats, wetlands, sloughs, prairie potholes, wet meadows, playa lakes, or natural ponds, the use, degradation or destruction of which could affect interstate or foreign commerce including any such waters:
    i. Which are or could be used by interstate or foreign travelers for recreational or other purposes; or
    ii. From which fish or shellfish are or could be taken and sold in interstate or foreign commerce; or
    iii. Which are used or could be used for industrial purposes by industries in interstate commerce.
4. All impoundments of waters otherwise defined as waters of the United States;
5. Tributaries of waters identified in paragraphs (a)(1)-(4) of this section;
6. The territorial sea;
7. Wetlands adjacent to waters (other than waters that are themselves wetlands) identified in items 1-6 above.

Waters of the United States do not include prior converted cropland. Notwithstanding the determination of an area's status as prior converted cropland by any other federal agency, for the purposes of the CWA, the final authority regarding CWA jurisdiction remains with the USEPA.

Waste treatment systems, including treatment ponds or lagoons designed to meet the requirements of CWA are not waters of the United States.

The lateral limits of USACE jurisdiction in non-tidal waters are 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(c)(1)). 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(c)(1)). 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 exert a controlling influence on the plant species present. Plant species are assigned wetland indicator status according to the probability of their occurrence 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 2020), 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 USACE list is assumed to be an upland species, almost never occurring in wetlands. In addition, an area needs to contain at least 5 percent 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.

Limitations on Jurisdiction Based on Sackett v. USEPA Supreme Court

On May 25, 2023, the Supreme Court issued its decision on the petition from the Sacketts, a family in Idaho that was subject to a compliance order from the USEPA for backfilling their lot near Priest Lake, which the USEPA claimed contained federally regulated wetlands. The wetlands in question were adjacent to a ditch that fed a creek that ultimately drained into Priest Lake, a navigable water body. The USEPA asserted that the Sacketts had violated the law by filling the wetlands on their property without a permit. The Court's decision addressed controversy over whether, and under

what conditions, the CWA reaches navigable waters' tributaries or adjacent wetlands. The Supreme Court's decision in Sackett provides definitive guidance to the agencies in determining the limits of their Clean Water Act authority. Prioritizing a need for clarity and regulatory certainty, the Court set forth an interpretation of Clean Water Act jurisdiction that can be applied without the need for lengthy case-by-case evaluations. This interpretation will have the effect of reducing the Clean Water Act's geographic reach.

The Court decided:

- "Adjacent wetlands" are WOTUS only if there is a continuous surface connection between the wetland and a navigable or relatively permanent water body, such that it is difficult to determine the boundary between the wetland and the water body. The opinion notes that "temporary interruptions to surface connection may sometimes occur because of phenomena like low tides or dry spells."
- The Significant Nexus Standard, introduced by the Court in prior decisions, is not mentioned in the Clean Water Act and should not be used. Additionally, the standard includes ecological factors whose use in determining jurisdiction is not supported by the statute.
- Although jurisdiction over tributaries was not addressed by the Court, current agency guidance relies upon the Significant Nexus Standard to establish jurisdiction over tributaries that flow infrequently. In disallowing the use of that standard, the decision suggests that non-relatively permanent tributaries will be non-jurisdictional going forward, stating, "…the [Clean Water Act's] use of "waters" encompasses only those relatively permanent, standing or continuously flowing bodies of water forming geographical features that are described in ordinary parlance as streams, oceans, rivers, and lakes."

Rivers and Harbors Act Section 10

Section 10 of the Rivers and Harbors Act of 1899 requires authorization from the USACE for the construction of any structure in or over any navigable water of the United States. Structures or work outside the limits defined for navigable waters of the United States require a Section 10 permit if the structure or work affects the course, location, or condition of the water body. The law applies to any dredging or disposal of dredged materials, excavation, filling, re-channelization, or any other modification of a navigable water of the United States and applies to all structures and work. It further includes, without limitation, any wharf, dolphin, weir, boom breakwater, jetty, groin, bank protection (e.g., riprap, revetment, bulkhead), mooring structures such as pilings, aerial or subaqueous power transmission lines, intake or outfall pipes, permanently moored floating vessel, tunnel, artificial canal, boat ramp, aids to navigation, and any other permanent, or semi-permanent obstacle or obstruction. It is important to note that Section 10 applies only to navigable waters and thus does not apply to work in non-navigable wetlands or tributaries. In some cases, Section 10 authorization is issued by the USACE concurrently with CWA Section 404 authorization, such as when certain Nationwide Permits are used.

Regional Water Quality Control Board

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 Section 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 groundwater 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 shall be protected;
- All activities and factors affecting the quality of water shall be regulated to attain the highest water quality within reason; and
- 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 the agency will apply the Porter-Cologne Act's requirements to discharges of dredge and fill material as well. The *Procedures* state 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 currently established regulations for field determinations of waters of the State except for wetlands. 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;

(i) the duration of such saturation is sufficient to cause anaerobic conditions in the upper substrate; and

(ii) 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 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 shall 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.

United States Fish and Wildlife Service

The United States Fish and Wildlife Service (USFWS) implements several laws protecting the Nation's fish and wildlife resources, including the Endangered Species Act (FESA; 16 United States Code [USC] Sections 153 et seq.), the Migratory Bird Treaty Act (MBTA; 16 USC Sections 703 through 711), and the Bald and Golden Eagle Protection Act (16 USC Section 668).

Endangered Species Act

The USFWS and National Marine Fisheries Service (NMFS) share responsibility for implementing the FESA. Generally, the USFWS implements the FESA for terrestrial and freshwater species, while the NMFS implements the FESA for marine and anadromous species. Projects that would result in "take" of any threatened or endangered animal species, or a threatened or endangered plant species if occurring on federal land, are required to obtain permits from the USFWS or NMFS through either Section 7 (interagency consultation with a federal nexus) or Section 10 (Habitat Conservation Plan) of the FESA, depending on the involvement by the federal government in funding, authorizing, or

carrying out the project. The permitting process is used to determine if a project would jeopardize the continued existence of a listed species and what measures would be required to avoid jeopardizing the species. “Take” under federal definition means to harass, harm (which includes habitat modification), pursue, hunt, shoot, wound, kill, trap, capture, or collect, or to attempt to engage in any such conduct. Proposed or candidate species do not have the full protection of the FESA; however, the USFWS and NMFS advise project applicants that they could be elevated to listed status at any time.

Migratory Bird Treaty Act

The MBTA of 1918 implements four international conservation treaties the U.S. entered into with Canada in 1916, Mexico in 1936, Japan in 1972, and Russia in 1976. It is intended to ensure the sustainability of populations of all protected migratory bird species. The law has been amended with the signing of each treaty, as well as when any of the treaties were amended, such as with Mexico in 1976 and Canada in 1995. The MBTA prohibits the take (including killing, capturing, selling, trading, and transport) of protected migratory bird species without prior authorization by the USFWS.

The list of migratory bird species protected by the law, in regulations at 50 CFR Part 10.13, is primarily based on bird families and species included in the four international treaties. A migratory bird species is included on the list if it meets one or more of the following criteria:

1. It occurs in the United States or U.S. territories as the result of natural biological or ecological processes and is currently, or was previously listed as, a species or part of a family protected by one of the four international treaties or their amendments.
2. Revised taxonomy results in it being newly split from a species that was previously on the list, and the new species occurs in the United States or U.S. territories as the result of natural biological or ecological processes.
3. New evidence exists for its natural occurrence in the United States or U.S. territories resulting from natural distributional changes and the species occurs in a protected family.

In 2004, the Migratory Bird Treaty Reform Act limited the scope of the MBTA by stating the MBTA applies only to migratory bird species that are native to the United States or U.S. territories and that a native migratory bird species is one that is present as a result of natural biological or ecological processes. The Migratory Bird Treaty Reform Act requires the USFWS to publish a list of all nonnative, human-introduced bird species to which the MBTA does not apply, and an updated list was published in 2020. The 2020 update identifies species belonging to biological families referred to in treaties the MBTA implements but are not protected because their presence in the United States or U.S. territories is solely the result of intentional or unintentional human-assisted introductions.

Bald and Golden Eagle Protection Act

The Bald and Golden Eagle Protection Act prohibits anyone, without a permit issued by the USFWS, from “taking” bald or golden eagles, including their parts (including feathers), nests, or eggs. The Act provides criminal penalties for persons who “take, possess, sell, purchase, barter, offer to sell, purchase or barter, transport, export or import, at any time or any manner, any bald eagle … [or any golden eagle], alive or dead, or any part, nest, or egg thereof.” The Act defines “take” as “pursue, shoot, shoot at, poison, wound, kill, capture, trap, collect, molest or disturb.”

"Disturb" means "to agitate or bother a bald or golden eagle to a degree that causes, or is likely to cause, based on the best scientific information available, 1) injury to an eagle, 2) a decrease in its productivity, by substantially interfering with normal breeding, feeding, or sheltering behavior, or 3) nest abandonment, by substantially interfering with normal breeding, feeding, or sheltering behavior."

In addition to immediate impacts, this definition also covers impacts that result from human-induced alterations initiated around a previously used nest site during a time when eagles are not present, if, upon the eagle's return, such alterations agitate or bother an eagle to a degree that interferes with or interrupts normal breeding, feeding, or sheltering habits, and causes injury, death or nest abandonment.

California Department of Fish and Wildlife

The California Department of Fish and Wildlife (CDFW) derives its authority from the California Fish and Game Code and administers several state laws protecting fish and wildlife resources and the habitats upon which they depend.

California Endangered Species Act

The California Endangered Species Act (CESA) (California Fish and Game Code Section 2050 et. seq.) prohibits take of state listed threatened or endangered. Take under CESA is defined as "hunt, pursue, catch, capture, or kill, or attempt to hunt, pursue, catch, capture, or kill" (California Fish and Game Code Section 86). This definition does not prohibit indirect harm by way of habitat modification, except where such harm is the proximate cause of death of a listed species. Where incidental take would occur during construction or other lawful activities, CESA allows the CDFW to issue an Incidental Take Permit upon finding, among other requirements, that impacts to the species have been minimized and fully mitigated. Unlike the federal ESA, CESA's protections extend to candidate species during the period (typically one year) while the California Fish and Game Commission decides whether the species warrants CESA listing.

Native Plant Protection Act

The CDFW also has authority to administer the Native Plant Protection Act (NPPA) (California Fish and Game Code Section 1900 et seq.). The NPPA requires the CDFW to establish criteria for determining if a species, subspecies, or variety of native plant is endangered or rare and prohibits the take of listed plant species. Effective in 2015, CDFW promulgated regulations (14 California Code of Regulations Section 786.9) under the authority of the NPPA, establishing that the CESA's permitting procedures would be applied to plants listed under the NPPA's "Rare." With this change, there is little practical difference for the regulated public between plants listed under CESA and those listed under the NPPA.

Fully Protected Species Laws

The CDFW enforces Sections 3511, 4700, 5050, and 5515 of the California Fish and Game Code, which prohibit take of species designated as Fully Protected. The CDFW is not allowed to issue an Incidental Take Permit for Fully Protected species; therefore, impacts to these species must be avoided. The exception is a situation in which a Natural Community Conservation Plan (NCCP) is in place that authorizes take of the Fully Protected species.

Avian Protection Laws

California Fish and Game Code Sections 3503, 3503.5, and 3513 describe unlawful take, possession, or destruction of native birds, nests, and eggs. Section 3503.5 protects all birds-of-prey and their eggs and nests against take, possession, or destruction of nests or eggs. Section 3513 makes it a state-level offense to take any bird in violation of the federal Migratory Bird Treaty Act.

Protection of Lakes and Streambeds

California Fish and Game Code Section 1602 states 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. 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 Lake/Streambed Alteration Agreement (LSAA), 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 LSAA. Upon review of the Draft LSAA by the applicant, any problematic terms are negotiated with CDFW and a final LSAA 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 California Code of Regulations Section 1.72) and streambed alterations associated with cannabis production (14 California Code of Regulations Section 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* (CDFW 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.

County of Riverside

Riverside County Code of Ordinances

Ordinance No. 663 (Stephens' Kangaroo Rat Mitigation Fee Ordinance)

The proposed Project is located within the Stephens' Kangaroo Rat HCP, including the Fee Area. This ordinance states that the Stephens' kangaroo rat is listed as a threatened species by the state of California, and the California Department of Fish and Game (now CDFW) has recommended changing its status to endangered and occupied habitat of the species may not be altered without a Section 10(a) permit issued by the Secretary of the Interior. All requests for a Section 10(a) permit

must be accompanied by a Habitat Conservation Plan approved by the USFWS. Said permit will then allow for the loss of occupied habitat due to development on the basis that the Habitat Conservation Plan will provide protection for the species and guarantee its survival.

This page intentionally left blank.

Appendix B

Site Photographs

Photograph 1. Fremont cottonwood trees within the San Jacinto River at the southern border of the Project site facing north.

Photograph 2. The location of the proposed access road entrance into the San Jacinto River at the southern border of the Project site facing northeast.

Photograph 3. Fremont cottonwood trees within the San Jacinto River at the southern border of the Project site facing southeast.

Photograph 4. Fremont cottonwood trees and Goodding's black willow trees within the San Jacinto River along the riverbank within the BSA facing northeast.

Photograph 5. The San Jacinto River from the western border of the BSA, facing east.

Photograph 6. Chaparral sand-verbena within the BSA in the Fremont cottonwood woodland in the San Jacinto River.

Photograph 7. Emergent tamarisk within the fourwing saltbush scrub on the western buffer of the BSA.

Photograph 8. View of fourwing saltbush scrub community facing north from the northern half of the western boundary of the BSA looking toward Soboba Road.

Photograph 9. Fourwing saltbush scrub community in the western side of the BSA, facing southeast.

Photograph 10. Fremont cottonwood woodland community facing south from the access road.

Photograph 11. Looking toward Soboba Road showing the fourwing saltbush scrub vegetation community, facing north from the western boundary of the BSA.

Photograph 12. Looking toward Soboba Road showing the disturbed fourwing saltbush scrub vegetation, facing northeast from the western boundary of the BSA.

Photograph 13. The edge of the fourwing saltbush scrub transitioning to upland mustards, facing southeast.

Photograph 14. View of upland mustards community, facing east.

Photograph 15. The upland mustards vegetation community, facing northwest from the access road.

Photograph 16. View of the access road and the upland mustards vegetation community, facing northeast.

Photograph 17. View of the new access road and upland mustards community, facing northeast.

Photograph 18. View of existing access road leading into the San Jacinto River, facing southwest.

Photograph 19. The San Jacinto River from the southeastern edge of the survey area showing Fremont cottonwood woodland, facing northwest.

Photograph 20. The southern boundary of the survey area within the San Jacinto River, showing vegetation on the bank, facing southeast.

Photograph 21. Small mammal burrows near the center of the site within the upland mustards community.

This page intentionally left blank.

Appendix C

Special Status Species Evaluation Tables

Special Status Plant Species in the Regional Vicinity of the BSA

Scientific Name Common Name	Status	Habitat Requirements	Potential to Occur in Project Area	Habitat Suitability/Observations
Abronia villosa var. *aurita* chaparral sand-verbena	None/None G5T2?/S2 1B.1	Annual herb. Chaparral, coastal scrub, desert dunes. Sandy. Elevations: 245-5250ft. (75-1600m.) Blooms (Jan)Mar-Sep.	Present	Species was observed in the BSA during a field reconnaissance survey on October 24, 2023.
Allium marvinii Yucaipa onion	None/None G1/S1 1B.2	Perennial bulbiferous herb. Chaparral. In openings on clay soils. Elevations: 2495-3495ft. (760-1065m.) Blooms Apr-May.	Not Expected	No suitable chaparral habitat or clay soils occur within the BSA. The BSA is outside the preferred elevational range of the species. The 3 CNDDB occurrences that are within 5 miles of the BSA are from 2009, 2010 and 2012; however, all of these occurrences are situated in the mountainous region northeast of the BSA.
Allium munzii Munz's onion	FE/ST G1/S1 1B.1	Perennial bulbiferous herb. Chaparral, cismontane woodland, coastal scrub, pinyon and juniper woodland, valley and foothill grassland. Clay, mesic. Elevations: 975-3510ft. (297-1070m.) Blooms Mar-May.	Not Expected	No suitable chaparral, mixed chaparral, coastal scrub, juniper woodland or grassland habitat occurs within the BSA. Riparian Fremont cottonwood does occur within the BSA; however, the soil is primarily loamy sand and gravelly coarse sand, rather than clay or mesic. The only CNDDB occurrence within 9-quadrangles is found near Diamond Valley Lake approximately 9 miles southwest of the BSA.
Astragalus hornii var. *hornii* Horn's milk-vetch	None/None GUT1/S1 1B.1	Annual herb. Meadows and seeps, playas. Alkaline, lake margins. Elevations: 195-2790ft. (60-850m.) Blooms May-Oct.	Not Expected	No suitable meadows or alkaline lakes occur within the BSA. The only CNDDB occurrence is from 1889.
Astragalus lentiginosus var. *borreganus* Borrego milk-vetch	None/None G5T5?/S4 4.3	Annual herb. Mojavean desert scrub, Sonoran desert scrub. Sandy. Elevations: 100-2935ft. (30-895m.) Blooms Feb-May.	Not Expected	No suitable desert scrub habitat occurs within the BSA. Although soils within the BSA are primarily sandy and the site is within the elevation range of this species, the 9-quad CNDDB search did not find any occurrences of this species.
Astragalus lentiginosus var. *coachellae* Coachella Valley milk-vetch	FE/None G5T1/S1 1B.2	Annual/perennial herb. Desert dunes, Sonoran desert scrub. Sandy flats, washes, outwash fans, sometimes on dunes. Elevations: 130-2150ft. (40-655m.) Blooms Feb-May.	Not Expected	No suitable Sonoran desert scrub or dune habitat occurs within the BSA. Although the San Jacinto River does provide a sandy, wash area to potentially support this species, no recent occurrences of this species occur within the 9 quadrangles.

Scientific Name Common Name	Status	Habitat Requirements	Potential to Occur in Project Area	Habitat Suitability/Observations
Astragalus pachypus var. *jaegeri* Jaeger's milk-vetch	None/None G4T1/S1 1B.1	Perennial shrub. Chaparral, cismontane woodland, coastal scrub, valley and foothill grassland. Rocky (sometimes), sandy (sometimes). Elevations: 1200-3200ft. (365-975m.) Blooms Dec-Jun.	Not Expected	No suitable chaparral, mixed chaparral, coastal scrub or grassland habitat occurs within the BSA. Riparian Fremont cottonwood does occur within the BSA, and the soil is primarily loamy sand and gravelly coarse sand; however, there is only one recent CNDDB occurrence approximately 12 miles southeast of the BSA.
Atriplex coronata var. *notatior* San Jacinto Valley crownscale	FE/None G4T1/S1 1B.1	Annual herb. Playas, valley and foothill grassland, vernal pools. Alkaline. Elevations: 455-1640ft. (139-500m.) Blooms Apr-Aug.	Not Expected	No grassland or vernal pool habitat occurs within the BSA.
Atriplex parishii Parish's brittlescale	None/None G1G2/S1 1B.1	Annual herb. Chenopod scrub, playas, vernal pools. Alkaline. Elevations: 80-6235ft. (25-1900m.) Blooms Jun-Oct.	Not Expected	No vernal pools occur within the BSA. The BSA contains loamy sand and gravelly sand rather than alkaline soils.
Atriplex serenana var. *davidsonii* Davidson's saltscale	None/None G5T1/S1 1B.2	Annual herb. Coastal bluff scrub, coastal scrub. Alkaline. Elevations: 35-655ft. (10-200m.) Blooms Apr-Oct.	Not Expected	No coastal bluff scrub or coastal scrub occurs within the BSA. The BSA contains loamy sand and gravelly sand rather than alkaline soils. There is one recent CNDDB occurrence approximately 3 miles west of the BSA; however, it is in a highly disturbed agricultural area.
Brodiaea filifolia thread-leaved brodiaea	FT/SE G2/S2 1B.1	Perennial bulbiferous herb. Chaparral, cismontane woodland, coastal scrub, playas, valley and foothill grassland, vernal pools. Clay (often). Elevations: 80-3675ft. (25-1120m.) Blooms Mar-Jun.	Not Expected	No suitable chaparral, mixed chaparral, coastal scrub, vernal pools or grassland habitat occurs within the BSA. Riparian Fremont cottonwood does occur within the BSA; however, the soil is primarily loamy sand and gravelly coarse sand, rather than clay. The recent CNDDB occurrences are mostly confined to an area near the San Jacinto Wildlife area approximately 8.5 miles northwest of the BSA
Calochortus palmeri var. *munzii* San Jacinto mariposa-lily	None/None G3T3/S3 1B.2	Perennial bulbiferous herb. Chaparral, lower montane coniferous forest, meadows and seeps. Seen in open Jeffrey pine forest as well as in chaparral. Elevations: 2805-7220ft. (855-2200m.) Blooms Apr-Jul.	Not Expected	No suitable chaparral, mixed chaparral, meadows or coniferous forest habitat occurs within the BSA. The BSA is outside the preferred elevational range of the species

Scientific Name Common Name	Status	Habitat Requirements	Potential to Occur in Project 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	No suitable chaparral or lower montane coniferous forest occurs within the BSA. The BSA is outside the preferred elevational range of the species
Calochortus plummerae Plummer's mariposa-lily	None/None G4/S4 4.2	Perennial bulbiferous herb. Chaparral, cismontane woodland, coastal scrub, lower montane coniferous forest, valley and foothill grassland. Granitic, rocky. Elevations: 330-5580ft. (100-1700m.) Blooms May-Jul.	Low Potential	No suitable chaparral, mixed chaparral, coastal scrub, lower montane coniferous forest or grassland habitat occurs within the BSA. Riparian Fremont cottonwood does occur within the BSA; however, the soil is primarily loamy sand and gravelly coarse sand, rather than rocky. There is a CNDDB occurrence 3 miles northwest from 2008.
Calochortus weedii var. *intermedius* intermediate mariposa-lily	None/None G3G4T3/S3 1B.2	Perennial bulbiferous herb. Chaparral, coastal scrub, valley and foothill grassland. Rocky. Elevations: 345-2805ft. (105-855m.) Blooms May-Jul.	Not Expected	No suitable chaparral, coastal scrub or grassland habitat occurs within the BSA. The most recent CNDDB occurrence is located neat Diamond Valley Lake approximately 9 miles southwest of the BSA.
Caulanthus simulans Payson's jewelflower	None/None G4/S4 4.2	Annual herb. Chaparral, coastal scrub. Granitic, sandy. Elevations: 295-7220ft. (90-2200m.) Blooms (Feb)Mar-May(Jun).	Not Expected	No suitable chaparral or coastal scrub habitat occurs within the BSA.
Centromadia pungens ssp. *laevis* smooth tarplant	None/None G3G4T2/S2 1B.1	Annual herb. Chenopod scrub, meadows and seeps, playas, riparian woodland, valley and foothill grassland. Alkaline. Elevations: 0-2100ft. (0-640m.) Blooms Apr-Sep.	Moderate Potential	No suitable meadows, or grasslands occur within the BSA. The Fremont cottonwood habitat within the BSA may provide suitable riparian woodland for this species, as well as the fourwing saltbush scrub. There are several recent CNDDB occurrences, with the closest being within 1 mile of the BSA
Chorizanthe leptotheca Peninsular spineflower	None/None G3/S3 4.2	Annual herb. Chaparral, coastal scrub, lower montane coniferous forest. Granitic. Elevations: 985-6235ft. (300-1900m.) Blooms May-Aug.	Not Expected	No suitable chaparral, coastal scrub or lower montane coniferous forest habitat occurs within the BSA. There are no recent CNDDB occurrences within 9 quadrangles of the BSA.

Scientific Name Common Name	Status	Habitat Requirements	Potential to Occur in Project Area	Habitat Suitability/Observations
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.	Not Expected	No suitable chaparral, mixed chaparral, coastal scrub or grassland habitat occurs within the BSA. Riparian Fremont cottonwood does occur within the BSA, and the soil is primarily loamy sand and gravelly coarse sand. However, rocky soil is not present within the BSA. There are several recent occurrences, but they are mostly concentrated in areas 8-10 miles from the BSA.
Chorizanthe polygonoides var. *longispina* long-spined spineflower	None/None G5T3/S3 1B.2	Annual herb. Chaparral, coastal scrub, meadows and seeps, valley and foothill grassland, vernal pools. Clay (often). Elevations: 100-5020ft. (30-1530m.) Blooms Apr-Jul.	Not Expected	No suitable chaparral, mixed chaparral, coastal scrub, meadows or grassland habitat occurs within the BSA. The BSA does not contain vernal pools.
Chorizanthe xanti var. *leucotheca* white-bracted spineflower	None/None G4T3/S3 1B.2	Annual herb. Coastal scrub, Mojavean desert scrub, pinyon and juniper woodland. Gravelly (sometimes), sandy (sometimes). Elevations: 985-3935ft. (300-1200m.) Blooms Apr-Jun.	Not Expected	No suitable coastal scrub, desert scrub or juniper woodland occurs within the BSA.
Deinandra mohavensis Mojave tarplant	None/SE G3/S3 1B.3	Annual herb. Chaparral, coastal scrub, riparian scrub. Low sand bars in riverbed; mostly in riparian areas or in ephemeral grassy areas. Elevations: 2100-5250ft. (640-1600m.) Blooms (Jan-May) Jun-Oct.	Moderate Potential	Sandy, dry soils in the San Jacinto River occur within the BSA. The BSA is outside the preferred elevational range of the species; however, there are a few recent occurrences from 2001 approximately 3.5 miles upstream of the BSA.
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	No suitable coastal scrub or grassland habitat occurs within the BSA. The BSA does not contain vernal pools.
Delphinium parishii ssp. *subglobosum* Colorado Desert larkspur	None/None G4T4/S4 4.3	Perennial herb. Chaparral, cismontane woodland, pinyon and juniper woodland, Sonoran desert scrub. On dry stony fans and slopes. Elevations: 1970-5905ft. (600-1800m.) Blooms Mar-Jun.	Not Expected	No suitable chaparral, mixed chaparral, desert scrub or juniper woodland habitat occurs within the BSA. The BSA is outside the preferred elevational range of the species.
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	No suitable chaparral, desert scrub or juniper woodland habitat occurs within the BSA. The BSA is outside the preferred elevational range of the species.

Scientific Name Common Name	Status	Habitat Requirements	Potential to Occur in Project Area	Habitat Suitability/Observations
Diplacus clevelandii Cleveland's bush monkeyflower	None/None G4/S4 4.2	Perennial rhizomatous herb. Chaparral, cismontane woodland, lower montane coniferous forest. Disturbed gravelly roadsides and slopes. Gabbro soils. Elevations: 1475-6560ft. (450-2000m.) Blooms Apr-Jul.	Not Expected	No suitable chaparral, mixed chaparral or lower montane coniferous forest occurs within the BSA.
Dodecahema leptoceras slender-horned spineflower	FE/SE G1/S1 1B.1	Annual herb. Chaparral, cismontane woodland, coastal scrub. Flood deposited terraces and washes; associates include Encelia, Dalea, Lepidospartum, etc. Sandy soils. Elevations: 655-2495ft. (200-760m.) Blooms Apr-Jun.	Low Potential	No suitable chaparral, mixed chaparral or coastal scrub habitat occurs within the BSA. The San Jacinto River does provide washes and sandy soils are present throughout the BSA, however the species' preferred habitat, stabilized sandy benches, is not present within the BSA. A few occurrences took place approximately 7 miles upstream in the San Jacinto River, the most recent as 2005.
Erythranthe diffusa Palomar monkeyflower	None/None G4/S3 4.3	Annual herb. Chaparral, lower montane coniferous forest. Sandy or gravelly soils. Elevations: 4005-6005ft. (1220-1830m.) Blooms Apr-Jun.	Not Expected	No suitable chaparral, mixed chaparral or coastal scrub habitat occurs within the BSA. The BSA is outside the preferred elevational range of the species.
Galium angustifolium ssp. *jacinticum* San Jacinto Mountains bedstraw	None/None G5T2?/S2? 1B.3	Perennial herb. Lower montane coniferous forest. Open mixed forest. Elevations: 4430-6890ft. (1350-2100m.) Blooms Jun-Aug.	Not Expected	No suitable lower montane coniferous forest occurs within the BSA. The BSA is outside the preferred elevational range of the species.
Galium californicum ssp. *primum* Alvin Meadow bedstraw	None/None G5T2/S2 1B.2	Perennial herb. Chaparral, lower montane coniferous forest. Grows in shade of trees and shrubs at the lower edge of the pine belt, in pine forest-chaparral ecotone. Granitic, sandy soils. Elevations: 4430-5580ft. (1350-1700m.) Blooms May-Jul.	Not Expected	No suitable chaparral or lower montane coniferous forest occurs within the BSA. The BSA is outside the preferred elevational range of the species.
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	No suitable chaparral, coastal scrub or grassland habitat occurs within the BSA. The soil within the BSA is sandy rather than clay.
Holocarpha virgata ssp. *elongata* curving tarplant	None/None G5T3/S3 4.2	Annual herb. Chaparral, cismontane woodland, coastal scrub, valley and foothill grassland. Elevations: 195-3610ft. (60-1100m.) Blooms May-Nov.	Not Expected	No suitable chaparral, mixed chaparral, coastal scrub or grassland habitat occurs within the BSA. Riparian Fremont cottonwood does occur within the BSA; however, the soil is primarily loamy sand and gravelly coarse sand, which would not support this species

Scientific Name Common Name	Status	Habitat Requirements	Potential to Occur in Project Area	Habitat Suitability/Observations
Hordeum intercedens vernal barley	None/None G3G4/S3S4 3.2	Annual herb. Coastal dunes, coastal scrub, valley and foothill grassland, vernal pools. Vernal pools, dry, saline streambeds, alkaline flats. 5-. Elevations: 15-3280ft. (5-1000m.) Blooms Mar-Jun.	Not Expected	No coastal scrub or grassland habitat occurs within the BSA. The BSA does not contain any vernal pools.
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	No suitable chaparral, mixed chaparral or coastal scrub habitat occurs within the BSA. Riparian Fremont cottonwood does occur within the BSA, and the soil is primarily loamy sand and gravelly coarse sand. However, this species is a perennial herb that would have been detected during the reconnaissance field survey and was not observed.
Hulsea vestita ssp. *callicarpha* beautiful hulsea	None/None G5T4/S4 4.2	Perennial herb. Chaparral, lower montane coniferous forest. Rocky or gravelly, granitic sites. Elevations: 3000-10005ft. (915-3050m.) Blooms May-Oct.	Not Expected	No suitable chaparral or lower montane coniferous forest occurs within the BSA. The BSA is outside the preferred elevational range of the species.
Imperata brevifolia California satintail	None/None G3/S3 2B.1	Perennial rhizomatous herb. Chaparral, coastal scrub, meadows and seeps, Mojavean desert scrub, riparian scrub. Mesic sites, alkali seeps, riparian areas. 3-. Elevations: 0-3985ft. (0-1215m.) Blooms Sep-May.	Not Expected	No suitable chaparral, coastal scrub, meadows or desert scrub habitat occurs within the BSA. No Alkali seeps or mesic soils are present within the BSA.
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	No suitable chaparral, mixed chaparral or coastal scrub habitat occurs within the BSA. Rincon biologists did not observe this species, and this species would be readily observable any time of the year if present.
Lasthenia glabrata ssp. *coulteri* Coulter's goldfields	None/None G4T2/S2 1B.1	Annual herb. Marshes and swamps, playas, vernal pools. Usually found on alkaline soils in playas, sinks, and grasslands. 1-. Elevations: 5-4005ft. (1-1220m.) Blooms Feb-Jun.	Not Expected	No marshes, swamps or vernal pools occur within the BSA.
Lepidium virginicum var. *robinsonii* Robinson's pepper-grass	None/None G5T3/S3 4.3	Annual herb. Chaparral, coastal scrub. Dry soils, shrubland. 4-. Elevations: 5-2905ft. (1-885m.) Blooms Jan-Jul.	Not Expected	No suitable chaparral or coastal scrub habitat occurs within the BSA.

Scientific Name Common Name	Status	Habitat Requirements	Potential to Occur in Project Area	Habitat Suitability/Observations
Lilium parryi lemon lily	None/None G3/S3 1B.2	Perennial bulbiferous herb. Lower montane coniferous forest, meadows and seeps, riparian forest, upper montane coniferous forest. Wet, mountainous terrain; generally in forested areas; on shady edges of streams, in open boggy meadows and seeps. Elevations: 4005-9005ft. (1220-2745m.) Blooms Jul-Aug.	Not Expected	The BSA is not wet or mountainous terrain, and no suitable mixed chaparral, meadows, or upper montane coniferous forest occurs within the BSA. The BSA is outside the preferred elevational range of the species.
Mentzelia tricuspis spiny-hair blazing star	None/None G4/S2 2B.1	Annual herb. Mojavean desert scrub. Sandy or gravelly slopes and washes. Elevations: 490-4200ft. (150-1280m.) Blooms Mar-May.	Not Expected	No desert scrub habitat occurs within the BSA. The soil within the BSA is primarily loamy sand and gravelly coarse sand.
Microseris douglasii ssp. *platycarpha* small-flowered microseris	None/None G4T4/S4 4.2	Annual herb. Cismontane woodland, coastal scrub, valley and foothill grassland, vernal pools. Alkaline clay in river bottoms. Elevations: 50-3510ft. (15-1070m.) Blooms Mar-May.	Not Expected	No suitable mixed chaparral, coastal scrub or grassland habitat occurs within the BSA. The BSA does not contain vernal pools.
Monardella macrantha ssp. *hallii* Hall's monardella	None/None G5T3/S3 1B.3	Perennial rhizomatous herb. Broadleafed upland forest, chaparral, cismontane woodland, lower montane coniferous forest, valley and foothill grassland. Dry slopes and ridges in openings. Elevations: 2395-7200ft. (730-2195m.) Blooms Jun-Oct.	Not Expected	No broadleafed upland forest, chaparral or lower montane coniferous forest occurs within the BSA. The BSA is outside the preferred elevational range of the species.
Monardella nana ssp. *leptosiphon* San Felipe monardella	None/None G4G5T2Q/S2 1B.2	Perennial rhizomatous herb. Chaparral, lower montane coniferous forest. Sometimes in openings and fuelbreaks or in the understory of forest or chaparral. Elevations: 3935-6085ft. (1200-1855m.) Blooms Jun-Jul.	Not Expected	No chaparral or lower montane coniferous forest occurs within the BSA. The BSA is outside the preferred elevational range of the species.
Myosurus minimus ssp. *apus* little mousetail	None/None G5T2Q/S2 3.1	Annual herb. Valley and foothill grassland, vernal pools. Alkaline soils. Elevations: 65-2100ft. (20-640m.) Blooms Mar-Jun.	Not Expected	No suitable grasslands or vernal pools occur within the BSA.
Nama stenocarpa mud nama	None/None G4G5/S1S2 2B.2	Annual/perennial herb. Marshes and swamps. Lake shores, river banks, intermittently wet areas. Elevations: 15-1640ft. (5-500m.) Blooms Jan-Jul.	Not Expected	No marshes or swamps occur within the BSA.
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 suitable vernally moist areas occur within the BSA.

Scientific Name Common Name	Status	Habitat Requirements	Potential to Occur in Project Area	Habitat Suitability/Observations
Orcuttia californica California Orcutt grass	FE/SE G1/S1 1B.1	Annual herb. Vernal pools. Elevations: 50-2165ft. (15-660m.) Blooms Apr-Aug.	Not Expected	No vernal pools occur within the BSA.
Parkinsonia microphylla little-leaved palo verde	None/None G5/S3 4.3	Perennial deciduous shrub. Mojavean desert scrub. Rocky or gravelly sites. Elevations: 150-3510ft. (45-1070m.) Blooms Apr-May.	Not Expected	No suitable desert scrub habitat occurs within the BSA.
Penstemon californicus California beardtongue	None/None G3/S2 1B.2	Perennial herb. Chaparral, lower montane coniferous forest, pinyon and juniper woodland. Stony slopes and shrubby openings; sandy or granitic soils. Elevations: 3840-7545ft. (1170-2300m.) Blooms May-Jun(Aug).	Not Expected	No suitable chaparral, lower montane coniferous forest or juniper woodland occurs within the BSA. The BSA is outside the preferred elevational range of the species.
Petalonyx linearis narrow-leaf sandpaper-plant	None/None G4/S3? 2B.3	Perennial shrub. Mojavean desert scrub, Sonoran desert scrub. Sandy or rocky canyons. Elevations: -80-3660ft. (-25-1115m.) Blooms (Jan-Feb)Mar-May(Jun-Dec).	Not Expected	No suitable desert scrub habitat occurs within the BSA.
Pseudognaphalium leucocephalum white rabbit-tobacco	None/None G4/S2 2B.2	Perennial herb. Chaparral, cismontane woodland, coastal scrub, riparian woodland. Sandy, gravelly sites. Elevations: 0-6890ft. (0-2100m.) Blooms (Jul)Aug-Nov(Dec).	Moderate Potential	The Fremont cottonwood habitat within the BSA may serve as suitable riparian woodland for this species. There is one recent CNDDB occurrence approximately 2.8 miles downstream of the BSA within the San Jacinto River. Furthermore, a population of this species occurred in an open sandy wash that burned in 2003.
Quercus engelmannii Engelmann oak	None/None G3/S3 4.2	Perennial deciduous tree. Chaparral, cismontane woodland, riparian woodland, valley and foothill grassland. Elevations: 165-4265ft. (50-1300m.) Blooms Mar-Jun.	Not Expected	No suitable chaparral, mixed chaparral or grassland habitat occurs within the BSA. The Fremont cottonwood habitat within the BSA may serve as suitable riparian woodland for this species. Rincon biologists did not observe this species, and this species would be readily observable any time of the year if present.
Saltugilia latimeri Latimer's woodland-gilia	None/None G3/S3 1B.2	Annual herb. Chaparral, Mojavean desert scrub, pinyon and juniper woodland. Rocky or sandy substrate; sometimes in washes, sometimes limestone. Elevations: 1310-6235ft. (400-1900m.) Blooms Mar-Jun.	Not Expected	No suitable chaparral, desert scrub or juniper woodland habitat occurs within the BSA. There is only one recent CNDDB occurrence that is over 14 miles from the BSA.

Scientific Name Common Name	Status	Habitat Requirements	Potential to Occur in Project Area	Habitat Suitability/Observations
Scutellaria bolanderi ssp. *austromontana* southern mountains skullcap	None/None G4T3/S3 1B.2	Perennial rhizomatous herb. Chaparral, cismontane woodland, lower montane coniferous forest. In gravelly soils on streambanks or in mesic sites in oak or pine woodland. Elevations: 1395-6560ft. (425-2000m.) Blooms Jun-Aug.	Not Expected	No suitable chaparral, mixed chaparral or lower montane coniferous forest occurs within the BSA. The Fremont cottonwood habitat within the BSA may serve as suitable riparian woodland for this species; however, no recent occurrences were identified.
Sidalcea neomexicana salt spring checkerbloom	None/None G4/S2 2B.2	Perennial herb. Chaparral, coastal scrub, lower montane coniferous forest, Mojavean desert scrub, playas. Alkali springs and marshes. Elevations: 50-5020ft. (15-1530m.) Blooms Mar-Jun.	Not Expected	No suitable alkali springs and marshes occur within the BSA. There are no recent CNDDB occurrences within 9 quadrangles of the BSA.
Sidotheca caryophylloides chickweed oxytheca	None/None G4/S4 4.3	Annual herb. Lower montane coniferous forest. Sandy sites. Elevations: 3655-8530ft. (1114-2600m.) Blooms Jul-Sep(Oct).	Not Expected	No suitable lower montane coniferous forest occurs within the BSA. The BSA is outside the preferred elevational range of the species.
Streptanthus bernardinus Laguna Mountains jewelflower	None/None G3G4/S3S4 4.3	Perennial herb. Chaparral, lower montane coniferous forest. Clay or decomposed granite soils; sometimes in disturbed areas such as streamsides or roadcuts. Elevations: 2200-8205ft. (670-2500m.) Blooms May-Aug.	Not Expected	No chaparral or lower montane coniferous forest occurs within the BSA. The BSA is outside the preferred elevational range of the species.
Symphyotrichum defoliatum San Bernardino aster	None/None G2/S2 1B.2	Perennial rhizomatous herb. Cismontane woodland, coastal scrub, lower montane coniferous forest, marshes and swamps, meadows and seeps, valley and foothill grassland. Vernally mesic grassland or near ditches, streams and springs; disturbed areas. Elevations: 5-6695ft. (2-2040m.) Blooms Jul-Nov.	Not Expected	No suitable mixed chaparral, coastal scrub, meadows or lower montane coniferous forest occurs within the BSA. The BSA does not contain marshes or swamps.
Tortula californica California screw moss	None/None G2G3/S2? 1B.2	Moss. Chenopod scrub, valley and foothill grassland. Moss growing on sandy soil. Elevations: 35-4790ft. (10-1460m.)	Not Expected	No suitable chenopod scrub or grasslands occur within the BSA. The closest CNDDB occurrence is from 2013 and is approximately 5.5 miles west of the BSA.

Scientific Name Common Name	Status	Habitat Requirements	Potential to Occur in Project Area	Habitat Suitability/Observations
Trichocoronis wrightii var. *wrightii* Wright's trichocoronis	None/None G4T3/S1 2B.1	Annual herb. Marshes and swamps, meadows and seeps, riparian forest, vernal pools. Mud flats of vernal lakes, drying river beds, alkali meadows. Elevations: 15-1425ft. (5-435m.) Blooms May-Sep.	Not Expected	No marshes, swamps or vernal pools occur within the BSA.

Status (Federal/State)

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

CRPR (CNPS California Rare Plant Rank)

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

CRPR Threat Code Extension

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

Other Statuses

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

Special Status Wildlife Species in the Regional Vicinity of the BSA

Scientific Name Common Name	Status	Habitat Requirements	Potential to Occur in Project Area	Habitat Suitability/Observations
Invertebrates				
Bombus crotchii Crotch bumble bee	None/SCE G2/S2	Coastal California east to the Sierra-Cascade crest and south into Mexico. Food plant genera include Antirrhinum, Phacelia, Clarkia, Dendromecon, Eschscholzia, and Eriogonum.	Low Potential	Few suitable plants for pollination occur within the BSA. There are 5 recent occurrences in the CNDDB 9-quad search, but none of them are within 8 miles of the BSA.
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 suitable grassland habitat or depression pools occur within the BSA. There is only one recent occurrence in the CNDDB 9-quad search, and it occurs over 8 miles away from the BSA.
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	No suitable chaparral or coastal sage shrublands occur within the BSA. There are 2 recent occurrences in the CNDDB 9-quad search, but they are located over 10 miles from the BSA.
Streptocephalus woottoni Riverside fairy shrimp	FE/None G1G2/S2	Endemic to Western Riverside, Orange, and San Diego counties in areas of tectonic swales/earth slump basins in grassland and coastal sage scrub. Inhabit seasonally astatic pools filled by winter/spring rains. Hatch in warm water later in the season.	Not Expected	No suitable grasslands or coastal sage scrub habitat occurs within the BSA. No seasonally astatic pools occur within the BSA. There is 1 recent occurrence in the CNDDB 9-quad search. This species is considered extirpated according to the CNDDB records.
Amphibians				
Anaxyrus californicus arroyo toad	FE/None G2G3/S2 SSC	Semi-arid regions near washes or intermittent streams, including valley-foothill and desert riparian, desert wash, etc. Rivers with sandy banks, willows, cottonwoods, and sycamores; loose, gravelly areas of streams in drier parts of range.	Low Potential	This species is typically found in alluvial scrub, rather than riparian woodland. The San Jacinto River channel is disturbed, which reduces the potential for this species to occur Furthermore, there is only one recent occurrence in the CNDDB 9-quad search, but it is over 5 miles from the BSA.

Scientific Name Common Name	Status	Habitat Requirements	Potential to Occur in Project Area	Habitat Suitability/Observations
Rana muscosa southern mountain yellow-legged frog	FE/SE G1/S2 WL	Disjunct populations known from southern Sierras (northern DPS) and San Gabriel, San Bernardino, and San Jacinto Mtns (southern DPS). Found at 1,000 to 12,000 ft in lakes and creeks that stem from springs and snowmelt. May overwinter under frozen lakes. Often encountered within a few feet of water. Tadpoles may require 2-4 years to complete their aquatic development.	Not Expected	The BSA does not contain suitable lake or creek habitat for this species. There are 2 recent occurrences in the CNDDB 9-quad search, but they are both over 10 miles from the BSA.
Spea hammondii western spadefoot	FPT/None G2G3/S3S4 SSC	Occurs primarily in grassland habitats but can be found in valley-foothill hardwood woodlands. Vernal pools are essential for breeding and egg-laying.	Low Potential	No suitable grassland habitat or vernal pools occurs within the BSA. There are some suitable woodlands in the BSA. There are several recent occurrences within in the San Jacinto quadrangle; however, they are not found in similar habitats to those present within the BSA.
Reptiles				
Anniella stebbinsi Southern California legless lizard	None/None G3/S3 SSC	Generally south of the Transverse Range, extending to northwestern Baja California. Occurs in sandy or loose loamy soils under sparse vegetation. Disjunct populations in the Tehachapi and Piute Mountains in Kern County. Variety of habitats; generally in moist, loose soil. They prefer soils with a high moisture content.	Low Potential	Some suitable sandy soil with sparse vegetation occurs within the BSA. There are several recent occurrences in the CNDDB 9-quad search. Some of those occurrences take place within the San Jacinto River, but they are over 8 miles away from the BSA. None of the occurrences are within 5 miles of the BSA.
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	No suitable scrub or grassland habitat occurs within the BSA. There are several recent occurrences in the CNDDB 9-quad search, one of which is within the San Jacinto quadrangle, approximately 4.5 miles downstream of the BSA within the San Jacinto River.
Aspidoscelis hyperythra orange-throated whiptail	None/None G5/S2S3 WL	Inhabits low-elevation coastal scrub, chaparral, and valley-foothill hardwood habitats. Prefers washes and other sandy areas with patches of brush and rocks. Perennial plants necessary for its major food: termites.	Low Potential	No suitable coastal scrub or chaparral habitat occurs within the BSA. There are 8 recent occurrences in the CNDDB 9-quad search, but they are all over 5 miles from the BSA.
Aspidoscelis tigris stejnegeri coastal whiptail	None/None G5T5/S3 SSC	Found in deserts and semi-arid areas with sparse vegetation and open areas. Also found in woodland and riparian areas. Ground may be firm soil, sandy, or rocky.	Low Potential	Some suitable woodland areas and areas with firm and sandy soils occur within the BSA. There is only 1 recent occurrence in the CNDDB 9-quad search, and it is over 10 miles from the BSA.

Scientific Name Common Name	Status	Habitat Requirements	Potential to Occur in Project Area	Habitat Suitability/Observations
Charina umbratica southern rubber boa	None/ST G2G3/S2	Found in a variety of montane forest habitats. Previously considered morphologically intermediate, recent (2022) genomic analysis clarifies individuals from Mt Pinos, Tehachapi Mts, and southern Sierra Nevada are southern rubber boa. Found in vicinity of streams or wet meadows; requires loose, moist soil for burrowing; seeks cover in rotting logs, rock outcrops, and under surface litter.	No Potential	No suitable montane forest habitat with moist, loose soil occurs within the BSA. There are several recent occurrences in the CNDDB 9-quad search, but they are all over 9 miles from the BSA.
Coleonyx variegatus abbotti San Diego banded gecko	None/None G5T5/S1S2 SSC	Coastal and cismontane Southern California. Found in granite or rocky outcrops in coastal scrub and chaparral habitats.	Not Expected	No suitable coastal scrub or chaparral habitat occurs within the BSA. The only 2 occurrences in the CNDDB 9-quad search are from 1999.
Crotalus ruber red-diamond rattlesnake	None/None G4/S3 SSC	Chaparral, woodland, grassland, and desert areas from coastal San Diego County to the eastern slopes of the mountains. Occurs in rocky areas and dense vegetation. Needs rodent burrows, cracks in rocks or surface cover objects.	Not Expected	No suitable chaparral, woodland or grassland habitat occurs within the BSA. There are 2 recent occurrences in the CNDDB 9-quad search. The closest occurrence is from 2005 and is approximately 6.5 miles southwest.
Phrynosoma blainvillii coast horned lizard	None/None G4/S4 SSC	Frequents a wide variety of habitats, most common in lowlands along sandy washes with scattered low bushes. Open areas for sunning, bushes for cover, patches of loose soil for burial, and abundant supply of ants and other insects.	Low Potential	Some suitable sandy wash habitat occurs within the BSA. There is only one CNDDB occurrence from 2005 that is relatively close to the BSA, 4 miles upstream in the banks of the San Jacinto River.
Birds				
Accipiter cooperii Cooper's hawk	None/None G5/S4 WL	Woodland, chiefly of open, interrupted or marginal type. Nest sites mainly in riparian growths of deciduous trees, as in canyon bottoms on river flood-plains; also, live oaks.	High Potential	Suitable nesting trees occur within the site. There are only 2 recent occurrences in the CNDDB 9-quad search. However, there are several sightings of this species on eBird, one of which occurred within the BSA in 2019. This species is easily distinguishable from other raptors, so observations within the BSA are most likely accurate.

Scientific Name Common Name	Status	Habitat Requirements	Potential to Occur in Project Area	Habitat Suitability/Observations
Agelaius tricolor tricolored blackbird	None/ST G1G2/S2 SSC	Highly colonial species, most numerous in Central Valley and vicinity. Largely endemic to California. Requires open water, protected nesting substrate, and foraging area with insect prey within a few km of the colony.	Low Potential	There are 13 recent occurrences in the CNDDB 9-quad search, one of which is within the San Jacinto quadrangle approximately 3 miles north of the BSA. Although, no open water occurs within the BSA, there are several occurrences on eBird of this species within 2 miles of the BSA in the San Jacinto River.
Aimophila ruficeps canescens southern California rufous-crowned sparrow	None/None G5T3/S4 WL	Resident in Southern California coastal sage scrub and sparse mixed chaparral. Frequents relatively steep, often rocky hillsides with grass and forb patches.	Not Expected	No suitable coastal sage scrub or chapparal habitat occurs within the BSA. There are several recent occurrences in the CNDDB 9-quad search, none of which are within 5 miles of the BSA.
Aquila chrysaetos golden eagle	None/None G5/S3 FP WL	Rolling foothills, mountain areas, sage-juniper flats, and desert. Cliff-walled canyons provide nesting habitat in most parts of range; also, large trees in open areas.	Low Potential	Some suitable nesting trees occur within the BSA; however, adjacent disturbances reduce the potential for nesting. There is one recent occurrence from 2008, approximately 3 miles northeast of the BSA.
Artemisiospiza belli Bell's sparrow	None/None G5T2T3/S3 WL	Nests in chaparral dominated by fairly dense stands of chamise. Found in coastal sage scrub in south of range. Nest located on the ground beneath a shrub or in a shrub 6-18 inches above ground. Territories about 50 yds apart.	Not Expected	No suitable chaparral habitat occurs within the BSA. There most recent occurrences in the CNDDB 9-quad search are all over 8 miles from the BSA.
Athene cunicularia burrowing owl	None/SCE G4/S2 SSC	Open, dry annual or perennial grasslands, deserts, and scrublands characterized by low-growing vegetation. Subterranean nester, dependent upon burrowing mammals, most notably, the California ground squirrel.	Low Potential	There are several occurrences in the CNDDB 9-quad search. The most recent occurrence within the San Jacinto quadrangle is from 2006. However, Rincon Biologists made no observations of suitable burrows, of sign or individuals within the BSA.
Buteo regalis ferruginous hawk	None/None G4/S3S4 WL	Open grasslands, sagebrush flats, desert scrub, low foothills and fringes of pinyon and juniper habitats. Eats mostly lagomorphs, ground squirrels, and mice. Population trends may follow lagomorph population cycles.	Low Potential	No suitable grassland or desert scrub occurs within the BSA. The most recent occurrence approximately 1.6 miles from the BSA is from 2006. The other recent occurrence is over 11 miles from the BSA.
Campylorhynchus brunneicapillus sandiegensis coastal cactus wren	None/None G5T3Q/S2 SSC	Southern California coastal sage scrub. Wrens require tall opuntia cactus for nesting and roosting.	Not Expected	No suitable opuntia cactus occurs within the BSA. There is only 1 occurrence from 2001 in the CNDDB 9-quad search.

Scientific Name Common Name	Status	Habitat Requirements	Potential to Occur in Project Area	Habitat Suitability/Observations
Circus hudsonius northern harrier	None/None G5/S3 SSC	Coastal salt and freshwater marsh. Nest and forage in grasslands, from salt grass in desert sink to mountain cienagas. Nests on ground in shrubby vegetation, usually at marsh edge; nest built of a large mound of sticks in wet areas.	Not Expected	No suitable freshwater marsh habitat occurs within the BSA. There is only 1 occurrence from 2006 in the CNDDB 9-quad search.
Coccyzus americanus occidentalis western yellow-billed cuckoo	FT/SE G5T2T3/S1	Riparian forest nester, along the broad, lower flood-bottoms of larger river systems. Nests in riparian jungles of willow, often mixed with cottonwoods, with lower story of blackberry, nettles, or wild grape.	Not Expected	This species has a very particular habitat, and their locations are well-known/mapped. The BSA is not located in an area where this species is found. There are no recent occurrences in the CNDDB 9-quad search.
Cypseloides niger black swift	None/None G4/S3 SSC	Coastal belt of Santa Cruz and Monterey counties; central and southern Sierra Nevada; San Bernardino and San Jacinto mountains. Breeds in small colonies on cliffs behind or adjacent to waterfalls in deep canyons and sea-bluffs above the surf; forages widely.	Not Expected	No suitable cliff habitat occurs within the BSA. The BSA is not near sea-bluffs nor near canyons with waterfalls. There are no recent occurrences in the CNDDB 9-quad search.
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	No suitable open grasslands, meadows or marshes occur within the BSA. There are 4 recent occurrences in the CNDDB 9-quad search, 1 of which is 6.5 miles southwest of the BSA and 3 of which are in the same area approximately 11 miles northwest of the BSA.
Empidonax traillii extimus southwestern willow flycatcher	FE/SE G5T2/S3	Riparian woodlands in Southern California.	Low Potential	Some suitable riparian woodland habitat occurs within the BSA, but it is not dense enough to support this species. Typically, this species requires open water nearby, which does not exist within the BSA. There are 2 recent occurrences in the CNDDB 9-quad search, but they are both in the same area approximately 7.5 miles northwest of the BSA.
Eremophila alpestris actia California horned lark	None/None G5T4Q/S4 WL	Coastal regions, chiefly from Sonoma County to San Diego County. Also, main part of San Joaquin Valley and east to foothills. Short-grass prairie, “bald” hills, mountain meadows, open coastal plains, fallow grain fields, alkali flats.	Not Expected	No suitable mountain meadows, fallow grain fields or alkali flats occur within the BSA. There are 2 recent occurrences in the CNDDB 9-quad search, but they are both over 6 miles from the BSA.

Scientific Name Common Name	Status	Habitat Requirements	Potential to Occur in Project Area	Habitat Suitability/Observations
Icteria virens yellow-breasted chat	None/None G5/S4 SSC	Summer resident; inhabits riparian thickets of willow and other brushy tangles near watercourses. Nests in low, dense riparian, consisting of willow, blackberry, wild grape; forages and nests within 10 ft of ground.	Low Potential	Elements of suitable habitat occur within the BSA. However, there is only 1 recent occurrence in the CNDDB 9-quad search, and it is over 8 miles away from the BSA.
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	Some suitable habitat occurs within the BSA. There are 8 recent occurrences in the CNDDB 9-quad search, none of which are within 5 miles of the BSA.
Plegadis chihi white-faced ibis	None/None G5/S3S4 WL	Shallow freshwater marsh. Dense tule thickets for nesting, interspersed with areas of shallow water for foraging.	Not Expected	No suitable freshwater marsh habitat or tule thicket habitat occurs within the BSA. There is only 1 recent occurrence in the CNDDB 9-quad search, and it is not within the San Jacinto quadrangle.
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	No suitable coastal sage scrub habitat occurs within the BSA. There are several recent occurrences in the CNDDB 9-quad search, none of which are within 7 miles of the BSA.
Progne subis purple martin	None/None G5/S3 SSC	Inhabits woodlands, low elevation coniferous forest of Douglas-fir, ponderosa pine, and Monterey pine. Nests in old woodpecker cavities mostly; also, in human-made structures. Nest often located in tall, isolated tree/snag.	Not Expected	No suitable habitat occurs within the BSA. There are no recent occurrences in the CNDDB 9-quad search.
Setophaga petechia yellow warbler	None/None G5/S3 SSC	Riparian plant associations in close proximity to water. Also nests in montane shrubbery in open conifer forests in Cascades and Sierra Nevada. Frequently found nesting and foraging in willow shrubs and thickets, and in other riparian plants including cottonwoods, sycamores, ash, and alders.	Present	This species was observed on July 25, and July 26, 2023, in the Fremont cottonwood woodland within the BSA. There are also 4 recent occurrences in the CNDDB 9-quad search, one of which is from 2014 and is approximately 2 miles downstream of the BSA.
Toxostoma lecontei Le Conte's thrasher	None/None G4/S3 SSC	Desert resident; primarily of open desert wash, desert scrub, alkali desert scrub, and desert succulent scrub habitats. Commonly nests in a dense, spiny shrub or densely branched cactus in desert wash habitat, usually 2-8 feet above ground.	Not Expected	No suitable desert scrub, alkali desert scrub or desert succulent scrub habitat occurs within the BSA. There are no recent occurrences in the CNDDB 9-quad search.

Scientific Name Common Name	Status	Habitat Requirements	Potential to Occur in Project Area	Habitat Suitability/Observations
Vireo bellii pusillus least Bell's vireo	FE/SE G5T2/S3	Summer resident of Southern California in low riparian in vicinity of water or in dry river bottoms; below 2000 ft. Nests placed along margins of bushes or on twigs projecting into pathways, usually willow, Baccharis, mesquite.	Moderate Potential	Some suitable habitat occurs within the BSA. There are several recent occurrences in the CNDDB 9-quad search, one of which from 2011 overlaps with the BSA where 25 individuals were observed. Furthermore, eBird also has sightings of least Bell's 2 miles downstream and 3 miles upstream from the Project site in the San Jacinto River from 2019. Both locations confirmed breeding (pairs and fledglings) and were observed by someone who works closely with a local bird organization and for the Santa Ana Watershed Association.
Xanthocephalus xanthocephalus yellow-headed blackbird	None/None G5/S3 SSC	Nests in freshwater emergent wetlands with dense vegetation and deep water. Often along the borders of lakes or ponds. Nests only where large insects such as Odonata are abundant, nesting timed with maximum emergence of aquatic insects.	Not Expected	No deep-water features occur within the BSA. There are no recent occurrences in the CNDDB 9-quad search.
Mammals				
Antrozous pallidus pallid bat	None/None G4/S3 SSC	Found in a variety of habitats including deserts, grasslands, shrublands, woodlands, and forests. Most common in open, dry habitats with rocky areas for roosting. Roosts in crevices of rock outcrops, caves, mine tunnels, buildings, bridges, and hollows of live and dead trees which must protect bats from high temperatures. Very sensitive to disturbance of roosting sites.	Moderate Potential	No rocky roosting areas occur within the BSA; however, the riparian woodland habitat and the wash area within the BSA could support seasonal roosting and foraging of this species. The BSA's proximity to Lake Perris and Diamond Valley Lake makes it more likely for this species to occur within the BSA. There is one recent occurrence in the CNDDB 9-quad search that is approximately 3.5 miles north of the BSA.
Corynorhinus townsendii Townsend's big-eared bat	None/None G4/S2 SSC	Occurs throughout California in a wide variety of habitats. Most common in mesic sites, typically coniferous or deciduous forests. Roosts in the open, hanging from walls and ceilings in caves, lava tubes, bridges, and buildings. This species is extremely sensitive to human disturbance.	Moderate Potential	The riparian woodland habitat and the wash area within the BSA could support seasonal roosting and foraging of this species. The BSA's proximity to Lake Perris and Diamond Valley Lake makes it more likely for this species to occur within the BSA. There is one occurrence that is approximately 2 miles north of the BSA, but it is from 1997.

Scientific Name Common Name	Status	Habitat Requirements	Potential to Occur in Project Area	Habitat Suitability/Observations
Dipodomys merriami parvus San Bernardino kangaroo rat	FE/SCE G5T1/S1 SSC	Alluvial scrub vegetation on sandy loam substrates characteristic of alluvial fans and flood plains. Needs early to intermediate seral stages.	High Potential	Suitable small mammal burrows were observed within the BSA. Critical Habitat occurs within the BSA. There is one occurrence from 2006 that overlaps with the BSA. There are several other recent occurrences in the San Jacinto River channel within 2 miles of the BSA.
Dipodomys stephensi Stephens' kangaroo rat	FT/ST G2/S3	Found primarily in annual & perennial grasslands, but also occurs in coastal scrub & sagebrush with sparse canopy cover. Prefers buckwheat, chamise, brome grass & filaree. Will burrow into firm soil and use the burrows of California ground squirrels and pocket gophers. Occurs only in southern California.	Moderate Potential	Suitable small mammal burrows were observed within the BSA. There are several recent occurrences in the CNDDB 9-quad search. A large area was mapped as inhabited by the Stephens' kangaroo approximately 2 miles north of the BSA with several occurrences from 2005-2018 within that area. Furthermore, there was another occurrence in the San Jacinto River channel approximately 1.8 miles northwest of the BSA.
Lasiurus xanthinus western yellow bat	None/None G4G5/S3 SSC	Occurs in arid regions of the southwestern United States. Typically found in riparian woodlands, oak or pinyon-juniper woodland, desert wash, palm oasis habitats, and urban or suburban areas. Roosts in trees, often between palm fronds.	Moderate Potential	The riparian woodland habitat and the wash area within the BSA could support seasonal roosting and foraging of this species. The BSA's proximity to Lake Perris and Diamond Valley Lake makes it more likely for this species to occur within the BSA. Although, there are no recent occurrences in the CNDDB 9-quad search, this species is found in the general area of Riverside County.
Neotoma lepida intermedia San Diego desert woodrat	None/None G5T3T4/S3S4 SSC	Occurs in scrub habitats of southern California from San Luis Obispo County to San Diego County.	Low Potential	Suitable small mammal burrrows were observed within the BSA; however, woodrat species create middens for nesting that were not observed during the reconnaissance survey. Scrub habitat does not occur within the BSA. There are 9 recent occurrences in the CNDDB 9-quad search.

Scientific Name Common Name	Status	Habitat Requirements	Potential to Occur in Project Area	Habitat Suitability/Observations
Onychomys torridus ramona southern grasshopper mouse	None/None G5T3/S3 SSC	Desert areas, especially scrub habitats with friable soils for digging. Prefers low to moderate shrub cover. Feeds almost exclusively on arthropods, especially scorpions and orthopteran insects.	Not Expected	No suitable habitat occurs within the BSA. There are only historical occurrences in the CNDDB 9-quad search (from 1908 and 1938).
Perognathus longimembris brevinasus Los Angeles pocket mouse	None/None G5T2/S1S2 SSC	Lower elevation grasslands and coastal sage communities in and around the Los Angeles Basin. Open ground with fine, sandy soils. May not dig extensive burrows, hiding under weeds and dead leaves instead.	Moderate Potential	No grassland or coastal sage communities occur within the BSA. However, there are several occurrences in the CNDDB 9-quad search, one of which, from 2002, occurred within BSA. Furthermore, there is another CNDDB occurrence from 2001 approximately 1.5 miles northwest of the BSA within the San Jacinto River Channel.
Taxidea taxus American badger	None/None G5/S3 SSC	Most abundant in drier open stages of most shrub, forest, and herbaceous habitats, with friable soils. Needs sufficient food, friable soils and open, uncultivated ground. Preys on burrowing rodents. Digs burrows.	Low Potential	No suitable burrows occur within the BSA. There is limited friable soil in the fourwing saltbush scrub, where soils are more compact. The upland mustards containing Russian thistle are not expected to support this species. There are no recent occurrences in the CNDDB 9-quad search.

Scientific Name Common Name	Status	Habitat Requirements	Potential to Occur in Project Area	Habitat Suitability/Observations
Xerospermophilus tereticaudus chlorus Palm Springs round-tailed ground squirrel	None/None G5T2Q/S2 SSC	Restricted to the Coachella Valley. Prefers desert succulent scrub, desert wash, desert scrub, alkali scrub, and levees. Prefers open, flat, grassy areas in fine-textured, sandy soil. Density correlated with winter rainfall.	Not Expected	This species is restricted to the Coachella Valley, so it will not occur near the BSA. There are no recent occurrences in the CNDDB 9-quad search.

Status (Federal/State)

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

CRPR (CNPS California Rare Plant Rank)

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

CRPR Threat Code Extension

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

Other Statuses

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

Appendix D

Jurisdictional Delineation Report

Rincon Consultants, Inc.
180 North Ashwood Avenue
Ventura, California 93003
805-644-4455

March 14, 2024
Rincon Project No: 23-15199

Tania Asef, Associate Environmental Specialist
The Metropolitan Water District of Southern California
700 North Alameda Street
Los Angeles, California, 90012
Via email: TAsef@mwdh2o.com

Subject: Jurisdictional Delineation for the Casa Loma Siphon No. 1 and San Jacinto Pipeline Project, Riverside County, California

Dear Ms. Asef,

This report has been prepared by Rincon Consultants, Inc. (Rincon) to assist The Metropolitan Water District of Southern California (Metropolitan) with project planning, and for use by the United States Army Corps of Engineers (USACE) to confirm extent of potential jurisdiction under Section 404 of the Clean Water Act, the Regional Water Quality Control Board (RWQCB), to confirm extent of potential jurisdiction pursuant to Section 401 of the Clean Water Act and the Porter-Cologne Water Quality Control Act, and the California Department of Fish and Wildlife (CDFW) to confirm potential jurisdiction pursuant to California Fish and Game Code (CFGC) Section 1600 *et seq*.

This Jurisdictional Delineation identified one feature, the San Jacinto River, that is likely subject to agency jurisdiction.

Project Description

Metropolitan is a regional water wholesaler for 26 public agency members that provide drinking water to approximately 19 million people in parts of Los Angeles, Orange, Riverside, San Bernardino, San Diego, and Ventura counties.

During storm activity in early 2023, accelerated flows within the San Jacinto River exposed an approximate 200-foot-long segment of Metropolitan's Casa Loma Siphon No. 1 Pipeline. In response to the emergency, Metropolitan installed protective measures to achieve temporary protection of the pipelines until a permanent solution could be developed. Metropolitan is now proposing a permanent engineering solution within the approximate 20-acre Project site to properly cover the three existing pipelines (CRA Siphon, San Jacinto Pipeline and Casa Loma Canal Siphon).

Project Location

The Project site encompasses an approximate 20-acre area located within and adjacent to the San Jacinto River, between Soboba Road and State Street, near the city of San Jacinto, unincorporated Riverside County, California (Attachment 1, Figure 1 and Figure 2). The Project site is depicted on the United States Geological Survey (USGS) *San Jacinto, California,* 7.5-minute topographic map within Township 4 South, Range 1 West, Section 15, San Bernardino Baseline and Meridian (33.820600°, -116.969914°).

Methods

A literature review and field delineation were conducted to identify, describe, and map potential jurisdictional waters within the Study Area (i.e., the Project site plus a 100-foot buffer). The literature review and field delineation were conducted in accordance with USACE, RWQCB, and CDFW procedures as outlined below. Photographs of the Study Area and data sheets from the field delineation are provided in Attachments 2 and 3, respectively.

Literature Review

Prior to the field survey, Rincon reviewed aerial imagery (Google Earth Pro 2024) of the Study Area, the *San Jacinto, California* U.S. Geological Survey (USGS) 7.5-minute topographic quadrangle (USGS 2024a), the Web Soil Survey (United States Department of Agriculture, Natural Resources Conservation Service [USDA, NRCS] 2024c), and the National Hydric Soils List by State (USDA, NRCS 2024b). These resources were reviewed to better characterize the site and its surroundings from a hydrologic, geologic, and topographic perspective and to determine if any soil units mapped in the Study Area were classified as hydric. Additionally, the National Wetlands Inventory (NWI; United States Fish and Wildlife Service [USFWS] 2024) and the National Hydrography Dataset (NHD; USGS 2023b) were reviewed to determine if any potential jurisdictional waters were mapped within the Study Area.

Field Delineation

On January 8, 2024, Rincon Biologists Kevin Gugerty and Jared Reed surveyed the accessible portions of the Study Area. The Study Area was surveyed on foot to delineate the potential jurisdictional waters. Current federal and state policies, methods, and guidelines were used to identify and delineate potential jurisdictional waters and are summarized in the subsections below and in detail in Attachment 4.

During the field delineation, Rincon took photographs of potential jurisdictional waters and the surrounding areas (Attachment 2). General site characteristics were noted, and vegetation present within the Study Area was documented. Data collection focused on potential jurisdictional waters, and sample points were taken in areas that best represented the conditions of that feature (Attachment 3).

The extent of potential jurisdictional waters, ordinary high water mark (OHWM) sample points, and vegetation community/land cover type boundaries were mapped in the field with the use of a Global Positioning System unit capable of sub-meter accuracy.

Wetland Waters of the U.S.

Potential wetland features were evaluated for the presence of wetland indicators; specifically, hydrophytic vegetation, hydric soils, and wetland hydrology, according to 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). The USACE Arid West 2020 Regional Wetland Plant List was used to determine the indicator 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). If a potential wetland is present within the Study Area, representative sample points would be taken in the areas most likely to exhibit wetland characteristics (i.e., the prevalence of hydrophytic vegetation, hydrology, and suitable topography) and examined in the field to determine if it meets all three wetland parameters. Sample points were not conducted in areas with an obvious prevalence of

upland vegetation or in areas where the topography would not support wetland features. Adjacent wetlands are "waters of the U.S" only if there is a continuous surface connection between the potential wetland and a navigable or relatively permanent water body (Environmental Protection Agency [EPA] 2023).

Non-Wetland Waters of the U.S.

The lateral limits of USACE jurisdiction for 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), as well as in reference to various relevant technical publications, including, but not limited to, *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). The regulations were also reviewed in the determination of non-jurisdictional features (e.g., roadway ditches excavated in uplands). The *Updated Datasheet for the Identification of the Ordinary High Water Mark (OHWM) in the Arid West Region of the Western United States* (USACE 2010) was completed for all potential non-wetland waters of the U.S. within the Study Area.

Additionally, Rincon evaluated sources of water, streamflow period, connections to Navigable Waters or Traditional Navigable Waters (TNWs), and other factors that affect whether waters qualify as "waters of the U.S." under current USACE regulations (33 CFR 328.3), including, but not limited to, the recent *Sackett v. USEPA* court ruling and the conforming *Revised Definition of Waters of the United States* (United States Environmental Protection Agency [USEPA] 2023).

Waters of the State

The limits of non-wetland "waters of the State," as defined under the Section 401 of the Clean Water Act and Porter-Cologne Water Quality Control Act, were determined to extend out to the lateral extent of the stream's OHWM based on current interpretation of jurisdiction by the Santa Ana RWQCB. Therefore, the lateral extent of the delineated boundaries for non-wetland waters of the State includes all streams up to the OHWM within the Study Area.

Additionally, potential State wetland features were evaluated pursuant to *State Wetland Definition and Procedures for Discharges of Dredged or Fill* (State Water Resources Control Board [SWRCB] 2019) which acknowledges that waters of the State should be delineated using the standard USACE wetland delineation procedures and proclaims that the SWRCB takes jurisdiction over isolated wetlands.

CDFW Streambed

The extent of potential streambeds, streambanks, and riparian habitat subject to CDFW jurisdiction under Section 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.

Existing Setting

Topography and Land Use

The Study Area is located within and adjacent to the San Jacinto River at the north end the San Jacinto River Valley and has a relatively uniform elevation at approximately 1,500 feet above mean

sea level. Topographic features visible from the Study Area include the San Jacinto Mountains adjoining the northeast side of the Study Area.

Existing land use within the Study Area consists of recreational open space. Low- and medium-density residential areas are located to the west and south of the Study Area and mixed-use and open space areas are located to the north, northwest, and east of the Study Area. Riprap reinforces the southern end of the San Jacinto Riverbank, and a man-made berm creates the northern bank adjacent to the river within the Study Area.

Hydrology

The Study Area is within the San Jacinto River Wash watershed, Hydrological Unit Code (HUC) 18070202 (USGS 2024b). The Study Area contains a portion of the San Jacinto River, which is classified by the National Wetlands Inventory as a Riverine System (USFWS 2023c). The river is classified as an intermittent streambed that is intermittently flooded and is approximately 150 feet wide within the Study Area. The San Jacinto River is approximately 42 miles long, flows in a northernly direction and drains into Canyon Lake, which is used for recreational activity including boating.

Soils

Four soil types occur within the Study Area (USDA NRCS 2023a):

- Dello loamy sand, 0 to 5 percent slopes (DgB)
- Riverwash (RsC)
- Tujunga loamy sand, channeled, 0 to 8 percent slopes (TvC)
- Soboba cobbly loamy sand, 2 to 25 percent slopes (SrE)

The majority of the Study Area is mapped as Riverwash, which is considered hydric (USDA NRCS 2023b; Figure 3).

Vegetation and Other Land Cover

Vegetation communities documented in the Study Area include Fremont cottonwood woodland, upland mustards, and fourwing saltbush scrub. Developed/disturbed was the only other land cover type documented in the Study Area (Figure 4). Brief descriptions of the vegetation communities present in the Study Area are provided below.

One special status plant species, chaparral sand verbena (*Abronia villosa* var. *aurita*), was also observed within the Study Area. An individual plant as well as a small population of this species were observed in the Fremont cottonwood woodland. Another individual plant was also observed on the edge of a developed/disturbed area adjacent to upland mustards.

Fremont Cottonwood Woodland

Fremont cottonwood woodland (*Populus fremontii* Woodland Alliance) is a vegetation community characterized by Fremont cottonwood (*Populus fremontii* ssp. *fremontii*) in the tree canopy with willows (*Salix* spp.) and other riparian trees, such as western sycamore (*Platanus racemosa*). The tree canopy is typically continuous to open, the shrub layer intermittent to open, and the herbaceous layer variable (Sawyer et al. 2009). This alliance can be found on floodplains, along low-gradient rivers, perennial or seasonally intermittent streams, and springs; and in canyons, alluvial fans, and valleys with a dependable subsurface water supply that varies considerably during the year.

Fremont cottonwood woodland is found throughout the Study Area, within the San Jacinto River. Fremont cottonwood is dominant in the tree layer, with Goodding's black willow (*Salix gooddingii*) a common species. The shrub layer is open and contains large areas of unvegetated river channel with scattered stands of mulefat (*Baccharis salicifolia*). This community comprises approximately 11.77 acres of the Study Area.

Upland Mustards

Upland mustards (*Brassica nigra* Herbaceous Semi-Natural Alliance) is a vegetation community typically found in fallow fields, grasslands, roadsides, levee slopes, disturbed coastal scrub, riparian areas, cleared roadsides, and waste places at elevations between 0 and 9,186 feet (0 and 2,800 meters) above mean sea level. Black mustard (*Brassica nigra*), summer mustard (*Hirschfeldia incana*), wild radish (*Raphanus sativus*), or other mustards occur with non-native plants at over 80 percent cover in the herbaceous layer.

In the Study Area, shortpod mustard is co-dominant with Russian thistle (*Salsola tragus*) and common stork's bill (*Erodium cicutarium*), forming a dense herbaceous layer. This alliance occupies areas outside the main channel of the San Jacinto River that appear to have been disturbed in the past, especially throughout the northeastern portion of the Study Area. The Study Area contains 6.73 acres of this alliance.

Fourwing Saltbush Scrub

Fourwing saltbush scrub (*Atriplex canescens* Shrubland Alliance) is a vegetation community typically found on playas, old beaches and shores, lake deposits, dissected alluvial fans, rolling hills or channel beds at elevations between 246 and 4,921 feet (74 and 1,500 meters) above mean sea level. Soils are generally carbonate rich, alkaline, sandy, or sandy clay loams. Fourwing saltbush scrub is characterized by an open to intermittent shrub canopy and a variable herbaceous layer composed of seasonal herbs and non-native grasses. Fourwing saltbush has over two percent absolute cover and over 50 percent relative cover in the shrub layer (Sawyer et al. 2009).

In the Study Area, this vegetation community is co-dominated by fourwing saltbush (*Atriplex canescens*), red brome (*Bromus rubens*) and horsewheat (*Triticum aestivum*). It is found in the northwest buffer of the Study Area, and in a few areas in the northeast portion of the Study Area. This alliance occupies approximately 3.06 acres of the Study Area.

Disturbed Fourwing Saltbush Scrub

Stands of disturbed fourwing saltbush scrub occur in the northern portion of the Study Area in the buffer area across Soboba Road. This community is similar in species composition to fourwing saltbush scrub, as described above, but is sparser with large areas of bare or disturbed ground between shrubs and herbaceous vegetation. The Study Area contains 0.81 acre of disturbed fourwing saltbush scrub.

Developed/Disturbed

The developed/disturbed land cover type typically includes residential buildings, other infrastructure, and paved areas with little to no vegetation (e.g., paved roads). Developed/disturbed areas are present throughout the Study Area, specifically within Soboba Road and dirt roads within the Project site as well as along the northern and southern buffers of the Study Area. The Study Area contains approximately 7.29 acres of developed/disturbed land cover.

Field Results and Discussion

Based on the field delineation, the portion of the San Jacinto River within the Study Area is likely subject to the jurisdiction of the USACE, RWQCB, and CDFW. The location and extent of potentially jurisdictional portions of the river are depicted in Figure 5. The area and length of each agency's potential jurisdiction are summarized in Table 1, representative photographs are provided in Attachment 2, and wetland sampling point and OHWM forms are compiled in Attachment 3.

Within the Study Area, the San Jacinto River contains banks that range approximately 270 feet to 405 feet wide, averaging 10 feet deep from top of bank. The OHWM ranges from approximately 270 feet to 400 feet wide, and was defined by a break in bank slope, change in average sediment texture, and change in vegetation cover. The river was dry at the time of the survey, but hydrologic indicators such as sediment and drift deposits were present. The substrate consists of mostly unvegetated coarse sand with large benches of mature Fremont cottonwood. The Fremont cottonwoods extend beyond the OHWM to the top of bank and provide a riparian canopy which is likely hydrologically connected to the San Jacinto River. The presence of Fremont cottonwoods indicates presence of water more frequently than exclusively during or immediately after rainfall. Accordingly, the San Jacinto River likely contains an intermittent flow regime.

One wetland sampling point ("SP01"), illustrated in Figure 5, was examined below the OHWM of the river in the low flow channel where hydrophytic vegetation was observed. SP01 did not demonstrate a dominance of hydrophytic vegetation but satisfied the parameter for wetland hydrology via secondary indicators (drift deposits and sediment deposits). Soils were consistent with Riverwash, which are classified as hydric. Soils were closely analyzed for redox concentrations potentially indicating problematic hydric soils associated with vegetated sand and gravel bars within floodplains. However, no redox concentrations were observed, indicating that soils at SP01 are not hydric. The reach of the San Jacinto River present in the Study Area was therefore mapped as a non-wetland waterway.

Since the portion of the San Jacinto River within the Study Area is an intermittent stream that conveys surface flow directly into Canyon Lake, a USACE-defined Navigable Water, the limits of the OHWM within the channel are assumed to be a non-wetland water of the U.S. subject to the jurisdiction of the USACE. Additionally, the limits within the extent of the channel's OHWM will likely be considered a non-wetland water of the State subject to the jurisdiction of the Santa Ana RWQCB. Last, the limits within the extent of the channel's top of banks or the extent of the riparian canopy, whichever is greater, will likely be considered streambed subject to the jurisdiction of the CDFW.

Summary of Jurisdictional Areas

Potentially jurisdictional areas within the Study Area are identified below in Table 1 and Figure 5.

Table 1 USACE, RWQCB, and CDFW Jurisdictional Area

Feature	Non-Wetland Waters of the U.S.[1] (acres/linear feet)	Non-Wetland Waters of the State[1] (acres/linear feet)	CDFW Jurisdictional Streambed[2] (acres/linear feet)
San Jacinto River	7.82/1,307	7.82/1,307	12.27/1,307

[1] Calculated to OHWM

[2] Calculated to top of bank or edge of riparian

The findings and conclusions presented in this report, including the location and extent of areas subject to regulatory jurisdiction, represent the professional opinion of the consultant biologists.

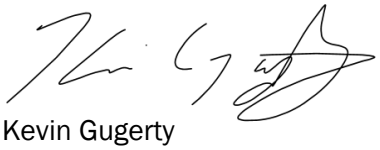
These findings and conclusions should be considered preliminary and at final discretion of the applicable resource agency.

Conclusions and Recommendations

Project-related impacts to San Jacinto River are likely subject to regulation by the USACE pursuant to Section 404 of the CWA, the Santa Ana RWQCB pursuant to Section 401 of the CWA and the Porter-Cologne Water Quality Control Act, and the CDFW pursuant to Section 1600 *et seq.* of the CFGC.

Impacts to jurisdictional waters should be avoided or minimized during project design to the extent feasible, including discharge of dredged or fill material or otherwise modifying potentially jurisdictional features. A Pre-Construction Notification would likely need to be submitted to the USACE for use of Nationwide Permit (NWP) 3 (Maintenance), or an alternative NWP based on input from the USACE, pursuant to Section 404 of the CWA to authorize impacts anticipated to non-wetland waters of the U.S. Additionally, an individual CWA Section 401 Certification Application for Dredge or Fill would need to be submitted to the Santa Ana RWQCB to authorize impacts to non-wetland waters of the State. Last, a Streambed Alteration Agreement notification would need to be submitted to the CDFW for impacts to CDFW jurisdictional streambed.

Sincerely,
Rincon Consultants, Inc.



Kevin Gugerty
Biologist

Robin Murray
Senior Biologist

Steven J. Hongola
Principal Biologist

Attachments

Attachment 1 Figures
Attachment 2 Representative Site Photographs
Attachment 3 Wetland Determination Data Forms, OHWM Forms, Data Summary
Attachment 4 Regulatory Framework

References

California Department of Fish and Wildlife (CDFW). 2023. California Natural Community List. Available at: https://nrm.dfg.ca.gov/FileHandler.ashx?DocumentID=153398&inline. Accessed January 2024

Google Earth Pro. 2024. U.S. Department of State Geographer. https://www.google.com/earth/. Accessed January 2024.Jepson Flora Project (eds.) 2023. Jepson eFlora. Available at: https://ucjeps.berkeley.edu/eflora/. Accessed January 2024.

Lichvar, R.W. et al. The National Wetland Plant List: 2020 wetland ratings. Federal Register Volume 86, Issue 209: 29689-29691. Published 18 May 2020.

Oberbauer, Thomas, Meghan Kelly, and Jeremy Buegge. 2008. Draft Vegetation Communities of San Diego County. Based on "Preliminary Descriptions of the Terrestrial Natural Communities of California", Robert F. Holland, Ph.D., October 1986.

Sawyer, J.O., T. Keeler-Wolf, and J.M. Evens. 2009. A Manual of California Vegetation, Second Edition. California Native Plant Society, Sacramento, CA.

State Water Resources Control Board (SWRCB). 2019. *Wetland Definition and Procedures for Discharges of Dredge and Fill Material to Waters of the State.* Adopted April 2, 2019. Available at: https://www.waterboards.ca.gov/water_issues/programs/cwa401/docs/procedures_conformed.pdf. Accessed January 2024.

United States Army Corps of Engineers (USACE), Environmental Laboratory. 1987. Technical Report Y-97-1. In: United States Army Corps of Engineers Wetlands Delineation Manual. United States Army Corps of Engineers Waterways Experiment Station. Vicksburg, MS.

_____. 2004. Review of Ordinary High Water Mark Indicators for Delineating Arid Streams in the Southwest United States. Technical Report ERDC TR-04-1. U.S. Army Engineer Research and Development Center, Cold Regions Research and Engineering Laboratory. Hanover, New Hampshire.

_____. 2005. Regulatory Guidance Letter No. 05-05: Ordinary High Water Mark Identification. U.S. Army Corps of Engineers. Washington, D.C.

_____. 2007. U.S. Army Corps of Engineers Jurisdictional Determination Form Instructional Guidebook. U.S. Army Corps of Engineers and U.S. Environmental Protection Agency. Washington, D.C. Available at: https://usace.contentdm.oclc.org/utils/getfile/collection/p16021coll11/id/2310. Accessed January 2024.

_____. 2008a. Regional Supplement to the Corps of Engineers Wetland Delineation Manual: Arid West Region (Version 2.0). United States Army Corps of Engineers Research and Development Center. Vicksburg, MS. September.

_____. 2008b. A Field Guide to the Identification of the Ordinary High Water Mark (OHWM) in the Arid West Region of the Western United States. Technical Report ERDC/CRREL TR-08-12. U.S. Army Engineer Research and Development Center, Cold Regions Research and Engineering Laboratory. Hanover, New Hampshire.

_____. 2010. Updated Datasheet for the Identification of the Ordinary High Water Mark (OHWM) in the Arid West Region of the Western United States. Technical Report ERDC/CRREL TN-10-1. U.S. Army Engineer Research and Development Center, Cold Regions Research and Engineering Laboratory. Hanover, New Hampshire.

United States Department of Agriculture, Natural Resources Conservation Service (USDA, NRCS). 2024a. Web Soils Survey: Custom Area of Interest in the Imperial Beach and National City Quadrangles. Available at: https://websoilsurvey.sc.egov.usda.gov/App/HomePage.htm. Accessed January 2024.

_____. 2024b. State Soils Data Access (SDA) Hydric Soils List: California. Available at: https://www.nrcs.usda.gov/Internet/FSE_DOCUMENTS/nrcseprd1316619.html. Accessed January 2024.

United States Environmental Protection Agency (USEPA). 2023. Legal Definition of "Traditional Navigable Waters." Available at: https://www.epa.gov/sites/default/files/2017-05/documents/app_d_traditional_navigable_waters.pdf. Accessed January 2024.

United States Fish and Wildlife Service (USFWS). 2023. National Wetlands Inventory (NWI). Available at: https://www.fws.gov/wetlands/data/mapper.html. Accessed January 2024.

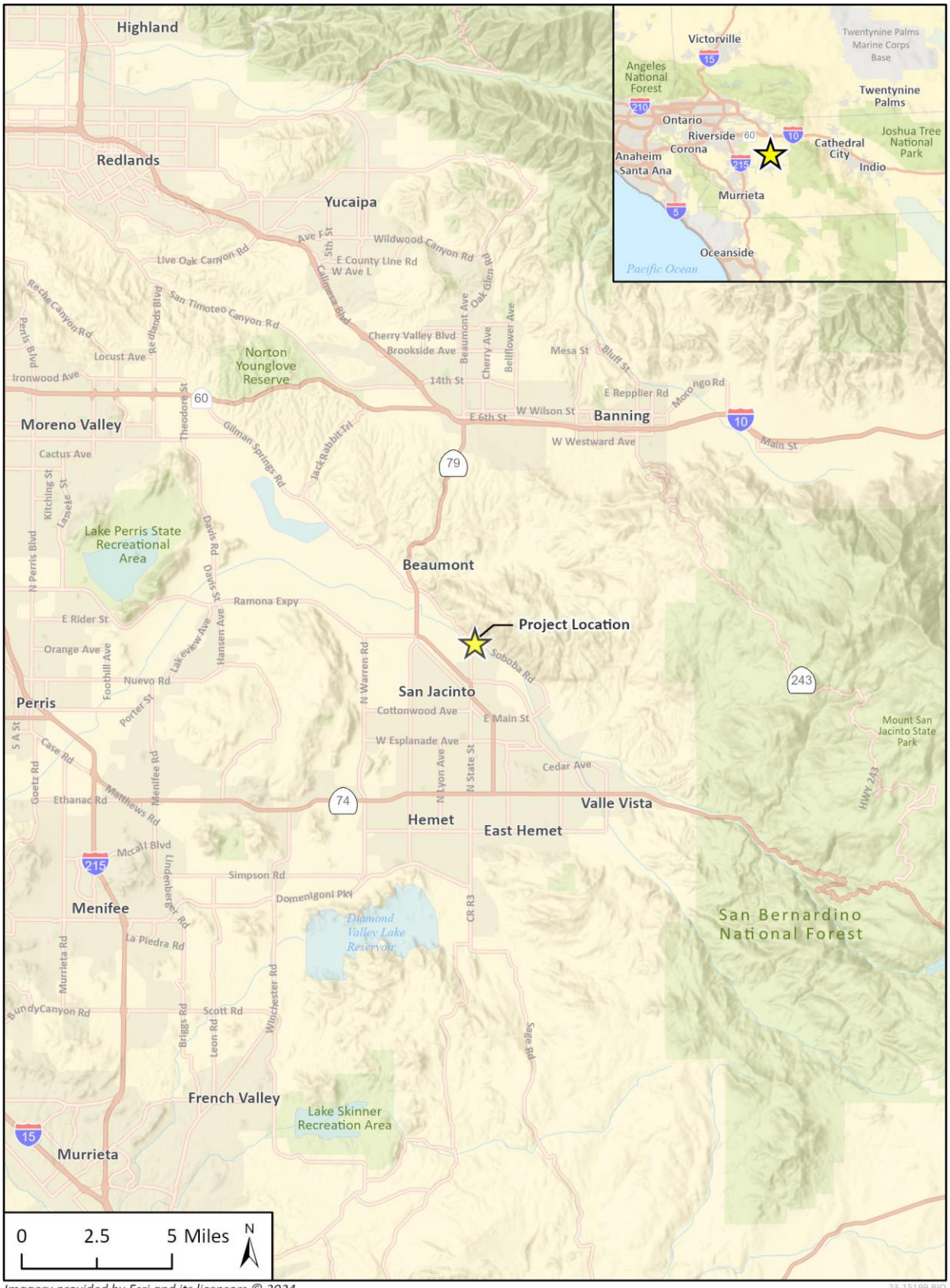
United States Geological Survey (USGS). 2023a. 7.5-minute topographic quadrangles. Available at: https://apps.nationalmap.gov/viewer/. Accessed January 2024.

_____. 2023b. National Hydrography Dataset. Available at: https://apps.nationalmap.gov/viewer/. Accessed January 2024.

Attachment 1

Figures

Figure 1 Regional Location

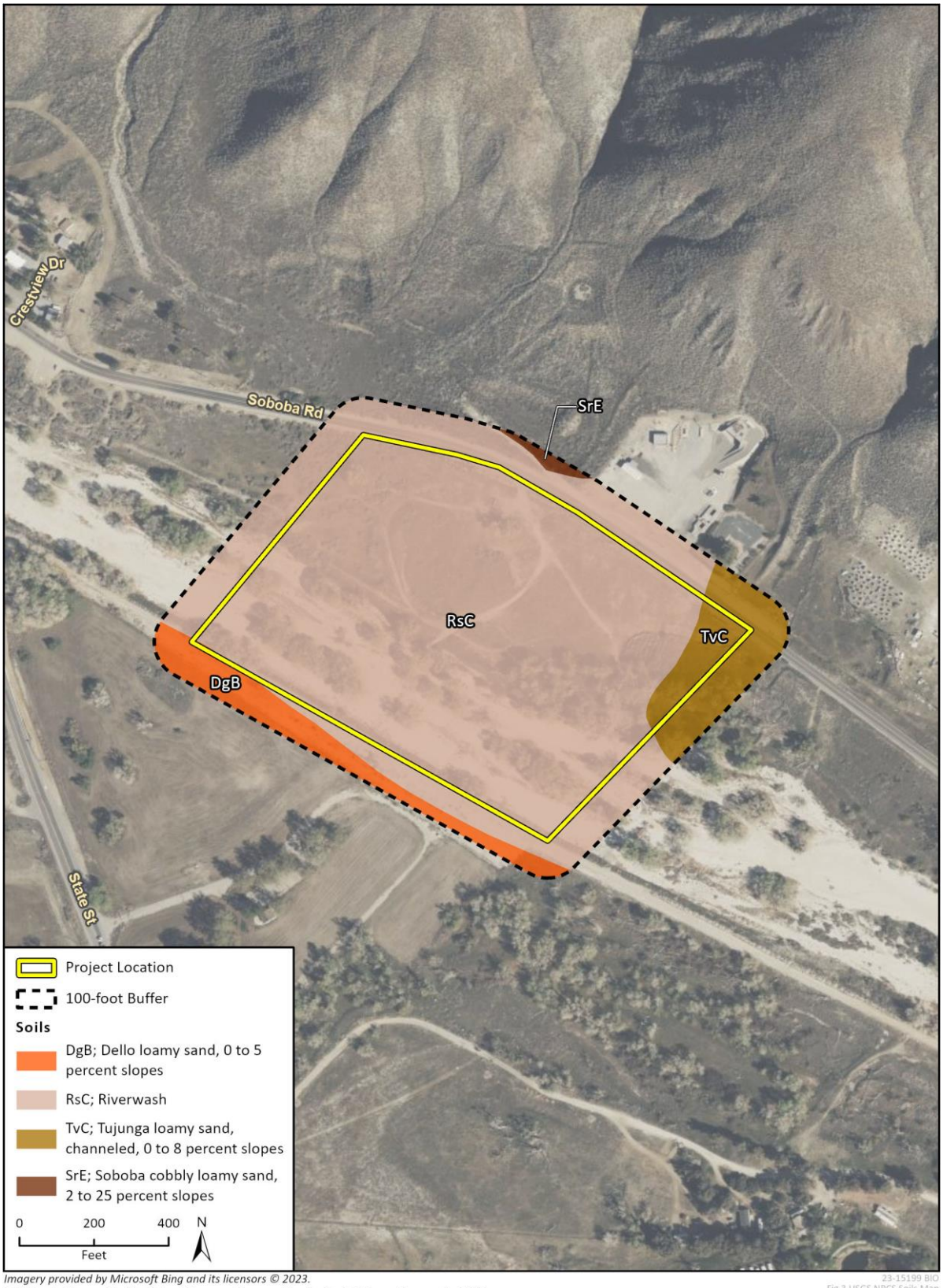


Imagery provided by Esri and its licensors © 2024.

23-15199 BIO
Fig 1 Regional Location

Figure 2 Study Area

Figure 3 Soils



Imagery provided by Microsoft Bing and its licensors © 2023.
Additional data provided by Natural Resource Conservation Service Soil Survey Geography, 2023.

23-15199 BIO
Fig 3 USGS NRCS Soils Map

Figure 4 Vegetation Communities

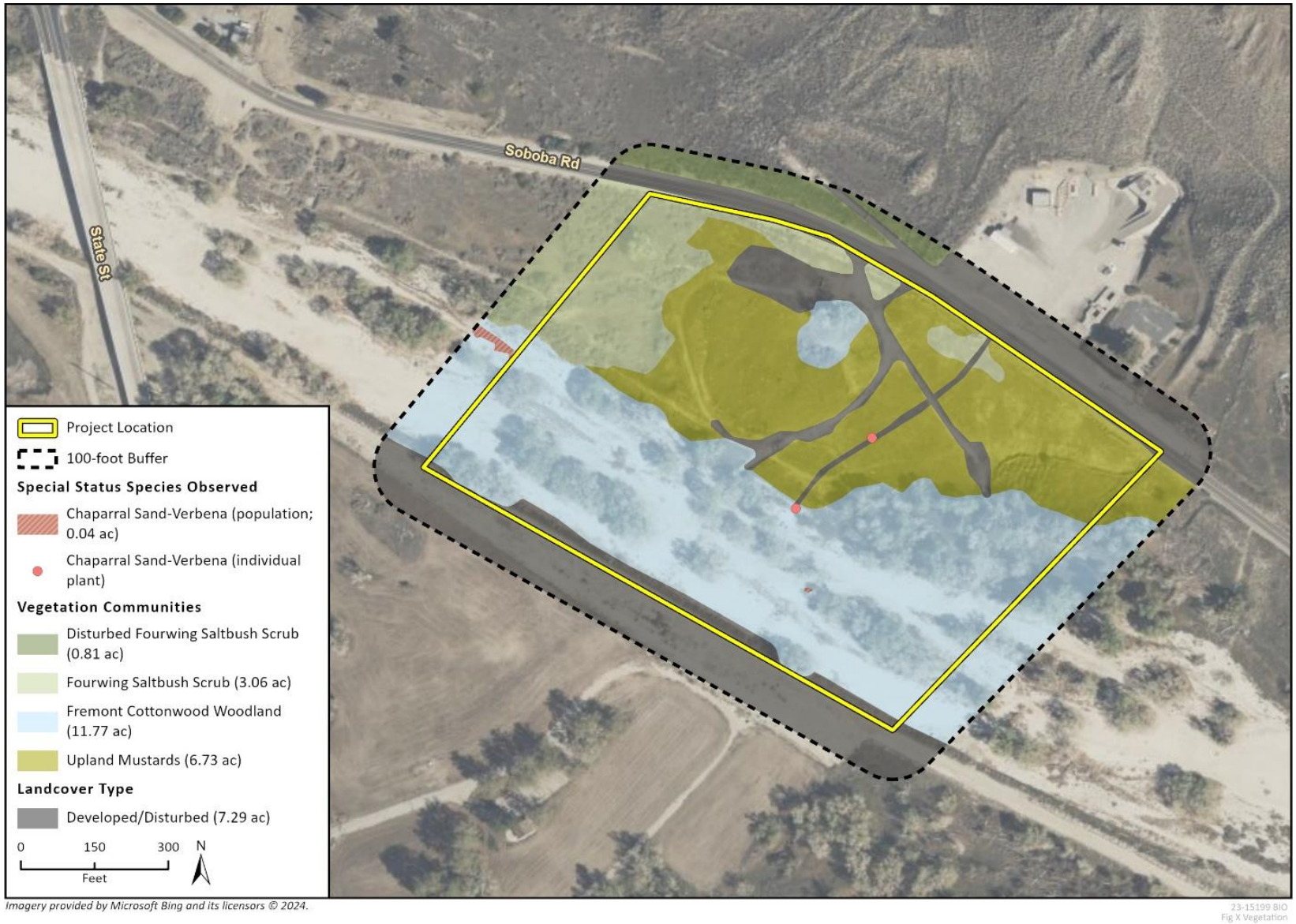
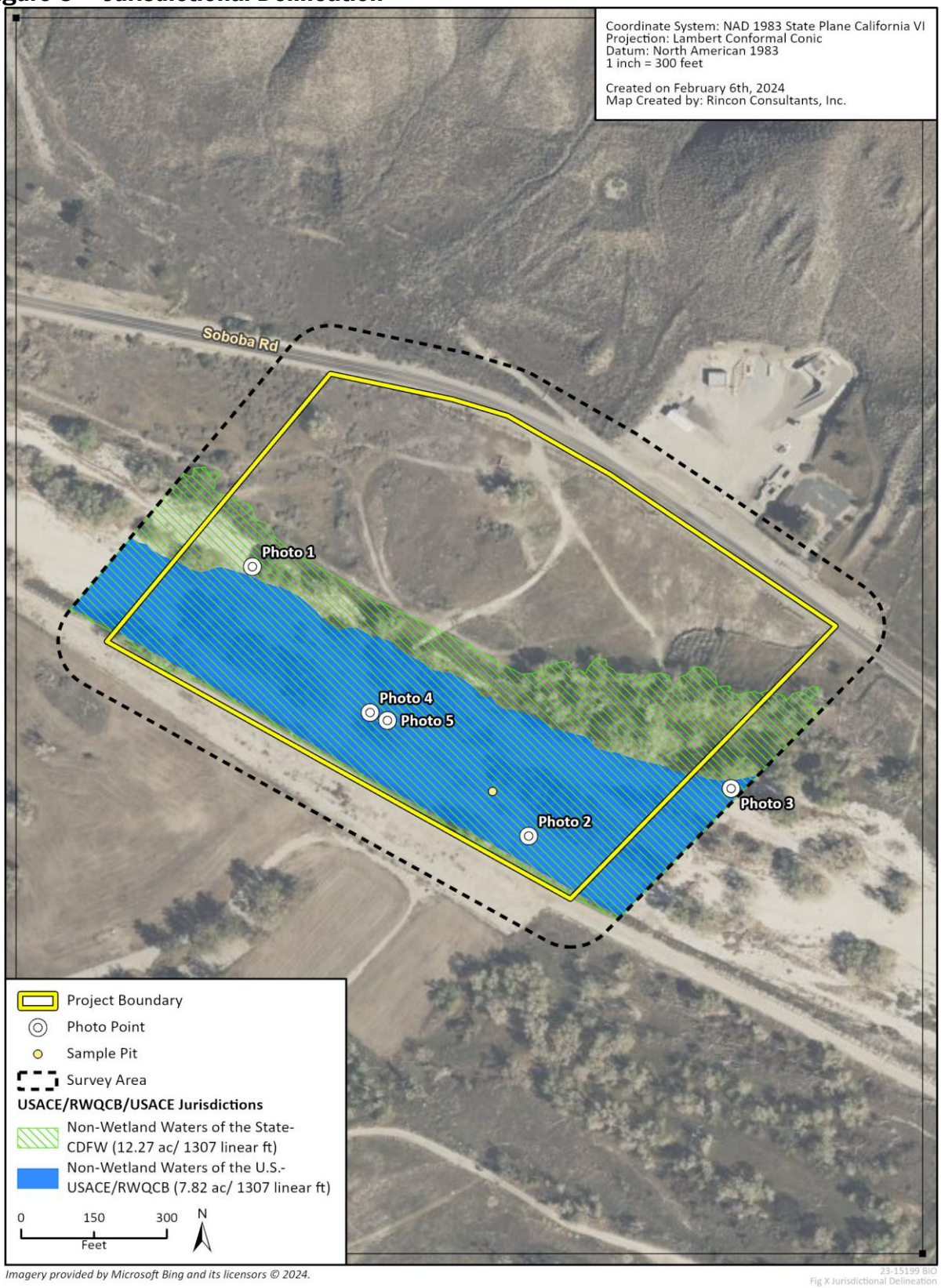


Figure 5 Jurisdictional Delineation



Attachment 2

Representative Site Photographs

Photograph 1. Northwest facing photograph showing the OHWM and CDFW jurisdiction. January 8, 2024.

Photograph 2. Northwest facing photograph showing the OHWM and riparian canopy. January 8, 2024.

Photograph 3. North facing photograph at the upstream portion of the Study Area. January 8, 2024.

Photograph 4. North facing photograph showing San Jacinto River wash and cottonwood woodland. January 8, 2024.

Photograph 5. Southeast facing showing San Jacinto River overview with riparian canopy. January 8, 2024.

Attachment 3

Data Forms

WETLAND DETERMINATION DATA FORM – Arid West Region

Project/Site: Casa Loma Siphon No. 1 Project City/County: San Jacinto Sampling Date: 1/8/2024

Applicant/Owner: The Metropolitan Water District State: CA Sampling Point: 1

Investigator(s): K. Gugerty, J. Reed Section, Township, Range: S: 00, T: 4 S, R: 1 W, San Bernardino Principal Meridian

Landform (hillslope, terrace, etc.): channel Local relief (concave, convex, none): concave Slope (%): 2-9

Subregion (LRR): Arid West Lat: 33.819675, Long: -116.969608 Datum: NAD 83

Soil Map Unit Name: Riverwash NWI classification: RIverine

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:

Not a wetland

VEGETATION – Use scientific names of plants.

Tree Stratum (Plot size: 20x20)	Absolute % Cover	Dominant Species?	Indicator Status
1. Populus fremontii	25	D	FAC
2.			
3.			
4.			
	25 = Total Cover		
Sapling/Shrub Stratum (Plot size: 10x10)			
1. Ambrosia acanthicarpa	5	D	NL
2.			
3.			
4.			
5.			
	5 = Total Cover		
Herb Stratum (Plot size: _____)			
1. None			
2.			
3.			
4.			
5.			
6.			
7.			
8.			
	0 = Total Cover		
Woody Vine Stratum (Plot size: _____)			
1. None			
2.			
	0 = Total Cover		

% Bare Ground in Herb Stratum 100 % Cover of Biotic Crust 0

Dominance Test worksheet:

Number of Dominant Species That Are OBL, FACW, or FAC: 1 (A)

Total Number of Dominant Species Across All Strata: 2 (B)

Percent of Dominant Species That Are OBL, FACW, or FAC: 50 (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:

SOIL

Sampling Point: 1

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

Depth (inches)	Matrix Color (moist)	%	Redox Features Color (moist)	%	Type[1]	Loc[2]	Texture	Remarks
0-23	10YR 6/2	100	----------	----	----	----	Sand	Uniform 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: _____

Depth (inches): _____

Hydric Soil Present? Yes ___ **No** ✓

Remarks:

no hydric soil indicators present.
Uniform sandy substrate

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:

No primary indicators present. Two secondary indicators present.

Arid West Ephemeral and Intermittent Streams OHWM Datasheet

Project: Casa Loma Siphon No.1
Project Number: 23-15199
Stream: San Jacinto River
Investigator(s): K. Gugerty, J. Reed
Date: 1/8/2024
Town: San Jacinto
Photo begin file#:
Time: 1040
State: CA
Photo end file#:

Y ■ / N ☐ Do normal circumstances exist on the site?

Y ☐ / N ■ Is the site significantly disturbed?

Location Details:
Within San Jacinto River

Projection: USGS **Datum:** NAD 83
Coordinates:

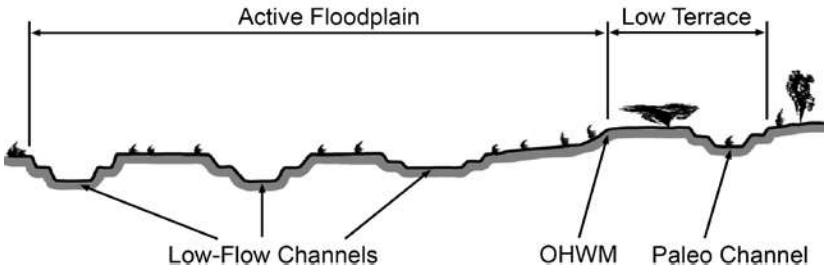
Potential anthropogenic influences on the channel system:
Access roads leading into the channel on NE bank. Man made berms on both side of river with rip rap enforced banks on the SE.
Pipeline buried within channel from the NE to the SE.

Brief site description:
Sandy substrate within fremont cottonwood woodland. Narrowleaf willow, salt cedar and ruderal vegetation (mustard and thistle). Banks are reinforced/ man made.

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

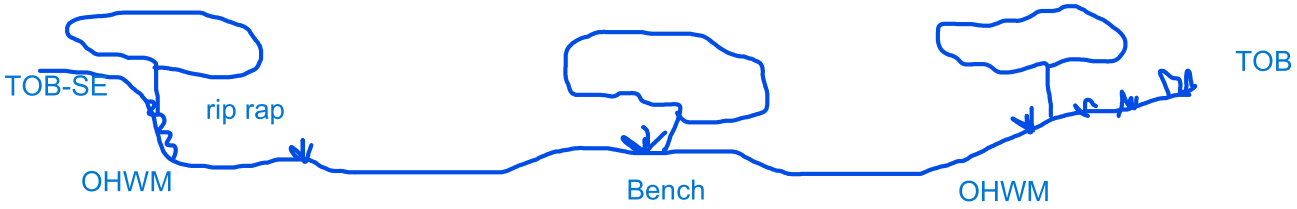


Procedure for identifying and characterizing the floodplain units to assist in identifying the OHWM:

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
   - ☐ Digitized on computer
   - ☐ GPS
   - ☐ Other:

Project ID: 23-15199 **Cross section ID:** SP-01 **Date:** 1/8/2024 **Time:** 1040

Cross section drawing:



OHWM

GPS point: 33.818606, -116.967588

Indicators:

- [x] Change in average sediment texture
- [ ] Change in vegetation species
- [x] Change in vegetation cover
- [x] Break in bank slope
- [ ] Other: _____
- [ ] Other: _____

Comments:
Defined by man-made berm with break in slope.

Floodplain unit: [x] Low-Flow Channel [ ] Active Floodplain [ ] Low Terrace

GPS point: 33.820176, -116.967813

Characteristics of the floodplain unit:

Average sediment texture: Sand

Total veg cover: 65 % Tree: 50 % Shrub: 10 % Herb: 5 %

Community successional stage:

- [ ] NA
- [ ] Early (herbaceous & seedlings)
- [ ] Mid (herbaceous, shrubs, saplings)
- [x] Late (herbaceous, shrubs, mature trees)

Indicators:

- [ ] Mudcracks
- [ ] Ripples
- [x] Drift and/or debris
- [x] Presence of bed and bank
- [x] Benches
- [ ] Soil development
- [ ] Surface relief
- [ ] Other: _____
- [ ] Other: _____
- [ ] Other: _____

Comments:

Attachment 4

Regulatory Framework

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)

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. All waters which are 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;
2. All interstate waters including interstate wetlands;
3. All other waters such as intrastate lakes, rivers, streams (including intermittent streams), mudflats, sandflats, wetlands, sloughs, prairie potholes, wet meadows, playa lakes, or natural ponds, the use, degradation or destruction of which could affect interstate or foreign commerce including any such waters:
    i. Which are or could be used by interstate or foreign travelers for recreational or other purposes; or
    ii. From which fish or shellfish are or could be taken and sold in interstate or foreign commerce; or
    iii. Which are used or could be used for industrial purpose by industries in interstate commerce;

4. All impoundments of waters otherwise defined as waters of the United States;
5. Tributaries of waters identified in paragraphs (a)(1)-(4) of this section;
6. The territorial sea;
7. Wetlands adjacent to waters (other than waters that are themselves wetlands) identified in items 1-6 above.

Waters of the United States do not include prior converted cropland. Notwithstanding the determination of an area's status as prior converted cropland by any other federal agency, for the purposes of the CWA, the final authority regarding CWA jurisdiction remains with the USEPA.

Waste treatment systems, including treatment ponds or lagoons designed to meet the requirements of CWA are not waters of the United States.

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.

Limitations on Jurisdiction based on Sackett v. USEPA Supreme Court

On May 25, 2023, the Supreme Court issued its decision on the petition from the Sacketts, a family in Idaho that was subject to a compliance order from the USEPA for backfilling their lot near Priest Lake, which the USEPA claimed contained federally regulated wetlands. The wetlands in question were adjacent to a ditch that fed a creek that ultimately drained into Priest Lake, a navigable water body. The USEPA asserted that the Sacketts had violated the law by filling the wetlands on their property without a permit. The Court's decision addressed controversy over whether, and under what conditions, the CWA reaches navigable waters' tributaries or adjacent wetlands. The Supreme Court's decision in Sackett provides definitive guidance to the agencies in determining the limits of their Clean Water Act authority. Major tenets of the decision have been incorporated into the agencies' current regulations through the September 2023 Conforming Rule.

The Court decided:

- "Adjacent wetlands" are WOTUS only if there is a continuous surface connection between the wetland and a navigable or relatively permanent water body, such that it is difficult to determine the boundary between the wetland and the water body. The opinion notes that "temporary interruptions to surface connection may sometimes occur because of phenomena like low tides or dry spells." The agencies addressed this element by defining the term "adjacent" to mean "having a continuous surface connection" in the Conforming Rule.
- The Significant Nexus Standard, introduced by the Court in prior decisions, is not mentioned in the Clean Water Act and should not be used. The Court determined that the standard applies ecological factors whose use in determining jurisdiction is not supported by the statute. The Conforming Rule removed significant nexus considerations from the definition.
- Although jurisdiction over tributaries was not addressed by the Court, the decision stated that "…the [Clean Water Act's] use of "waters" encompasses only those relatively permanent, standing or continuously flowing bodies of water forming geographical features that are

described in ordinary parlance as streams, oceans, rivers, and lakes." The Conforming Rule makes clear that only relatively permanent tributaries qualify as "waters of the United States."

Rivers and Harbors Act Section 10

Section 10 of the Rivers and Harbors Act of 1899 requires authorization from the USACE for the construction of any structure in or over any navigable water of the United States. Structures or work outside the limits defined for navigable waters of the United States require a Section 10 permit if the structure or work affects the course, location, or condition of the water body. The law applies to any dredging or disposal of dredged materials, excavation, filling, re-channelization, or any other modification of a navigable water of the United States, and applies to all structures and work. It further includes, without limitation, any wharf, dolphin, weir, boom breakwater, jetty, groin, bank protection (e.g., riprap, revetment, bulkhead), mooring structures such as pilings, aerial or subaqueous power transmission lines, intake or outfall pipes, permanently moored floating vessel, tunnel, artificial canal, boat ramp, aids to navigation, and any other permanent, or semi-permanent obstacle or obstruction. It is important to note that Section 10 applies only to navigable waters, and thus does not apply to work in non-navigable wetlands or tributaries. In some cases, Section 10 authorization is issued by the USACE concurrently with CWA Section 404 authorization, such as when certain Nationwide Permits are used.

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 shall be protected
- All activities and factors affecting the quality of water shall 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 shall 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, CDFG 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. Importance of each factor may be weighted based on site-specific considerations and the applicability of the indicators to the streambed at hand.

Appendix E

Bat Habitat Assessment and Focused Survey Results

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

August 15, 2024
Project No: 24-15778

Tania Asef, Associate Environmental Specialist
The Metropolitan Water District of Southern California
700 North Alameda Street
Los Angeles, California 90012
Via email: TAsef@mwdh2o.com

Subject: Bat Habitat Assessment and Focused Survey Results for Casa Loma Siphon No. 1 and San Jacinto Pipeline Project, Riverside County, California

Dear Ms. Asef,

This report documents the findings of a bat habitat assessment, focused emergence survey, and focused acoustic survey conducted by Rincon Consultants, Inc. (Rincon) for the Metropolitan Water District of Southern California (Metropolitan) Casa Loma Siphon No. 1 and San Jacinto Pipeline Project (Project). This report analyzes the potential for roosting and presence/absence of bats at the Project site.

Project Location and Description

The Project site encompasses approximately 20 acres within and adjacent to the San Jacinto River near the city of San Jacinto between Soboba Road and State Street, in unincorporated Riverside County, California. The Survey Area includes a 1,100-foot long and 150-foot-wide section of the San Jacinto River and the adjacent upland areas to Soboba Road with a 300-foot survey buffer around the site (Figure 1). The river was dry at the time of the survey. The upland areas of the Survey Area are characterized by Fremont cottonwood woodland, upland mustards, and fourwing saltbush scrub. Access to the site is provided via a dirt road located along Soboba Road.

During storm activity in early 2023, accelerated flows within the San Jacinto River exposed an approximate 200-foot-long segment of one of Metropolitan's Casa Loma Siphon No. 1 and San Jacinto Pipelines. In response to the emergency, Metropolitan installed protective measures to achieve temporary protection of the pipelines until a permanent solution could be developed. Metropolitan is now proposing a permanent engineering solution within the approximate 20-acre Project site to properly cover the three existing pipelines (Colorado River Aqueduct [CRA] Siphon, San Jacinto Pipeline and Casa Loma Canal Siphon).

Methodology

Regulatory authority over bat species is shared by federal, state, and/or local authorities depending on species status. For the purpose of this report, special-status bat species include:

- Species listed 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 during the Project
- Species listed as candidate, threatened, or endangered under the California Endangered Species Act (CESA)
- California Department of Fish and Wildlife (CDFW) Species of Special Concern (SSC)

The CDFW California Natural Diversity Database (CNDDB) was reviewed for updated information on special status bats tracked near the Survey Area (within the *San Jacinto, California,* United States Geological Survey [USGS] 7.5-minute topographic quadrangle and the surrounding eight quadrangles (*Beaumont*, *Blackburn Canyon*, *Cabazon*, *El Casco*, *Hemet*, *Lake Fulmor*, *Lakeview*, *Winchester*) (CDFW 2024a). In addition, the literature review included information from Bat Conservation International (2019) and the Western Bat Working Group (2017), and the CDFW Special Animals List (CDFW 2024b).

Following the literature review, the Survey Area was assessed for the potential presence of roosting special-status bats and bat maternity colonies. One bat habitat assessment and one focused bat emergence survey were conducted by Rincon biologists Nick Julier and Alex Shepherd. Both surveys were conducted on June 26, 2024, from 1730 to 2300 (Table 1). The daytime habitat assessment survey consisted of visual inspections of the sides and undersides of structures, existing foliage and trees, and ground surfaces within the project boundaries, as well as a 300-foot survey buffer around the site (Figure 2). The entire Survey Area was accessible on foot and was visually inspected to the extent feasible. Entrances to inaccessible cavities within the hollow portions of the bridge and trees were inspected for signs of bats (e.g., urine staining, scat, or guano accumulations) with the aid of flashlights.

The bat emergence survey was conducted immediately following the habitat assessment, after ensuring acceptable weather conditions, and beginning approximately 45 minutes prior to sunset. During the observation period, the biologists scanned suitable habitat areas for emerging bats. Insect activity levels (high, medium, low) and weather conditions were recorded for each individual survey period as prey availability and seasonal weather conditions are key indicators of potential bat activity (Table 1). Levels of medium and high insect activity, along with warmer temperatures, would increase the chances of bats emerging from their roosts. In addition to recording all visual observations, a Petterson D240x ultrasound detector auto recording device, a Petterson M500 microphone and Microsoft Surface Pro equipped with Sonobat Live, and a Wildlife Acoustics EchoMeter Pro were used to detect inaudible ultrasonic calls of active bats within the area. To increase the airspace around the detectors, the microphones were placed on extension poles approximately 15 vertical feet above the ground and pointed toward potential roost locations. Acoustic recordings were subsequently downloaded to a computer and analyzed with both Sonobat 4.4.5 and Wildlife Acoustics Kaleidoscope. LED flashlights and 10x42 binoculars were used during the inspections. Observations of bats and/or bat signs were recorded.

Table 1 Survey Dates and Site Conditions

Survey	Date	Time (24 hr)	Surveyor(s)	Air Temp (°F)	Wind Speed (mph)	Relative Humidity (%)	Insect Activity
Habitat Assessment	June 26, 2024	1730 – 1920	Nick Julier, Alex Shepherd	79 - 87	4 - 6	58 - 66	High
Emergence Survey	June 26, 2024	1920 – 2300 Sunset @ 2010	Nick Julier, Alex Shepherd	74 - 80	3 - 5	59-67	High

Existing Site Conditions

The Survey Area generally contains flat, undeveloped, land at approximately 1,500 feet above mean sea level. It is located within the San Jacinto River floodplain, with the San Jacinto River flowing from southeast to northwest through the southwestern half of the site. The San Jacinto River and its upland banks contain a Fremont cottonwood woodland, and the outer floodplain contains upland mustards, fourwing saltbush scrub, disturbed fourwing saltbush scrub, and developed/disturbed land cover. Adjacent land use consists of the San Jacinto Mountains to the north and agricultural land and residential developments to the south, east, and west.

The Fremont cottonwood woodland forms dense canopies in several sections within and around the sand wash. These cottonwood stands, particularly in the southern and central parts of the site, provide roosting opportunities for bats. Both living and dead cottonwood trees in these areas have numerous openings and crevices in their bark and branches, making them potentially suitable for sensitive bat species to utilize as roosting habitat.

In addition to the cottonwoods, the site includes various other potential bat roosting features such as cracks and seeps in bark and rock, access holes, and dead trees. These features are scattered throughout the dry riverbed and surrounding terrain. Although no direct signs or observations of bat maternity roosting were recorded, the physical characteristics of these habitats indicate their potential to support bat populations as day roosts and foraging habitat. Special-status bat species known from the region and their potential to occur on site are summarized below (Table 2).

Table 2 Special-Status Bat Species Potential to Occur

Scientific Name **Common Name**	**Status**	**Habitat Requirements**	**Potential to Occur in Survey Area**	**Habitat Suitability**
Antrozous pallidus pallid bat	None/None G4/S3 SSC	Found in a variety of habitats including deserts, grasslands, shrublands, woodlands, and forests. Most common in open, dry habitats with rocky areas for roosting. Roosts in crevices of rock outcrops, caves, mine tunnels, buildings, bridges, and hollows of live and dead trees which must protect bats from high temperatures. Very sensitive to disturbance of roosting sites.	Low	No rocky roosting areas occur within the BSA. Some woodland habitat occurs within the Survey Area. There is one recent occurrence in the CNDDB 9-quad search.
Corynorhinus townsendii Townsend's big-eared bat	None/None G4/S2 SSC	Occurs throughout California in a wide variety of habitats. Most common in mesic sites, typically coniferous or deciduous forests. Roosts in the open, hanging from walls and ceilings in caves, lava tubes, bridges, and buildings. This species is extremely sensitive to human disturbance.	Low	No suitable roosting habitat occurs within the Survey Area. There is 1 recent occurrence within the CNDDB 9-quad search.

Scientific Name **Common Name**	**Status**	**Habitat Requirements**	**Potential to Occur in Survey Area**	**Habitat Suitability**
Lasiurus xanthinus western yellow bat	None/None G4G5/S3 SSC	Occurs in arid regions of the southwestern United States. Typically found in riparian woodlands, oak or pinyon-juniper woodland, desert wash, palm oasis habitats, and urban or suburban areas. Roosts in trees, often between palm fronds.	Present (foraging) Low (roosting)	Some suitable riparian woodland habitat occurs within the Survey Area. Species observed foraging within Survey Area. There are two recent occurrences in the CNDDB 9-quad search.

Status (Federal/State)

SSC = CDFW Species of Special Concern

Other Statuses

G1 or S1 Critically Imperiled Globally or Subnationally (state)

Results

Bat-focused habitat assessment and emergence surveys were conducted at a specific location over a single day by Rincon Biologists Nick Julier and Alex Shepherd. During this period, weather conditions varied with wind speeds between 4 and 6 miles per hour, humidity levels ranging from 58% to 66%, and temperatures spanning 79 to 87 degrees Fahrenheit. Insect activity closely correlated with these environmental factors and remained consistently high throughout the survey.

Potential bat roosting sites were documented, including cavities, holes, or cracks in trees across the Survey Area, as well as bat ingress/egress points found in trees. Fremont cottonwood woodland, characterized by dense foliage and exfoliated bark, was also assessed but showed no signs of bat roosting.

Following initial habitat assessments, acoustic recordings and emergence surveys were conducted near multiple cottonwood woodland stands in the San Jacinto River. Recording began 30 minutes before sunset, during a period of heightened insect activity. Ultrasonic recording equipment was strategically placed, focusing on identified potential roosting habitats. Analysis of acoustic recordings confirmed calls from one special status bat species, western yellow bat (*Lasiurus xanthinus*). A detailed list of identified bat species recorded during surveys is provided in Table 3.

During emergence surveys, bats were observed foraging between 2000 and 2330. No bats were observed emerging from trees or vegetation within the Survey Area. Foraging bats were consistently seen entering the area from the east and west, concentrating their activity in the center of the dry wash as night fell and temperatures dropped. Up to four bats were observed at a time, traversing the wash while foraging. The most frequently observed species during the survey was the Canyon bat (*Parastrellus hesperus*), likely due to the nearby mountains providing suitable habitat.

Foraging behavior primarily focused on the dry wash, with fewer occurrences of activity in open spaces away from the Fremont cottonwood woodland. No bats were seen roosting within the Survey Area. Observed bats returned to vegetated areas north and south outside the Survey Area. The last bat sightings within the Survey Area occurred between 2200 and 2250, and the survey concluded at 2310, with a total of approximately 30 individual bats observed throughout the night.

Table 3 Bat Species Detected

Scientific Name	Common Name	Species Status	Detection Method, Activity Observed
Parastrellus hesperus	Canyon bat	None	Acoustic, foraging
Tadarida brasiliensis	Mexican free-tailed bat	None	Acoustic, foraging
Lasionycteris noctivagans	Silver-haired bat	None	Acoustic, foraging
Lasiurus xanthinus	Western yellow bat	SSC	Acoustic, foraging
Myotis yumanensis	Yuma myotis	None*	Acoustic, foraging

SSC = CDFW Species of Special Concern

*Yuma myotis is listed as Bureau of Land Management (BLM) Sensitive, however the Survey Area does not occur within BLM jurisdiction.

Conclusions

The Survey Area provides suitable foraging habitat for bats, characterized by abundant insect activity and preferred vegetation. The acoustic surveys detected the presence of the western yellow bat, a CDFW species of special concern, and this species likely forages within the San Jacinto River. The surrounding Fremont cottonwood stands, located predominantly within the San Jacinto River, may be used as day roosts by western yellow bat. However, no night or maternity roosts were observed.

Rincon appreciates the opportunity to provide focused bat surveys for this important Project. Please do not hesitate in reaching out to the undersigned with questions related to the contents herein.

Sincerely,
Rincon Consultants, Inc.

Nick Julier
Biologist/Project Manager

Steven J. Hongola
Principal Biologist

Attachments

Attachment 1 Figures

Attachment 2 Site Photographs

References

Bat Conservation International (BCI). 2024. Retrieved July 23, 2024, from http://www.batcon.org

California Department of Fish and Wildlife (CDFW). 2024a. California Natural Diversity Data Base (CNDDB), Rare find V. 5. Accessed June 2024.

_____. 2024b. Special Animals List. Biogeographic Data Branch, California Natural Diversity Database. March 2023a. Accessed at: http://www.dfg.ca.gov/biogeodata/cnddb/pdfs/spanimals.pdf. Accessed June 2024.

_____. 2024c. California Sensitive Natural Communities. Accessed at: https://nrm.dfg.ca.gov/FileHandler.ashx?DocumentID=153398&inline. Accessed June 2024. CDFW California Natural Diversity Data Base (CNDDB), Rare find V. 5. Accessed June 2024.

Western Bat Working Group. 2017. Retrieved July 23, 2024. from http://www.wbwg.org

Attachment 1

Figures

Figure 1 Regional Location and Project Site

Imagery provided by Microsoft Bing and its licensors © 2024.

24-15778 BIO
Fig 1 Regional Location

Figure 2 Bat Survey Area and Observations

Imagery provided by Microsoft Bing and its licensors © 2024.

24-15778 BIO
Fig 2 Biological Resources

Attachment 2

Site Photographs

Photograph 1. View of a dead Fremont cottonwood tree containing holes and cavities with access ports, facing northeast.

Photograph 2. Overview of San Jacinto River sand wash during bat survey with cottonwood stands, facing east.

Photograph 3. View of dead Fremont cottonwood tree with cavities and holes for potential roosting, facing northeast.

Photograph 4. Fremont cottonwood stands outside of the Project site and within Survey Area, facing south.

Photograph 5. Large Fremont cottonwood trees with cracks and exfoliated bark, facing east.

Photograph 6. Overview of San Jacinto River sand wash with cottonwood stands, with no signs or observations of bat roosting, facing southeast.

Appendix F

Burrowing Owl Habitat Assessment and Focused Survey Results

Rincon Consultants, Inc.
11801 Pierce Street, Suite 200
Riverside, California 92505
951-405-0979

September 8 , 2025
Project No: 24-17116

Alfredo Aguirre, Environmental Specialist
The Metropolitan Water District of Southern California
700 North Alameda Street
Los Angeles, California 90012
Via email: AAguirre@mwdh2o.com

Subject: Burrowing Owl Habitat Assessment and Focused Survey Results for the Casa Loma Siphon No. 1 and San Jacinto Pipeline Project, Riverside County, California

Dear Mr. Aguirre,

This report documents the findings of a western burrowing owl (*Athene cunicularia hypugaea*) habitat assessment and focused burrow surveys conducted by Rincon Consultants, Inc. (Rincon) for the Casa Loma Siphon No. 1 and San Jacinto Pipeline Project (Project). As of September 9, 2025, western burrowing owl is a candidate endangered species under CESA, affording it full interim protection equivalent to a listed species. The California Fish and Game Commission is currently reviewing its final listing recommendation. The purpose of the habitat assessment and focused surveys was to identify the location and extent of suitable habitat for western burrowing owl and determine the presence/absence of the species within the Project site.

Project Location and Description

The Project site encompasses an approximately 6.7-acre area located within and adjacent to the San Jacinto River, between Soboba Road and State Street, near the city of San Jacinto in unincorporated Riverside County, California (Figure 1 and Figure 2). The site is depicted on the United States Geological Survey *San Jacinto, California,* 7.5-minute topographic map within Township 4 South, Range 1 West, Section 15, San Bernardino Baseline and Meridian (33.820600°, -116.969914°). For purposes of this report, the survey area encompassed a larger, 20-acre Project area (inclusive of the current, smaller Project site) and a 500-foot survey buffer.

Immediately downstream of the Colorado River Aqueduct (CRA) San Jacinto Diversion Structure in the San Jacinto area, the CRA branches into three different pipelines (CRA Casa Loma Siphon No. 1, CRA Casa Loma Siphon No. 2, and the San Jacinto Pipeline). Approximately 1,000 feet west of the diversion structure, the three pipelines cross underneath the San Jacinto River. Within the San Jacinto River channel, there is currently inadequate cover material over the CRA Casa Loma Siphon No. 1 and San Jacinto Pipeline. In both 2019 and 2023, emergency work was undertaken by Metropolitan to reinstall soil cover and protect the CRA Casa Loma Siphon No. 1 and San Jacinto Pipeline.

Construction of the proposed Project would occur over an approximately eight-month period, anticipated to begin as early as fall 2026. The proposed Project includes the encasement of approximately 320 feet of the CRA Casa Loma Siphon No. 1 and approximately 295 feet of the San Jacinto Pipeline. The encasement would consist of concrete poured around the existing pipelines with a width of 16 feet and a depth of 13 feet for CRA Casa Loma Siphon No. 1 and a width of 12.5 feet and a depth of 10.7 feet for the San Jacinto Pipeline. Both encasements would be reinforced with steel rebar placed both horizontally and vertically to ensure structural integrity. The proposed concrete encasements would be placed on a compacted base and surrounded by riprap for erosion protection. Underneath the riprap, a non-woven geotextile fabric would be installed to prevent soil migration while maintaining drainage. Construction of the concrete encasement would require excavation above and

adjacent to both sides of each pipeline to allow for placement of the concrete forms and steel reinforcement. The top of the fill would be graded to match the existing surface elevation.

Existing conduit protection structures that were previously installed in 2023 for temporary protection (e.g., concrete k-rails, riprap) would be either removed or relocated within the Project site. K-rails would be removed and re-located to a portion of the Project site outside the streambed, and portions of riprap interfering with the proposed protection structure would be removed and salvaged, as feasible. The Project would not result in the addition of new above-ground components or appurtenances.

The maximum depth of ground disturbance would be approximately 15 feet. Ground disturbance would involve approximately 3,900 cubic yards of soil cut, approximately 600 cubic yards of soil fill, and the export of approximately 3,300 cubic yards of soil material from the Project site. Construction activities would involve the transport and delivery of approximately 1,600 cubic yards of ready-mix concrete, approximately 1,600 cubic yards of riprap, and reinforcing steel.

Figure 1 Regional Location Map

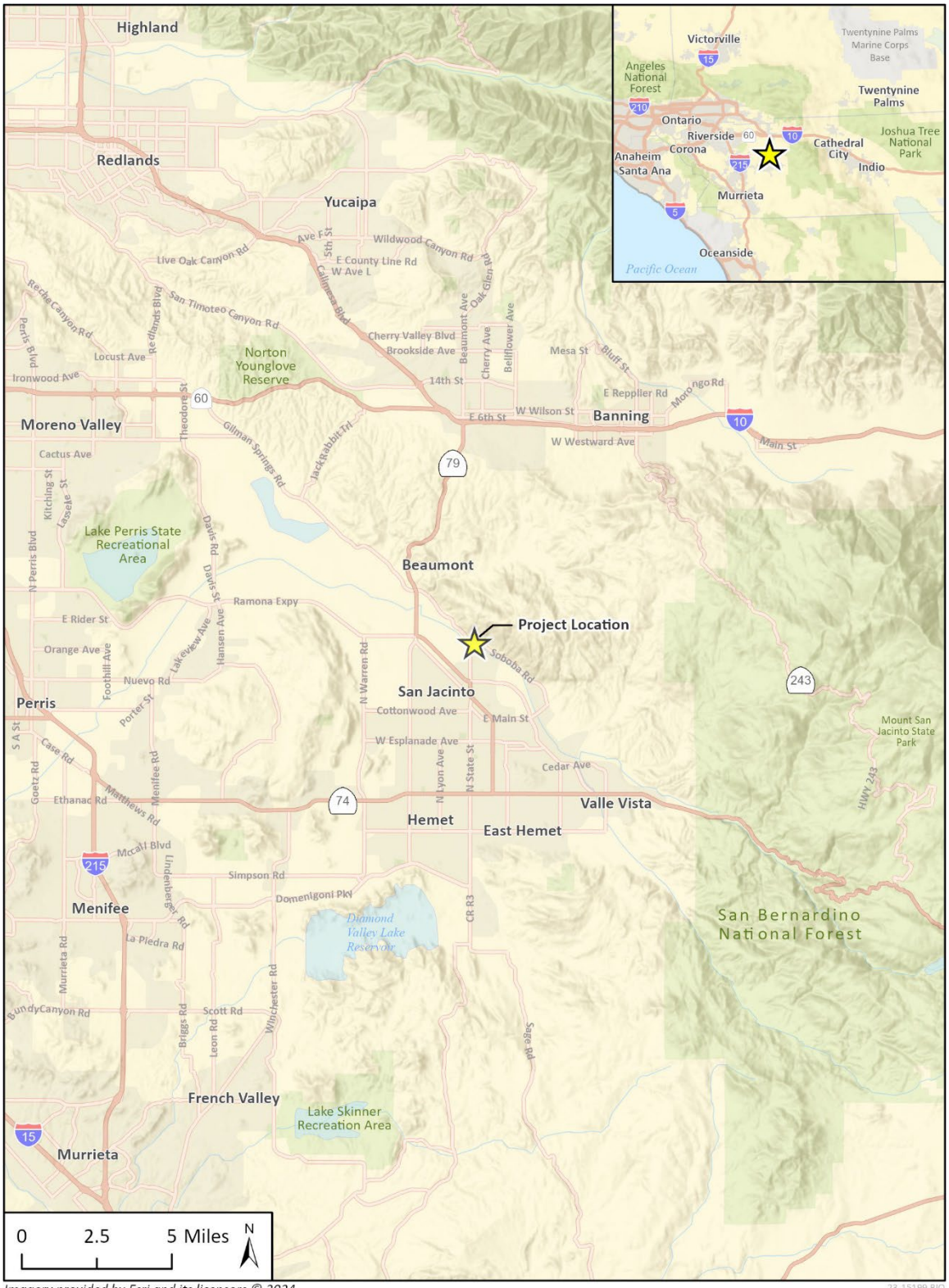


Figure 2 Project Location Map

Imagery provided by Microsoft Bing and its licensors © 2025.

23-15199 BIO
Fig X Project Location

Burrowing Owl Natural History

Primarily restricted to the western United States and Mexico, western burrowing habitat includes dry, open, short-grass areas often associated with fossorial (adapted for burrowing or digging) mammals, such as California ground squirrel (*Otospermophilus beecheyi*) and American badger (*Taxidea taxus*). The western burrowing owl is crepuscular (active primarily during dusk and dawn) and perches during daylight hours at the entrance to its burrow or on low posts. Nesting typically occurs from March through August. Burrowing owls form a pair-bond for more than one year and exhibit high site fidelity, reusing the same burrow year after year. The female remains inside the burrow during most of the egg laying and incubation periods and is fed by the male through the brooding period. Western burrowing owls are opportunistic feeders, consuming a diet that includes arthropods, small mammals, birds, and occasionally amphibians and reptiles (Shuford and Gardali 2008). Typical burrowing owl signs include, but are not limited to, feathers, white-wash, and pellets.

The western burrowing owl was once abundant and widely distributed in coastal southern California, but it has declined in counties such as Los Angeles, Orange, San Diego, Riverside, and San Bernardino. Urbanization has greatly reduced the amount of suitable habitat for this species. Other contributions to the decline of burrowing owls include habitat destruction, insecticide poisoning, rodenticide for squirrels and prairie dogs, and collisions with automobiles (Shuford and Gardali 2008).

Methodology

Focused burrowing owl surveys were conducted on April 15 (including the habitat assessment), May 14, June 10 and June 24, 2025, by Rincon biologists Robert Weber, Nick Julier, Molly Morrissey, and Kaitlyn Weaver, who have knowledge of burrowing owl life history and experience identifying burrowing owls and their signs. The surveys were conducted according to guidelines outlined in the *Staff Report on Burrowing Owl Mitigation* (CDFW 2012). Focused breeding season burrowing owl surveys were conducted by systematically searching for burrowing owl individuals, as well as signs of their presence, within potential foraging and nesting habitat throughout the Project site and a 500-foot survey buffer (i.e., the Survey Area). The 500-foot survey buffer is required by the *Staff Report on Burrowing Owl Mitigation* protocol (150 meters) to ensure that burrowing owls potentially occupying areas outside the Project footprint, but still subject to direct or indirect impacts, are detected and considered during surveys (CDFW 2012). The area above Soboba Road was surveyed using binoculars to cover adjoining habitat. The Survey Area was assessed on foot by the biologists walking transects spaced approximately 20 meters apart, appropriately adjusted to allow for 100 percent visual coverage of the ground surface. The Survey Area was systematically scanned using binoculars and spotting scopes, and all potential burrow features were examined for evidence of recent or historical owl use.

Surveys were scheduled and conducted to avoid precipitation, ensuring no portion of the survey was performed during rainfall. Transects were only walked when the Survey Area was dry and visibility was unobstructed, ensuring optimal conditions for detecting burrowing owls and signs of their presence. Survey dates and weather conditions are noted in Table 1.

Table 1 Survey Dates and Site Conditions

Date	Time (24-hour)	Surveyors	Air Temp (°F)	Wind Speed (mph)	Weather Notes	Type of Survey Conducted
April 15, 2025	0700 – 930	Nick Julier, Kaitlyn Weaver	53 – 58	0 – 2	100% cloud cover, foggy, 0.5 mile of visibility, 0.01 inch (in.) precipitation	Habitat Assessment and 1st Focused Breeding Season Survey
May 13, 2025	0730 – 1030	Rob Weber, Nick Julier	52 – 56	0 – 2	80% cloud cover, 4 miles of visibility, 0 in. precipitation	2nd Focused Breeding Season Survey
June 10, 2025	0745 – 1045	Rob Weber, Nick Julier	68 – 70	0	70% cloud cover, 4 miles of visibility, 0 in. precipitation	3rd Focused Breeding Season Survey
June 24, 2025	0730 – 1030	Nick Julier, Molly Morrissey	64 – 72	0 – 2	100% cloud cover, 3 miles of visibility, 0 in. precipitation	4th Focused Breeding Season Survey

Existing Site Conditions

The Survey Area is located within and adjacent to the San Jacinto River at approximately 1,500 feet above mean sea level and contains relatively flat terrain. The area receives an average of 13 inches of precipitation annually, primarily between December and March, with temperatures ranging from 45°F to 80°F (Western Regional Climate Center 2023). Portions of the site, including the existing storage area and southern access road, are disturbed by vehicle activity, resulting in soil compaction.

The Survey Area includes a segment of the San Jacinto River, which is classified as an intermittent Riverine System by the National Wetlands Inventory (United States Fish and Wildlife 2023). The riverbed, approximately 150 feet wide, was dry at the time of the survey, consistent with the region's dry season. These intermittent flow conditions shape the site's drainage patterns and influence the structure of surrounding vegetation and habitats.

Four soil types occur within the Project boundary (Natural Resources Conservation Service 2025): Dello loamy sand, 0 to 5 percent slopes (DgB); Riverwash (RsC); Tujunga loamy sand, channeled, 0 to 8 percent slopes (TvC); and Soboba cobbly loamy sand, 2 to 25 percent slopes (SrE). Riverwash is the dominant soil type mapped on the Project site. These sandy, well-drained soils are typical of alluvial environments. Riverwash soils mapped within the San Jacinto River are unconsolidated and lack the structural stability needed to support or maintain burrows, making the soils generally unsuitable for burrowing owls.

Vegetation Communities and Land Cover Types

Vegetation communities documented in the Survey Area during the field reconnaissance survey conducted on July 15, 2024, in support of the Biological Resource Assessment (Rincon 2024) include Fremont cottonwood woodland (*Populus fremontii* Woodland Alliance), upland mustards (*Brassica nigra* Herbaceous Semi-Natural Alliance), and fourwing saltbush scrub (*Atriplex canescens* Shrubland Alliance). Developed/disturbed as well as disturbed fourwing saltbush scrub were the other land cover types documented in the Survey Area. The developed/disturbed areas in the southern portion of the Project site provide low-quality conditions for burrowing owls, particularly due to the presence of an access road and high disturbance. The Fremont cottonwood woodland may serve as marginal foraging habitat but lacks the structure necessary for burrow establishment. Areas dominated by upland mustard and fourwing saltbush scrub exhibit dense vegetation and high ground cover, which may

support foraging activity but are generally unsuitable for burrowing. Although the survey covered the entire site, particular focus was placed on the edges of the Fremont cottonwood woodland and transitions between upland mustard and areas with sparse vegetation cover where conditions were more suitable for potential burrowing owl foraging activity.

Surrounding Land Use

Land uses surrounding the Project site include open space to the north, a commercial recreation park (e.g., paintball, paragliding, biking, hiking, camping) to the east, open space (City of San Jacinto's planned San Jacinto River Park) to the south, and open space and agricultural land to the west. The San Jacinto River bisects the southern end of the Project site from northwest to southeast. The nearest residences as well as Temple Beth Am, a synagogue, are located approximately 0.2 mile to the west.

Summary of Findings

No burrowing owls or diagnostic signs such as feathers, whitewash, pellets, or tracks were observed during the surveys. In addition to the absence of burrowing owls, no suitable burrows were identified within the Survey Area. While a few small mammal burrows were present, they lacked the appropriate size, depth, or activity level to be considered suitable for burrowing owl occupation. No artificial structures or anthropogenic features resembling suitable burrows were observed.

Photographs of the Survey Area observed during the four surveys are provided in Attachment 1. Overall avian activity was low during the surveys and some common species expected to occur within the region were observed (Table 2). Taxonomic nomenclature of avian species follows the American Ornithological Union's (2021) Checklist of North American Birds.

Table 2 Avian Species Observed

Scientific Name	Common Name
Accipiter cooperii	Cooper's hawk
Buteo jamaicensis	Red-tailed hawk
Columba macroura	Mourning dove
Corvus brachyrhynchos	American crow
Corvus corax	Common raven
Dryobates nuttallii	Nuttall's woodpecker
Haemorhous mexicanus	House finch
Melozone crissalis	California towhee
Psaltriparus minimus	Bushtit
Sayornis nigricans	Black phoebe
Thryomanes bewickii	Bewick's wren
Troglodytes aedon	Northern house wren

Predation

Potential predators of burrowing owls are present within the Project area. Observations included coyote (*Canis latrans*) scat observed during all surveys, domestic dogs (*Canis lupus familiaris*), and raptors. A leashed dog was observed on May 13, 2025, and a local officer reported the presence of unleashed dogs. Red-tailed hawks (*Buteo jamaicensis*) were recorded on multiple occasions, although

no nests were confirmed. A pair of Cooper's hawks (*Accipiter cooperii*) was observed in a southern cottonwood tree on June and July 2024 by Rincon biologist Jared Reed during the least Bell's vireo protocol surveys. Other raptors known in the region, such as great horned owl (*Bubo virginianus*) and American kestrel (*Falco sparverius*), may also occur. Reptile sign was minimal, but gopher snakes (*Pituophis catenifer*) have potential to occur. Together, these factors likely minimize the potential for burrowing owl occupancy within the site.

Conclusion

No burrowing owls or signs of their presence were observed during focused surveys on the Project site. The site lacks essential habitat features such as natural or artificial burrows, and the Riverwash soils within the San Jacinto River are not conducive to burrow formation. No evidence of fossorial mammal activity, such as ground squirrels, was observed. As a result, the Project site does not currently provide suitable conditions to support nesting or long-term occupancy by burrowing owls.

Although breeding owls were not observed, the Project site's proximity to open space and nearby agricultural lands may offer limited foraging opportunities for opportunistic or overwintering burrowing owls. However, while there is some burrowing owl habitat in nearby open spaces and agricultural fields, breeding typically requires contiguous suitable habitat (CDFW 2012). The areas adjacent to the Project site, including road and river corridors, limit the continuity of suitable habitat available to support breeding burrowing owls. Prey availability in the surrounding landscape could attract individuals in search of food during the non-breeding season. The dense herbaceous vegetation and the absence of protective, suitable burrows reduce the Project site's potential to support overwintering. However, given the presence of suitable plant communities and the mobility of the species, the potential for the Project site to support individual, overwintering owls in the future cannot be ruled out.

This survey was conducted during the burrowing owl breeding season and under favorable weather conditions, ensuring both comprehensiveness and high detection probability in accordance with the *Staff Report on Burrowing Owl Mitigation* (CDFW 2012).

Thank you for the opportunity to support Metropolitan with this important Project. If you have any questions, please contact Andrea Maben at amaben@rinconconsultants.com.

Sincerely,
Rincon Consultants, Inc.

Nick Julier
Biologist

Andrea Maben
Project Manager/Senior Biologist

Steven J. Hongola
Principal Biologist

Attachments

Attachment 1 Representative Site Photographs

References

American Ornithologists' Union. 2021. Checklist of North American Birds (online). American Ornithological Society. http://checklist.aou.org/taxa

California Department of Fish and Wildlife (CDFW). 2012. Staff Report on Burrowing Owl Mitigation. Available from https://www.wildlife.ca.gov. (Accessed June 2024).

Rincon Consultants, Inc. (Rincon). 2024. *Biological Resources Assessment: Casa Loma Siphon No. 1 and San Jacinto Pipeline Project*.

Natural Resources Conservation Service. 2025. Web Soil Survey. https://websoilsurvey.nrcs.usda.gov/app/WebSoilSurvey.aspx (accessed June 2025).

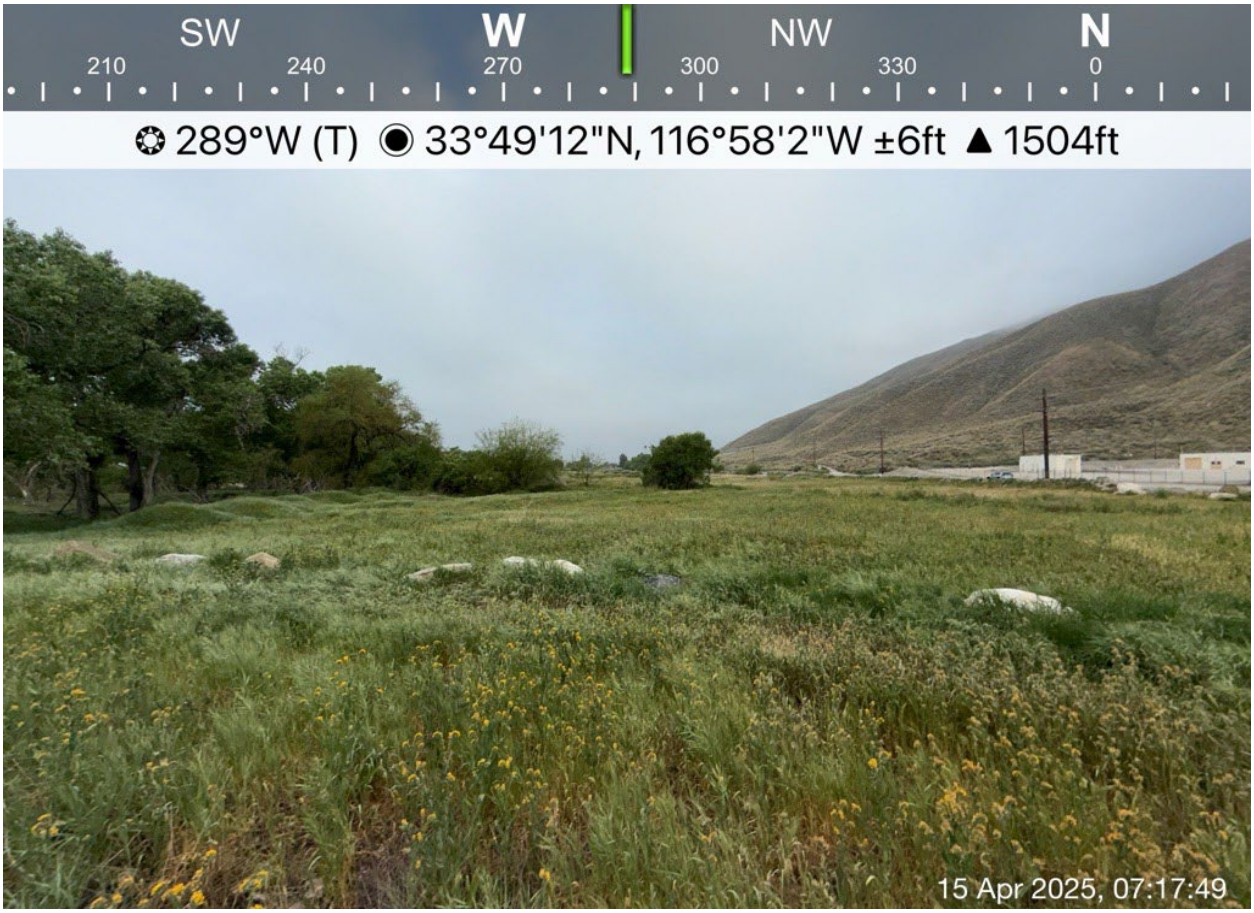
Shuford, W. D., and T. Gardali. 2008. California Bird Species of Special Concern: A ranked assessment of species, subspecies, and distinct populations of birds of immediate conservation concern in California. Studies of Western Birds 1. Western Field Ornithologists, Camarillo, California, and California Department of Fish and Game, Sacramento.

United States Fish and Wildlife Service. 2023. National Wetland Inventory. http://www.fws.gov/wetlands/Data/Mapper.html.

Western Regional Climate Center. 2023. *Western Regional Climate Center*. Desert Research Institute. from https://wrcc.dri.edu/

Attachment 1

Representative Site Photographs



Photograph 1. View of the northern part of the Survey Area facing northwest, looking at upland mustard habitat. April 15, 2025.

Photograph 2. View of the dirt mounds in the center of the Survey Area, facing northwest. May 13, 2025.

Photograph 3. View of the central portion of the Survey Area, facing east. May 13, 2025.

Photograph 4. View of the southern portion of the Survey Area, facing south. Looking at representative Fremont cottonwood woodland. May 13, 2025.

Photograph 5. View of the southern portion of the Survey Area, specifically the access road, facing southeast. June 10, 2025.

Photograph 6. View of the northern portion of the Survey Area, facing north, with representative fourwing saltbush scrub habitat. May 13, 2025.

Appendix G

Least Bell's Vireo Protocol Survey Report

Casa Loma Siphon No. 1 and San Jacinto Pipeline Project

Least Bell's Vireo Protocol Survey Report

prepared for

The Metropolitan Water District of Southern California
700 North Alameda
Los Angeles, California 90012

prepared by

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

September 2024

rincon CELEBRATING 30 YEARS
RINCON CONSULTANTS, INC. SINCE 1994

Table of Contents

1 Introduction 1
2 Methodology 4
3 Environmental Setting 5
4 Results and Discussion 8
5 Certification 11
6 References 12

Tables

Table 1 Least Bell's Vireo Survey Conditions 4

Figures

Figure 1 Regional Location Map 2
Figure 2 USGS Quadrangle Map with Project Site and Biological Study Area 3
Figure 3 Vegetation Communities 6
Figure 4 Least Bell's Vireo Observations 10

Appendices

Appendix A Avian Compendium
Appendix B Site Photographs

This page intentionally left blank.

1 Introduction

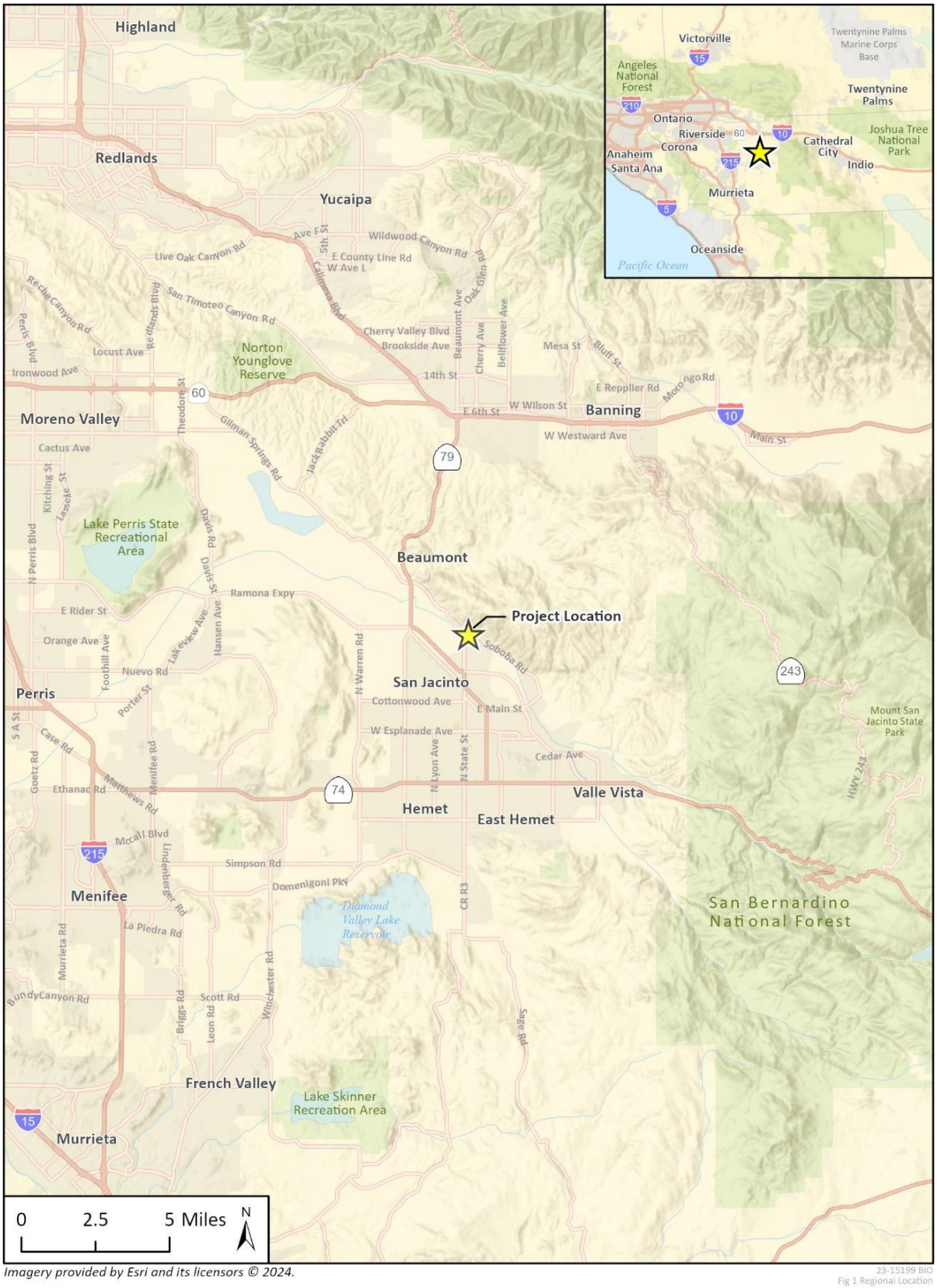
Rincon Consultants, Inc. (Rincon) herein presents the results of a protocol focused least Bell's vireo (*Vireo belli pusillus;* LBVI) survey, conducted on behalf of The Metropolitan Water District of Southern California (Metropolitan) for the Casa Loma Siphon No. 1 and San Jacinto Pipeline Project (project). Rincon completed the survey to determine the presence/absence of the federally and state listed endangered LBVI on or near the project site prior to project activities.

The project site encompasses an approximate 20-acre area located within and adjacent to the San Jacinto River, between Soboba Road and State Street, near the city of San Jacinto, unincorporated Riverside County, California (Figure 1 and Figure 2). The project site is depicted on the United States Geological Survey (USGS) *San Jacinto, California,* 7.5-minute topographic map within Township 4 South, Range 1 West, Section 15, San Bernardino Baseline and Meridian (33.820600°, -116.969914°).

During storm activity in early 2023, accelerated flows within the San Jacinto River exposed an approximate 200-foot-long segment of one of Metropolitan's Casa Loma Siphon No. 1 and San Jacinto Pipelines. In response to the emergency, Metropolitan installed protective measures to achieve temporary protection of the pipelines until a permanent solution could be developed. Metropolitan is now proposing a permanent engineering solution within the approximate 20-acre project site to properly cover the three existing pipelines (Colorado River Aqueduct [CRA] Siphon, San Jacinto Pipeline, and Casa Loma Canal Siphon).

Suitable habitat for LBVI within the project site consists of Fremont cottonwood woodland and forest (*Populus fremontii* Forest Alliance) and patches of tamarisk thickets (*Tamarix* spp. Shrubland Alliance). These communities occurs within the Biological Study Area (BSA, project site plus a 500-foot buffer). Rincon biologists conducted eight surveys from May to July 2024 to determine the current presence/absence of LBVI within the identified suitable riparian habitat in the BSA along the San Jacinto River.

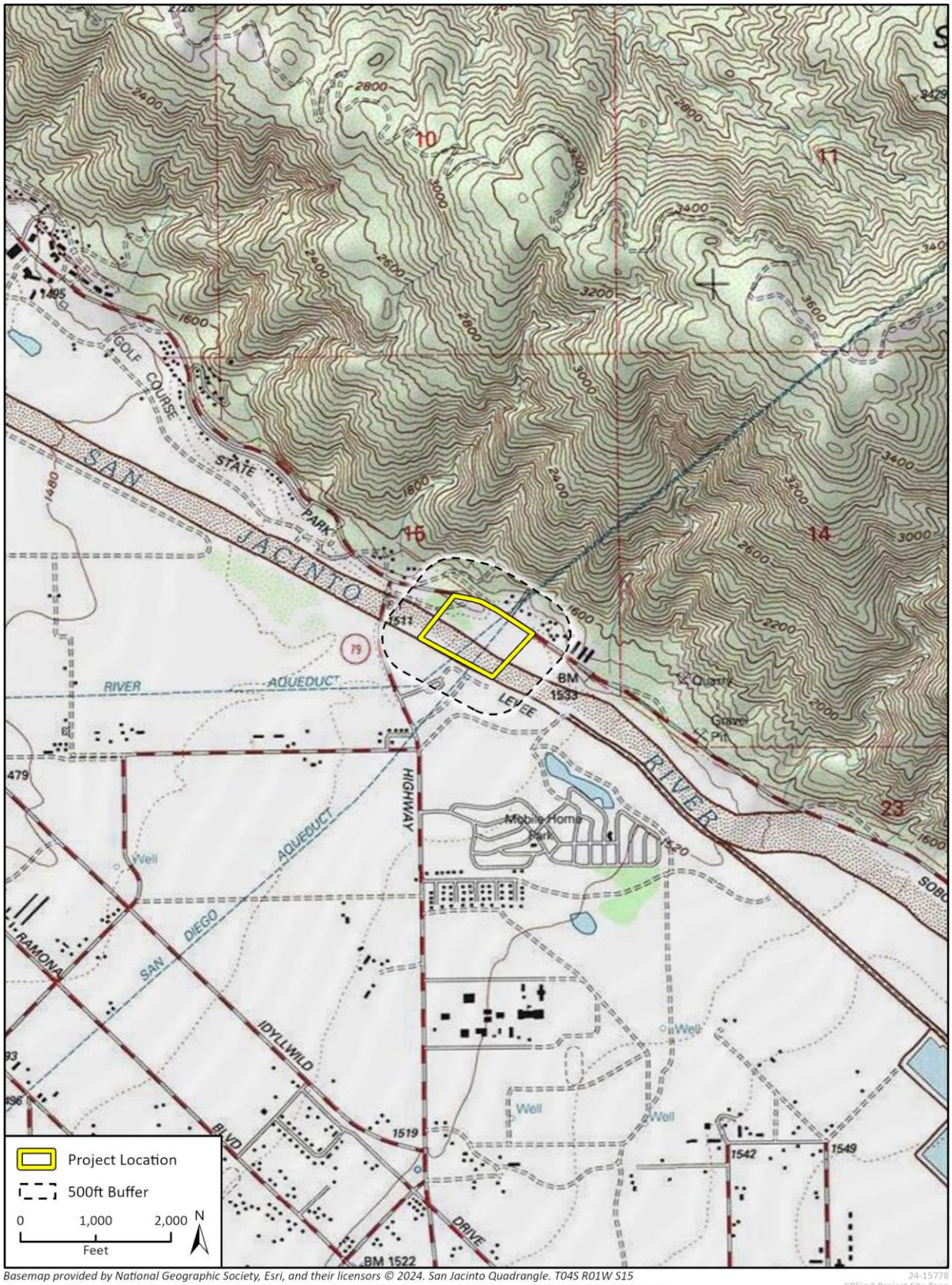
Figure 1 Regional Location Map



Imagery provided by Esri and its licensors © 2024.

23-15199 BIO
Fig 1 Regional Location

Figure 2 USGS Quadrangle Map with Project Site and Biological Study Area



Basemap provided by National Geographic Society, Esri, and their licensors © 2024. San Jacinto Quadrangle. T04S R01W S15
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.

24-15778
CRFig 2 Project Site Topo

2 Methodology

Protocol surveys for LBVI were conducted by Rincon biologists Jared Reed, Jacob Hargis, Morgan Henderson, and Molly Morrissey within the BSA. The surveys were conducted in accordance with the United States Fish and Wildlife Service (USFWS) *Least Bell's Vireo Survey Guidelines*, issued January 19, 2001. Eight surveys were conducted at least 10 days apart between April 10 and July 31 (Table 1). The surveys occurred between dawn and 11:00 am each day within all portions of the BSA containing potentially suitable riparian habitat. Surveys were not conducted during inclement weather conditions (e.g., excessive, or abnormal heat, cold, wind, rain, or fog).

The BSA includes suitable LBVI riparian habitat (i.e., riparian scrub and forest) of sufficient acreage and stature to support LBVI territories. Vegetation communities were previously classified and mapped by Rincon biologists (Rincon 2024). The surveys focused on suitable habitat within Metropolitan's property and adjacent Western Riverside County Regional Conservation Authority Conserved Lands. During each survey visit, the surveyors slowly walked areas of suitable habitat within the BSA, stopping at approximate 25-foot intervals to listen for LBVI songs and calls, and observed habitat with the aid of binoculars (10x42) for adults and fledglings. Nest searching was not conducted. Age, sex, breeding status, and behavioral characteristics were recorded, if LBVI were observed. Play back vocalizations were not used and observations were made from locations where birds would not be disturbed.

Table 1 Least Bell's Vireo Survey Conditions

Date	Survey Visit	Time		Temperature (°F)		Wind Speed (mph)		Cloud Cover (%)		Precipitation (in)
		Begin	End	Begin	End	Begin	End	Begin	End	
5/14/24	1	0830	1000	57	63	1-5	1-5	100	0	0
5/24/24	2	0755	1040	56	60	3-6	3-6	100	100	0
6/4/24	3	0815	1045	64	77	2-4	2-4	40	20	0
6/14/24	4	0800	1000	64	77	1-3	1-3	0	0	0
6/25/24	5	0800	1000	77	88	1-3	1-3	0	0	0
7/8/24	6	0800	1000	76	84	2-5	2-5	0	0	0
7/19/24	7	0800	1000	78	86	1-3	1-3	0	0	0
7/30/24	8	0800	0945	69	80	1-3	1-3	0	0	0

3 Environmental Setting

The BSA contains suitable habitat for nesting and foraging LBVI, including Fremont cottonwood woodland and tamarisk thickets (Figure 3). Although fourwing saltbush scrub would not typically be considered suitable habitat, foraging LBVI were found in this habitat during the later surveys. The topography of the BSA is flat with an incline that drops into the wash from the adjacent upland area. The wash characteristics are a result of intermittent flow from the San Jacinto River.

Adjacent land use consists of Soboba Road and undeveloped arid hills further to the north. Agricultural land and residential communities occur to the south, west, and east of the BSA.

Fremont Cottonwood Forest and Woodland

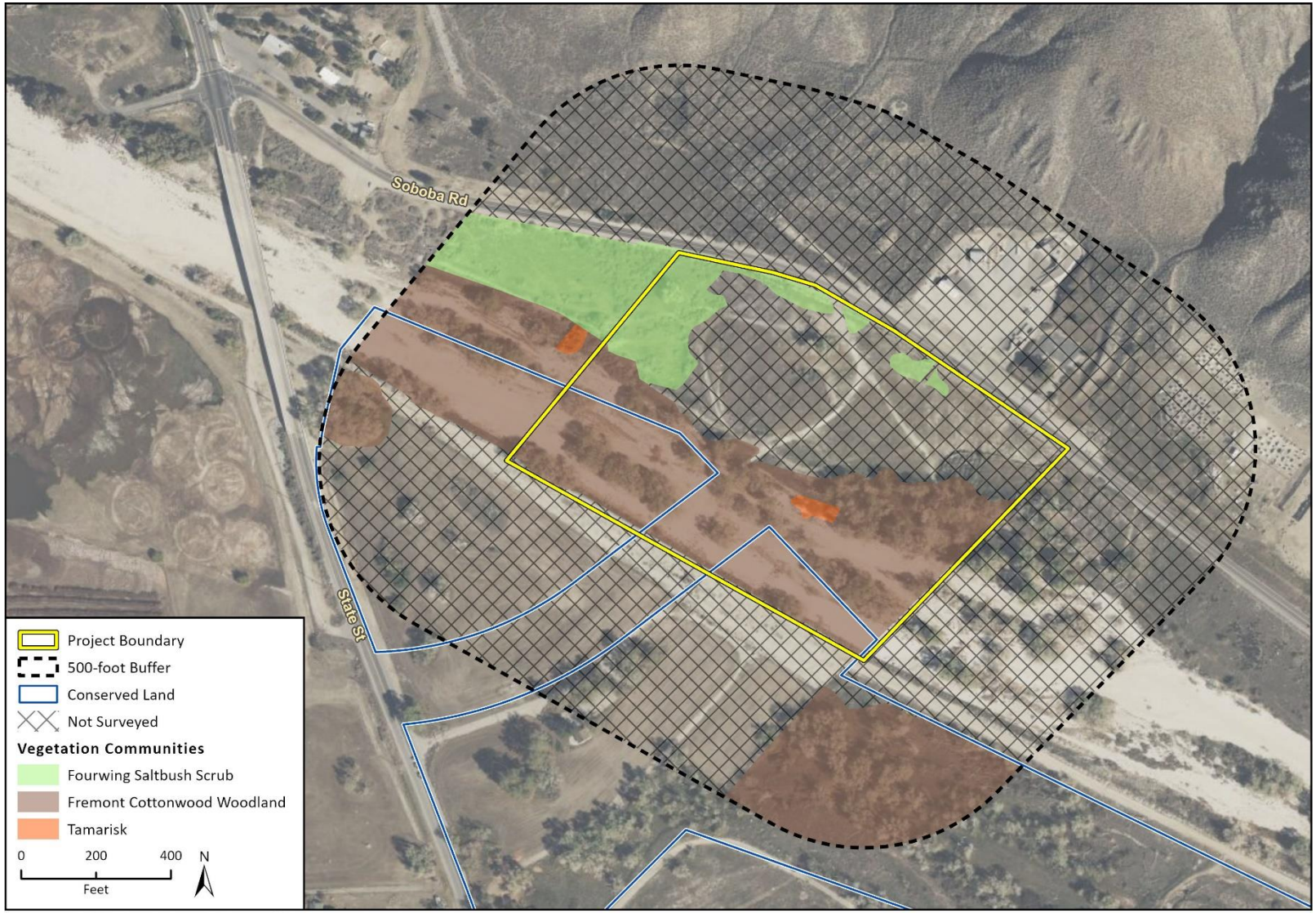
Fremont cottonwood woodland (*Populus fremontii* Woodland Alliance) is a vegetation community characterized by dominant Fremont cottonwood (*Populus fremontii* ssp*. fremontii*) in the tree canopy (approximately 10 to 80 percent absolute cover, and greater than 50 percent relative cover, in the tree layer) with willows (*Salix* spp.) and other riparian trees, such as western sycamore (*Platanus racemosa*). The tree canopy is typically continuous to open, the shrub layer intermittent to open, and the herbaceous layer variable (Sawyer et al. 2009). This alliance can be found on floodplains; along low-gradient rivers, perennial or seasonally intermittent streams, and springs; and in canyons, alluvial fans, and valleys with a dependable subsurface water supply that varies considerably during the year. This community is ranked G4S3 and is classified as sensitive (California Department of Fish and Wildlife [CDFW] 2023).

Fremont cottonwood woodland is found throughout the BSA, within the San Jacinto River and in the southeastern and southwestern corners of the BSA. Fremont cottonwood is dominant in the tree layer, with Goodding's black willow (*Salix gooddingii*) a common co-dominant species. The shrub layer is not dense and contains large areas of unvegetated river channel with scattered stands of mulefat (*Baccharis salicifolia*) and Hinds' willow (*Salix exigua* var. *hindsiana*).

Fourwing Saltbush Scrub

Fourwing saltbush scrub (*Atriplex canescens* Shrubland Alliance) is found within the western upland habitat of the BSA. Fourwing saltbush scrub is typically found on playas, old beaches and shores, lake deposits, dissected alluvial fans, rolling hills or channel beds at elevations between 246 and 4,921 feet (74 and 1,500 meters) above mean sea level (amsl). Soils are generally carbonate rich, alkaline, sandy, or sandy clay loams. Fourwing saltbush scrub is characterized by an open to intermittent shrub canopy and a variable herbaceous layer composed of seasonal herbs and non-native grasses. Fourwing saltbush has over two percent absolute cover and over 50 percent relative cover in the shrub layer (Sawyer et al. 2009). This community is ranked G5S4 and is not classified as sensitive (CDFW 2023). In the BSA, this vegetation community is co-dominated by fourwing saltbush (*Atriplex canescens*), red brome (*Bromus rubens*) and horsewheat (*Triticum aestivum*). In the BSA, this vegetation community is co-dominated by fourwing saltbush (*Atriplex canescens*), red brome (*Bromus rubens*) and horsewheat (*Triticum aestivum*). It is found in the western part of the BSA, and in a few areas in the northeast portion of the BSA.

Figure 3 Vegetation Communities



Tamarisk Thickets

Tamarisk thickets (*Tamarix* spp. Shrubland Alliance) is characterized by dominant saltcedar (*Tamarix ramosissima*) or other tamarisk (*Tamarix* spp.) species in the shrub or low tree layer. Emergent native shrubs or trees may be present at low cover, including Fremont cottonwood or willows. Tamarisk has at least three percent absolute cover or 60 percent relative cover in the shrub or low tree layer. This alliance can be found between 246 and 2,625 feet amsl (Sawyer et al. 2009). This vegetation community is ranked GNASNA due to the dominance of non-native species and is not considered sensitive (CDFW 2023). Tamarisk stands are found in two small, distinct locations within the San Jacinto River.

4 Results and Discussion

Overall avian activity and diversity was moderate to high during the surveys and common avian species expected to occur within riparian habitats were observed. A list of avian species observed/detected during the surveys is provided in Appendix A. Least Bell's vireo were detected and locations were mapped using ArcGIS collector.

A total of 13 LBVI observations were confirmed throughout the eight protocol surveys and their respective locations are shown in Figure 4. Least Bell's vireo were detected in two territories: a western territory and southeastern territory. Least Bell's vireo were detected in six out of the eight surveys in the western territory and seven out of the eight surveys in the southeastern territory; none were detected in either territory during the second survey. Individuals were observed singing and foraging in three identified habitat types, including Fremont cottonwood forest and woodland, tamarisk thickets, and fourwing saltbush scrub.

Rincon biologists estimate at least six individuals were present within two territories within the BSA (western territory and southeastern territory): two males, two females, and two fledglings. Males establish and defend territories through counter-singing, chasing, and sometimes engaging in physical combat with neighboring males (Kus 2020). Male vireos often use high exposed perches in the canopy as singing perches during territorial defense and advertisement (Kus 2020). If a male is observed in the same location throughout the breeding season, it is likely part of a nesting pair. A pair and a fledgling were observed in the western territory. A female was not detected in the western territory; however, a fledgling was, indicating a female was present in that territory as well.

The male in the western territory was heard singing during the first survey from within a dense tamarisk thicket in the western part of the BSA. The male was calling from a height less than six feet, leading the biologists to believe it was sitting on a nest. The biologists decided not to investigate further as to avoid disturbing nesting activities. Least Bell's vireo nests are normally found in areas with dense understory shrub cover for concealing their nests (Kus 2020). A fledgling was first heard and visually observed by biologists in this territory during the fourth survey. The fledgling was calling from Fremont cottonwood and tamarisk trees, close to where the suspected nest was. On the seventh survey, a fledgling was heard calling from the fourwing saltbush scrub habitat north of the tamarisk stand. On the eighth and final survey, a male was heard singing from the fourwing saltbush scrub habitat; however, the pace of the call was slower than usual, and the call was incomplete, leading biologists to suspect it was a male fledgling practicing singing.

The male in the southeastern territory was heard singing during the first survey within a Fremont cottonwood thicket in the southeastern part of the BSA. During the fifth survey, this male was heard singing within the riverbed, further north than where it had been initially documented and within private property that was not surveyed on foot. The male was observed with binoculars singing from high perches in Fremont cottonwood trees. The male continued singing and flying north towards Soboba Lane, at which point biologists lost track of the male. During the sixth survey, an LBVI pair was observed with binoculars in a patch of Hinds' willow within private property in the riverbed. Biologists suspected was the same male from the western territory. The pair were chasing each other west, eventually entering back into the BSA in the southeast. A fledgling was heard in this territory during the seventh survey, and a male was heard singing during the eighth survey.

The existence of LBVI within the BSA along with dense areas of riparian vegetation make the San Jacinto River in this location a suitable nesting area for LBVI. The data collected confirms riparian habitat within the BSA along the San Jacinto River contained two LBVI territories in 2024.

Leg bands were not observed on any of the LBVI in the survey area.

No brown-headed cowbirds (*Molothrus ater*), southwestern willow flycatchers (*Empidonax traillii extimus*), or western yellow-billed cuckoos (*Coccyzus americanus occidentalis*) were observed during the surveys. An avian compendium, located in Appendix A, contains a total of 45 bird species that were documented within the BSA. Representative site photographs were taken of the project site and BSA, located in Appendix B.

Figure 4 Least Bell's Vireo Observations

Imagery provided by Microsoft Bing and its licensors © 2024.
Additional data provided by WRCRCA, MSHCP, 2023.

24-15778 BIO
Fig 4 Least Bells Vireo Observations Within BSA

5 Certification

I hereby certify that the statements furnished in this report and in the attached figures present data and information required for these LBVI protocol surveys. The facts, statements, and information presented are true and correct to the best of my knowledge and belief.

Signed: _____ Date: 9/3/2024

Jared Reed
Senior Biologist/Project Manager

6 References

Cornell Lab of Ornithology. 2022. *All About Birds - Bell's Vireo Life History*. Cornell Lab of Ornithology, Ithaca, New York. https://www.allaboutbirds.org Accessed May 2022.

California Department of Fish and Wildlife. 2023. California Natural Communities List, June 2023. Accessed July 2024.

_____. 2024. Special Animals List, July 2024. Sacramento, CA.

Kus, B. 2002. Least Bell's Vireo (*Vireo bellii pusillus*). *In* The Riparian Bird Conservation Plan: a strategy for reversing the decline of riparian-associated birds in California. California Partners in Flight. http://prbo.org/calpif/pdfs/riparian_v-2.pdf. Accessed August 2024.

Rincon Consultants, Inc. (Rincon). 2024. Casa Loma Siphon No. 1 and San Jacinto Pipeline Project Biological Resources Assessment.

Sawyer, J., T. Keeler-Wolf, and J. Evens, 2009. A Manual of California Vegetation, Second Edition. California Native Plant Society Press. Sacramento, California.

State of California Resources Agency. 2019. Department of Fish and Game. Natural Heritage Division. *Endangered and Threatened Animals List*. Sacramento, CA.

United States Fish and Wildlife Service (USFWS). 1998. *Draft Recovery Plan for the Least Bell's Vireo (Vireo bellii pusillus).* Portland, OR.

_____. 2001. *Least Bell's Vireo Survey Guidelines.*

_____. 2006. *Least Bell's Vireo (Vireo bellii pusillus) 5-Year Review Summary and Evaluation*. USFWS Carlsbad Office, 26 pgs.

_____. 2016. En*dangered and Threatened Wildlife and Plants; Determination of Endangered Status for Least Bell's Vireo.* 51 Federal Register: 16474 – 16482.

Winkler, D. W., S. M. Billerman, and I. J. Lovette (2020). Version 1.0. Birds of the World (S. M. Billerman, B. K. Keeney, P. G. Rodewald, and T. S. Schulenberg, Editors). Cornell Lab of Ornithology, Ithaca, NY, USA. https://birdsoftheworld.org/bow/home. Accessed August 2022.

Appendix A

Avian Compendium

Avian Compendium

Genus, Species Name	Group, Common Name
Accipitridae	**Hawks**
Accipiter cooperii	Cooper's hawk
Buteo lineatus	red-shouldered hawk
Buteo jamaicensis	red-tailed hawk
Buteo swainsoni	Swainson's hawk
Aegithalidae	**Bushtits**
Psaltriparus minimus	bushtit
Anatidae	**Ducks, Geese, and Swans**
Anas platyrhynchos	mallard
Alaudidae	**Larks**
Eremophila alpestris	horned lark
Cardinalidae	**Grosbeaks**
Passerina amoena	lazuli bunting
Pheucticus melanocephalus	black-headed grosbeak
Cathartidae	**New World Vultures**
Cathartes aura	turkey vulture
Columbidae	**Pigeons, Doves**
Zenaida macroura	mourning dove
Corvidae	**Crows, Jays**
Corvus brachyrhynchos	American crow
Corvus corax	common raven
Emberizidae	**Emberizids**
Melozone crissalis	California towhee
Pipilo maculatus	spotted towhee
Melospiza melodia	song sparrow
Falconidae	**Falcons**
Falco sparverius	American kestrel
Fringillidae	**Finches**
Haemorhous mexicanus	house finch
Spinus psaltria	lesser goldfinch
Spinus lawrencei	American goldfinch
Hirundinidae	**Swallows**
Petrochelidon pyrrhonota	cliff swallow
Stelgidopteryx serripennis	northern rough-winged swallow
Icteridae	**New World Oriole**
Agelaius phoeniceus	red-winged blackbird
Icterus cucullatus	hooded oriole
Sturnella neglecta	western meadowlark

Genus, Species Name	Group, Common Name
Parulidae	**Wood-Warblers**
Setophaga petechia	yellow warbler
Passerellidae	**New World Sparrows**
Melospiza melodia	song sparrow
Passeridae	**Old World Sparrows**
Passer domesticus	house sparrow
Picidae	**Woodpeckers**
Colaptes auratus	northern flicker
Dryobates nuttallii	Nuttall's woodpecker
Polioptilidae	**Gnatcatchers**
Polioptila caerulea	blue-gray gnatcatcher
Polioptila sp.	gnatcatcher*
Strigidae	**True Owls**
Bubo virginianus	great horned owl
Sturnidae	**Starling**
Sturnus vulgaris	European starling
Trochilidae	**Hummingbirds**
Calypte anna	Anna's hummingbird
Tyrannidae	**Tyrant Flycatchers**
Myiarchus cinerascens	ash-throated flycatcher
Pyrocephalus obscurus	vermillion flycatcher
Sayornis nigricans	black phoebe
Sayornis saya	Say's phoebe
Tyrannus verticalis	western kingbird
Tyrannus vociferans	Cassin's kingbird
Troglodytidae	**Wrens**
Thryomanes bewickii	Bewick's wren
Troglodytes aedon	house wren
Turdidae	**Thrushes**
Sialia mexicana	western bluebird
Vireonidae	**Vireo**
Vireo bellii pusillus	least Bell's vireo

*Species not confirmed visually

Appendix B

Site Photographs

Photograph 1. Fremont cottonwood woodland within the San Jacinto River, facing southeast. July 30, 2024.

Photograph 2. Fremont cottonwood woodland within the San Jacinto River, facing north. San Jacinto Mountain foothills in the background. July 30, 2024.

Photograph 3. View of upland mustards (foreground) fourwing saltbush scrub (middle), and Fremont cottonwood woodland (background). Facing southwest. July 30, 2024.

Photograph 4. Westernmost tamarisk thicket, facing west. July 30, 2024.

Photograph 5. View of Fremont cottonwood woodland in the southeasternmost section of the BSA, within the 500-foot buffer. Facing southwest. June 4, 2024.

Photograph 6. Upland mustards and disturbed landcover (dirt roads), facing northwest. July 30, 2024.

This page intentionally left blank.

Appendix H

Rare Plant Survey Report

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

August 2, 2024
Project No: 24-15778

Tania Asef, Associate Environmental Specialist
Metropolitan Water District of Southern California
700 North Alameda Street
Los Angeles, California 90012
Via email: TAsef@mwdh20.com

Subject: Rare Plant Survey Report for the Casa Loma Siphon No. 1 and San Jacinto Pipeline Project, Riverside County, California

Dear Ms. Asef,

Rincon Consultants, Inc. (Rincon) is pleased to provide this Rare Plant Survey Report in support of the Casa Loma Siphon No. 1 and San Jacinto Pipeline Project (Project). This Rare Plant Survey Report documents the results of the rare plant survey (survey) conducted within the approximately 20-acre Project site plus a 100-foot buffer (Biological Study Area; BSA).

This report documents the existing conditions of the BSA and evaluates the presence/absence of rare plants. The evaluation is based on the results of a desktop assessment of site conditions including soil types and vegetation communities, reviews of rare plant observations documented in the vicinity of the BSA in previous years, and a rare plant survey conducted in summer 2024.

Project Location

The Project site encompasses an approximate 20-acre area located within and adjacent to the San Jacinto River, between Soboba Road and State Street, near the City of San Jacinto in unincorporated Riverside County, California (Attachment 1; Figure 1 and Figure 2). The Project site is depicted on the United States Geological Survey (USGS) *San Jacinto, California,* 7.5-minute topographic quadrangle and is within Township 4S, Range 1W, Section 15, San Bernardino Baseline and Meridian. The center point is located at 33.820600°, -116.969914°.

Environmental Setting

The BSA generally contains flat, undeveloped, land at approximately 1,500 feet above mean sea level. It is located within the San Jacinto River floodplain, with the San Jacinto River flowing from southeast to northwest through the southwestern half of the BSA. The soils within the San Jacinto River contain coarse sand and the soils within the upland banks of the floodplain contain loamy sand to sandy loam. The San Jacinto River and its upland banks contain a Fremont cottonwood woodland, and the outer floodplain contains upland mustards, fourwing saltbush scrub, disturbed fourwing saltbush scrub, and developed/disturbed land cover. Adjacent land use consists of the San Jacinto Mountains to the north and agricultural land and residential developments to the south, east, and west.

Regulatory Overview

Local, state, and federal agencies regulate protected plant species, and may require an assessment of their presence or potential presence to be conducted on site prior to the approval of a proposed development on a property. Assessments for the potential occurrence of rare plant species are based upon geographic ranges and habitat preferences for the species, species occurrence records from the

California Department of Fish and Wildlife (CDFW) California Natural Diversity Database (CNDDB) and other publicly available databases (e.g., Jepson eFlora), and species occurrence records from other sites in the vicinity of the Project.

For the purpose of this report, rare plant species are those plants listed, proposed for listing, or candidates for listing as threatened or endangered by the U.S. Fish and Wildlife Service (USFWS) under the federal Endangered Species Act (ESA); those listed or candidates for listing as rare, threatened, or endangered by the CDFW under the California Endangered Species Act (CESA) or Native Plant Protection Act; those recognized by the CDFW under the California Native Plant Society (CNPS) California Rare Plant Rank (CRPR) system (Ranks 1 through 4, Table 1; Rank Threat Code Extensions, Table 2).

Table 1 California Rare Plant Rank Definitions

Rank	Definition
1A	Presumed Extinct in California
1B	Rare, Threatened, or Endangered in California and elsewhere
2	Rare, Threatened, or Endangered in California, but more common elsewhere
3	Need more information (a Review List)
4	Plants of Limited Distribution (a Watch List)

Table 2 California Rare Plant Rank Threat Code Extensions

Threat Rank	Definitions
.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 endangered in California (<20% of occurrences threatened)

Methodology

The database search and literature review were conducted to identify rare plants that have been recorded in the Project's vicinity. The field survey was conducted to determine whether any such species are present in the BSA. Nomenclature for rare plants follows *The Jepson Manual, Second Edition* (Baldwin et al. 2012) with updates available in the online Jepson eFlora (Jepson Flora Project 2024). Listing and/or ranking statuses are provided in *State and Federally Listed Endangered, Threatened, and Rare Plants of California* (CDFW 2024a), *Special Vascular Plants, Bryophytes, and Lichens List* (CDFW 2024b), and the online Inventory of Rare and Endangered Plants of California (CNPS 2024). The methods used for the database search/literature review and field surveys are described below.

Literature Review

During the Project's biological resources assessment (BRA), Rincon conducted queries of CDFW's CNDDB (2023), CNPS's online Inventory of Rare and Endangered Plants of California (2023), and USFWS's Information for Planning and Consultation system (IPaC; USFWS 2023) for information regarding general botanical resources, rare plant species occurrences, and critical habitat designations within the *San Jacinto, California*, United States Geological Survey (USGS) 7.5-minute quadrangle and the eight surroundings quadrangles (*Beaumont*, *Blackburn Canyon*, *Cabazon*, *El Casco*, *Hemet*, *Lake Fulmor*, *Lakeview*, and *Winchester*). Additionally, historic and current aerial

imagery (Google Earth 2024), the *San Jacinto, California,* USGS 7.5-minute topographic quadrangle (USGS 2024), and the Web Soil Survey (United States Department of Agriculture, Natural Resources Conservation Service [USDA, NRCS] 2024), were reviewed to better characterize the BSA from a hydrologic, geologic, and topographic perspective. The result of database queries and lists of special status species were reviewed by Rincon's regional biological experts for accuracy and completeness. The final list of special status plant species was evaluated for potential to occur within the BSA based on documented occurrences within the nine-quadrangle search area and biologists' expert opinions on species known to occur in the region and the surrounding land uses (open space recreation, low density residential and mixed use). The BRA determined that chaparral sand-verbena (*Abronia villosa* var. *aurita*, CRPR 1B.1) was present within the BSA. Smooth tarplant (*Centromadia pungens* ssp. *laevis*, CRPR 1B.1), Mojave tarplant (*Deinandra mohavensis*, state endangered, CRPR 1B.3), and white rabbit-tobacco (*Pseudognaphalium leucocephalum*, CRPR 2B.2) were preliminarily determined to have a moderate potential to occur. Attachment 2 contains a summary of each rare plant species evaluated during the literature review, its habitat suitability requirements, and its potential to occur in the BSA as refined by the results of the rare plant survey (with moderate-potential species that were not observed reduced to low).

Field Survey

The rare plant survey generally followed the CNPS Botanical Survey Guidelines (CNPS 2001) and the Protocols for Surveying and Evaluating Impacts to Special Status Native Plant Populations and Natural Communities (CDFW 2024). The survey was conducted by Rincon Botanist Casey Clark and Rincon Biologist Jas Llamas on July 15, 2024, between the hours of 0700 and 1130, which was scheduled during the appropriate blooming period to optimize detection of the rare plant species with potential to occur in the BSA. The survey was conducted using systematic field techniques by walking meandering transects to attain 100 percent visual coverage. Special attention was given to areas with a high potential to support rare plant species (e.g., vegetation community interfaces and/or areas with unique soils or geology). All plant species identified on site were documented (Attachment 3).

Botanists recorded the locations of rare plant species using a Global Positioning System unit capable of sub-meter accuracy. The location of all rare plants occurring alone or growing together within a 1-meter radius were logged as a point and larger occurrences were documented with a polygon. For each rare plant geospatial entry, the number of individuals present was counted, and their phenology was recorded. The results of the rare plant survey are discussed below.

Results

A total of 65 plant species were observed within the BSA during the rare plant survey. Of these, 38 are native and 27 are introduced. Forty chaparral sand-verbena individuals were documented within the BSA during the survey. Thirty-nine of these individuals were documented within the San Jacinto River and its banks and one individual was documented along a road cut near the middle of the BSA. Smooth tarplant, Mojave tarplant, and white rabbit tobacco were not detected within the BSA, though the survey was conducted when these species would be identifiable. Attachment 1, Figure 3 depicts the locations of chaparral sand-verbena within the BSA. A comprehensive floral compendium documenting plant species identified in the BSA is included as Attachment 3. Photographs of chaparral sand-verbena and its suitable habitat are provided in Attachment 4.

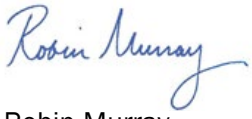
Conclusion

Chaparral sand-verbena is ranked as a CRPR 1B.1, which includes plants that are considered seriously rare, threatened, or endangered in California and elsewhere. These species' vulnerability or susceptibility to threat is currently considered high and they are considered "rare" from a state-wide perspective. It is assumed that the special status species determined to have a low or moderate potential to occur during the literature review are absent from the BSA due to the lack of evidence when they should have been readily observable.

Rincon appreciates the opportunity to provide botanical surveys for this important Project. Please do not hesitate in reaching out to the undersigned with questions related to the contents herein.

Sincerely,
Rincon Consultants, Inc.

Casey Clark
Botanist



Robin Murray
Certified Consulting Botanist, Supervising Biologist

Attachments

Attachment 1 Figures
Attachment 2 Rare Plant Species Potential to Occur
Attachment 3 Floral Compendium
Attachment 4 Representative Site Photographs (July 15, 2024)

References

Baldwin, B.G., D.H. Goldman, D.J. Keil, R. Patterson, T.J. Rosatti, and D. H. Wilken (Eds.). 2012. The Jepson Manual: Vascular Plants of California, Second Edition, Thoroughly Revised and Expanded. University of California Press. Berkeley, California.

California Department of Fish and Wildlife (CDFW). 2024. Protocols for Surveying and Evaluating Impacts to Special Status Native Plant Populations and Sensitive Natural Communities. State of California Natural Resources Agency. Sacramento, California.

_____. 2023. California Natural Diversity Database: RareFind5. Available at: https://www.wildlife.ca.gov/Data/CNDDB/. Accessed October 2023.

_____. 2024a. State and Federally listed Endangered, Threatened, and Rare Plants of California. Last updated April 2024. Available at: https://www.wildlife.ca.gov/Data/CNDDB/Plants-and-Animals. Accessed July 2024.

_____. 2024b. Special Vascular Plants, Bryophytes, and Lichens List. April 2024. Biogeographic Data Branch, California Natural Diversity Database. Accessed July 2024.

California Invasive Plant Council (Cal-IPC). 2024. California Invasive Plant Inventory. Available at: https://www.cal-ipc.org/plants/inventory/. Accessed July 2024.

California Native Plant Society (CNPS). 2001. CNPS Botanical Survey Guidelines. Available at: https://cnps.org/wp-content/uploads/2018/03/cnps_survey_guidelines.pdf. Accessed July 2024.

_____. 2023. Inventory of Rare and Endangered Plants (online edition, v-9.5). California Native Plant Society. Sacramento, California. Available at: http://www.rareplants.cnps.org. Accessed October 2023.

Google Earth Pro. 2024. Available at: https://earth.google.com/web. Accessed July 2024.

Jepson Flora Project (eds.) 2024. Jepson eFlora. Available at: https://ucjeps.berkeley.edu/eflora/. Accessed July 2024.

United States Department of Agriculture, Natural Resources Conservation Service (USDA, NRCS). 2024. Web Soil Survey Data: Version 3.3.2. Available at: https://casoilresource.lawr.ucdavis.edu/gmap/. Accessed July 2024.

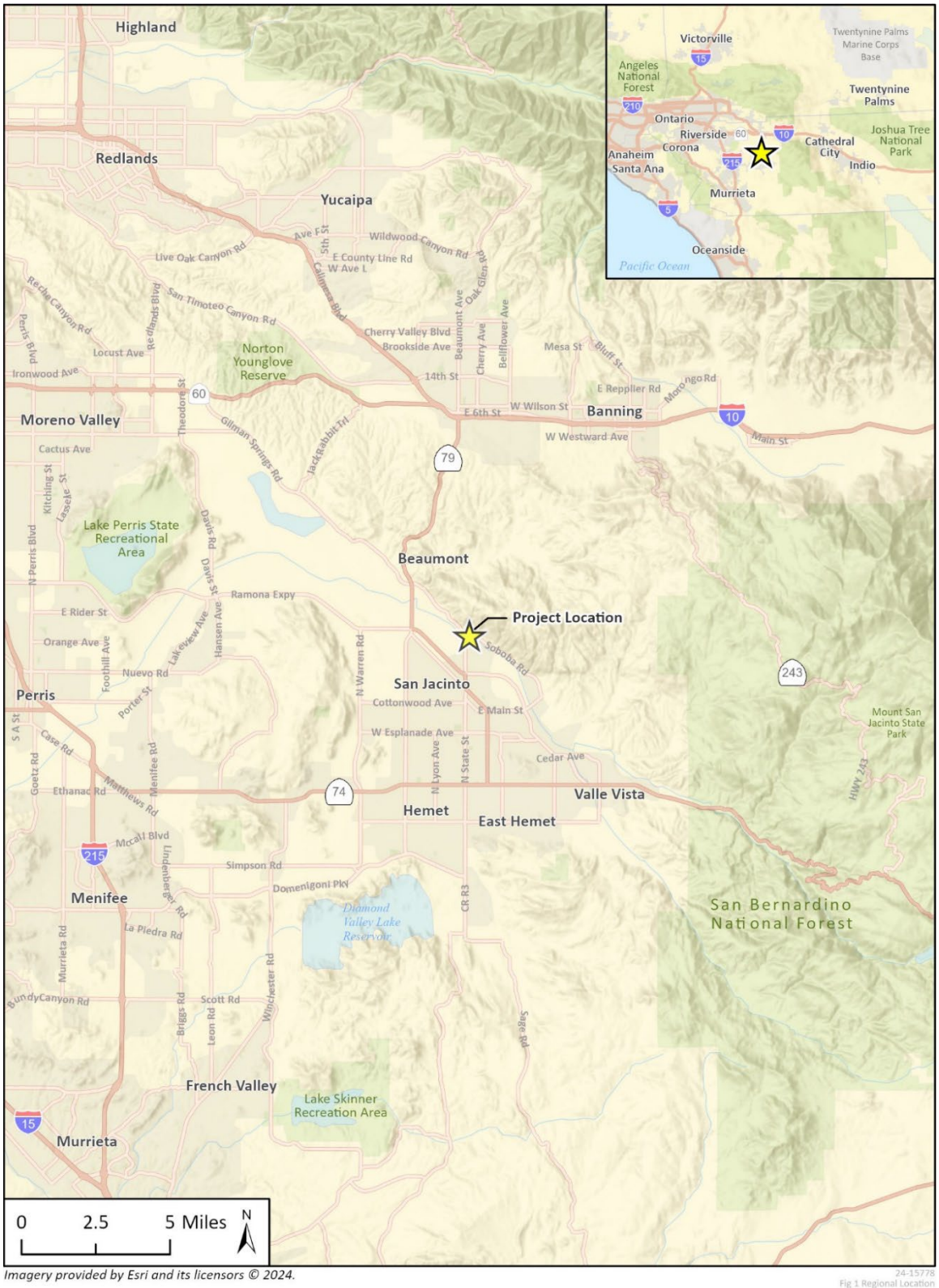
United States Fish and Wildlife Service (USFWS). 2023. Information for Planning and Consultation System (IPaC). Available at: https://ipac.ecosphere.fws.gov/. Accessed October 2023.

United States Geological Survey (USGS). 2024. *San Jacinto, California*. 7.5-minute topographic quadrangle, accessed via Google Earth. Accessed July 2024.

Attachment 1

Figures

Figure 1 Regional Location

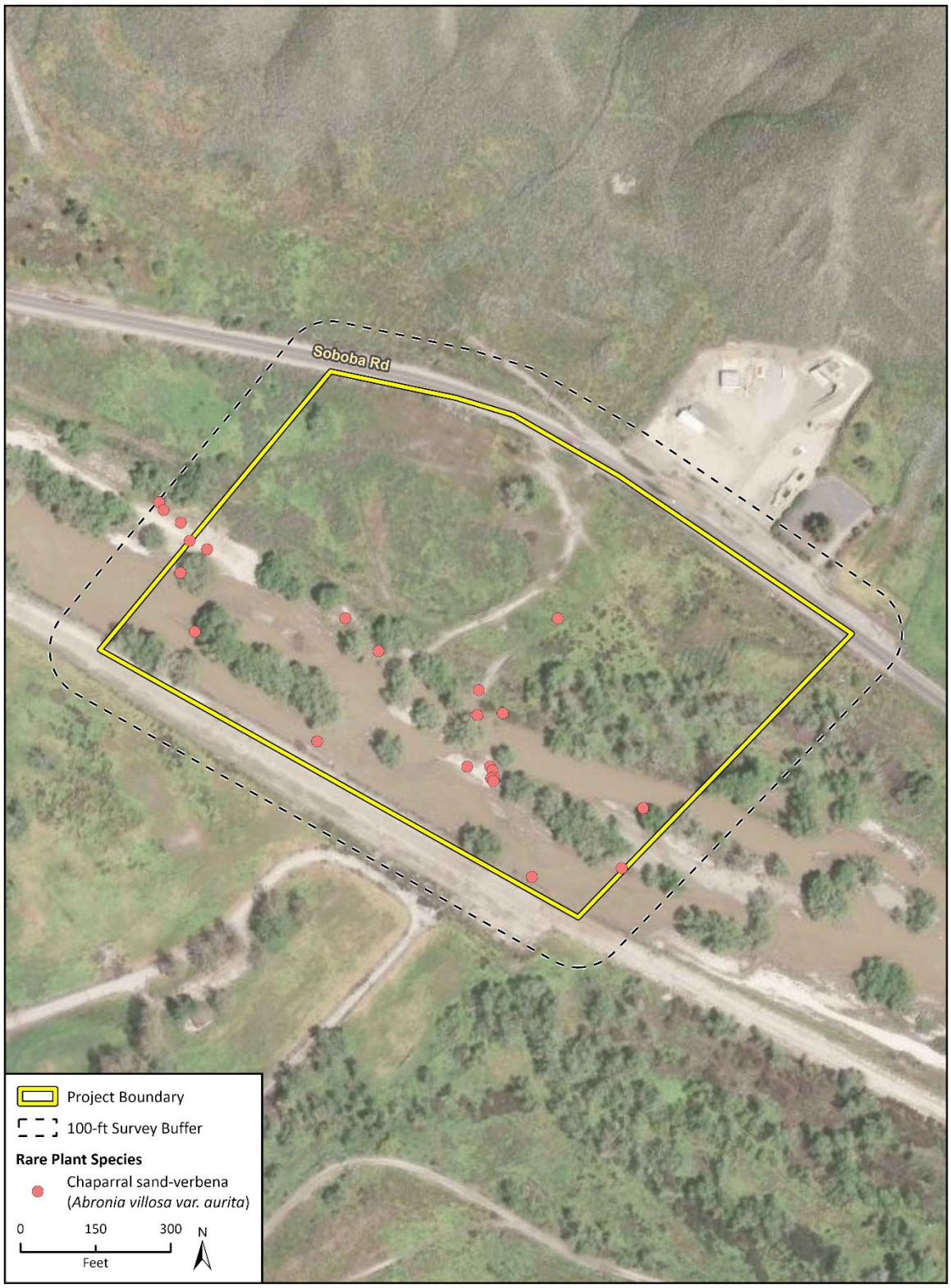


Imagery provided by Esri and its licensors © 2024.

24-15778
Fig 1 Regional Location

Figure 2 Biological Study Area

Figure 3 Rare Plant Species within the BSA



Attachment 2

Rare Plant Species Potential to Occur

Rare Plant Species in the Regional Vicinity of the Biological Study Area

Scientific Name Common Name	Status	Habitat Requirements	Potential to Occur in BSA	Habitat Suitability/Observations
Plants and Lichens				
Abronia villosa var. *aurita* chaparral sand-verbena	None/None G5T2?/S2 1B.1	Annual herb. Chaparral, coastal scrub, desert dunes. Sandy. Elevations: 245-5250ft. (75-1600m.) Blooms (Jan) Mar-Sep.	Present	Suitable sandy soils and scrub habitat is present on site and the BSA is within the appropriate elevational and geographic range. Species was detected in the BSA during the reconnaissance survey and rare plant survey.
Allium marvinii Yucaipa onion	None/None G1/S1 1B.2	Perennial bulbiferous herb. Chaparral. In openings on clay soils. Elevations: 2495-3495ft. (760-1065m.) Blooms Apr-May.	Not Expected	No suitable chaparral habitat or clay soils occur within the BSA. The BSA is outside the preferred elevational range of the species. The 3 CNDDB occurrences that are within 5 miles of the BSA are from 2009, 2010 and 2012; however, all of these occurrences are situated in the mountainous region northeast of the BSA.
Allium munzii Munz's onion	FE/ST G1/S1 1B.1	Perennial bulbiferous herb. Chaparral, cismontane woodland, coastal scrub, pinyon and juniper woodland, valley and foothill grassland. Clay, mesic. Elevations: 975-3510ft. (297-1070m.) Blooms Mar-May.	Not Expected	No suitable chaparral, mixed chaparral, coastal scrub, juniper woodland or grassland habitat occurs within the BSA. Riparian Fremont cottonwood does occur within the BSA; however, the soil is primarily loamy sand and gravelly coarse sand, rather than clay or mesic. The only CNDDB occurrence within 9-quadrangles is found near Diamond Valley Lake approximately 9 miles southwest of the BSA.
Astragalus hornii var. *hornii* Horn's milk-vetch	None/None GUT1/S1 1B.1	Annual herb. Meadows and seeps, playas. Alkaline, lake margins. Elevations: 195-2790ft. (60-850m.) Blooms May-Oct.	Not Expected	No suitable meadows or alkaline lakes occur within the BSA. The only CNDDB occurrence is from 1889.
Astragalus lentiginosus var. *borreganus* Borrego milk-vetch	None/None G5T5?/S4 4.3	Annual herb. Mojavean desert scrub, Sonoran desert scrub. Sandy. Elevations: 100-2935ft. (30-895m.) Blooms Feb-May.	Not Expected	No suitable desert scrub habitat occurs within the BSA. Although soils within the BSA are primarily sandy and the site is within the elevation range of this species, the 9-quad CNDDB search did not find any occurrences of this species.
Astragalus lentiginosus var. *coachellae* Coachella Valley milk-vetch	FE/None G5T1/S1 1B.2	Annual/perennial herb. Desert dunes, Sonoran desert scrub. Sandy flats, washes, outwash fans, sometimes on dunes. Elevations: 130-2150ft. (40-655m.) Blooms Feb-May.	Not Expected	No suitable Sonoran desert scrub or dune habitat occurs within the BSA. Although the San Jacinto River does provide a sandy, wash area to potentially support this species, no recent occurrences of this species occur within the 9 quadrangles.
Astragalus pachypus var. *jaegeri* Jaeger's milk-vetch	None/None G4T1/S1 1B.1	Perennial shrub. Chaparral, cismontane woodland, coastal scrub, valley and foothill grassland. Rocky (sometimes), sandy (sometimes). Elevations: 1200-3200ft. (365-975m.) Blooms Dec-Jun.	Not Expected	No suitable chaparral, mixed chaparral, coastal scrub or grassland habitat occurs within the BSA. Riparian Fremont cottonwood does occur within the BSA, and the soil is primarily loamy sand and gravelly coarse sand; however, there is only one recent CNDDB occurrence approximately 12 miles southeast of the BSA.

Scientific Name Common Name	Status	Habitat Requirements	Potential to Occur in BSA	Habitat Suitability/Observations
Atriplex coronata var. *notatior* San Jacinto Valley crownscale	FE/None G4T1/S1 1B.1	Annual herb. Playas, valley and foothill grassland, vernal pools. Alkaline. Elevations: 455-1640ft. (139-500m.) Blooms Apr-Aug.	Not Expected	No grassland or vernal pool habitat occurs within the BSA.
Atriplex parishii Parish's brittlescale	None/None G1G2/S1 1B.1	Annual herb. Chenopod scrub, playas, vernal pools. Alkaline. Elevations: 80-6235ft. (25-1900m.) Blooms Jun-Oct.	Not Expected	No vernal pools occur within the BSA. The BSA contains loamy sand and gravelly sand rather than alkaline soils.
Atriplex serenana var. *davidsonii* Davidson's saltscale	None/None G5T1/S1 1B.2	Annual herb. Coastal bluff scrub, coastal scrub. Alkaline. Elevations: 35-655ft. (10-200m.) Blooms Apr-Oct.	Not Expected	No coastal bluff scrub or coastal scrub occurs within the BSA. The BSA contains loamy sand and gravelly sand rather than alkaline soils. There is one recent CNDDB occurrence approximately 3 miles west of the BSA; however, it is in a highly disturbed agricultural area.
Brodiaea filifolia thread-leaved brodiaea	FT/SE G2/S2 1B.1	Perennial bulbiferous herb. Chaparral, cismontane woodland, coastal scrub, playas, valley and foothill grassland, vernal pools. Clay (often). Elevations: 80-3675ft. (25-1120m.) Blooms Mar-Jun.	Not Expected	No suitable chaparral, mixed chaparral, coastal scrub, vernal pools or grassland habitat occurs within the BSA. Riparian Fremont cottonwood does occur within the BSA; however, the soil is primarily loamy sand and gravelly coarse sand, rather than clay. The recent CNDDB occurrences are mostly confined to an area near the San Jacinto Wildlife area approximately 8.5 miles northwest of the BSA
Calochortus palmeri var. *munzii* San Jacinto mariposa-lily	None/None G3T3/S3 1B.2	Perennial bulbiferous herb. Chaparral, lower montane coniferous forest, meadows and seeps. Seen in open Jeffrey pine forest as well as in chaparral. Elevations: 2805-7220ft. (855-2200m.) Blooms Apr-Jul.	Not Expected	No suitable chaparral, mixed chaparral, meadows or coniferous forest habitat occurs within the BSA. The BSA is outside the preferred elevational range of the species
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	No suitable chaparral or lower montane coniferous forest occurs within the BSA. The BSA is outside the preferred elevational range of the species
Calochortus plummerae Plummer's mariposa-lily	None/None G4/S4 4.2	Perennial bulbiferous herb. Chaparral, cismontane woodland, coastal scrub, lower montane coniferous forest, valley and foothill grassland. Granitic, rocky. Elevations: 330-5580ft. (100-1700m.) Blooms May-Jul.	Low Potential	No suitable chaparral, mixed chaparral, coastal scrub, lower montane coniferous forest or grassland habitat occurs within the BSA. Riparian Fremont cottonwood does occur within the BSA; however, the soil is primarily loamy sand and gravelly coarse sand, rather than rocky. There is a CNDDB occurrence 3 miles northwest from 2008. Species was not detected in the BSA during the rare plant survey when it should have been observable.

Scientific Name Common Name	Status	Habitat Requirements	Potential to Occur in BSA	Habitat Suitability/Observations
Calochortus weedii var. *intermedius* intermediate mariposa-lily	None/None G3G4T3/S3 1B.2	Perennial bulbiferous herb. Chaparral, coastal scrub, valley and foothill grassland. Rocky. Elevations: 345-2805ft. (105-855m.) Blooms May-Jul.	Not Expected	No suitable chaparral, coastal scrub or grassland habitat occurs within the BSA. The most recent CNDDB occurrence is located neat Diamond Valley Lake approximately 9 miles southwest of the BSA.
Caulanthus simulans Payson's jewelflower	None/None G4/S4 4.2	Annual herb. Chaparral, coastal scrub. Granitic, sandy. Elevations: 295-7220ft. (90-2200m.) Blooms (Feb) Mar-May (Jun).	Not Expected	No suitable chaparral or coastal scrub habitat occurs within the BSA.
Centromadia pungens ssp. *laevis* smooth tarplant	None/None G3G4T2/S2 1B.1	Annual herb. Chenopod scrub, meadows and seeps, playas, riparian woodland, valley and foothill grassland. Alkaline. Elevations: 0-2100ft. (0-640m.) Blooms Apr-Sep.	Low Potential	No suitable meadows, or grasslands occur within the BSA. The Fremont cottonwood habitat within the BSA may provide suitable riparian woodland for this species, as well as the fourwing saltbush scrub. There are several recent CNDDB occurrences, with the closest being within 1 mile of the BSA. Species was not detected in the BSA during the rare plant survey when it should have been observable.
Chorizanthe leptotheca Peninsular spineflower	None/None G3/S3 4.2	Annual herb. Chaparral, coastal scrub, lower montane coniferous forest. Granitic. Elevations: 985-6235ft. (300-1900m.) Blooms May-Aug.	Not Expected	No suitable chaparral, coastal scrub or lower montane coniferous forest habitat occurs within the BSA. There are no recent CNDDB occurrences within 9 quadrangles of the BSA.
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.	Not Expected	No suitable chaparral, mixed chaparral, coastal scrub or grassland habitat occurs within the BSA. Riparian Fremont cottonwood does occur within the BSA, and the soil is primarily loamy sand and gravelly coarse sand. However, rocky soil is not present within the BSA. There are several recent occurrences, but they are mostly concentrated in areas 8-10 miles from the BSA.
Chorizanthe polygonoides var. *longispina* long-spined spineflower	None/None G5T3/S3 1B.2	Annual herb. Chaparral, coastal scrub, meadows and seeps, valley and foothill grassland, vernal pools. Clay (often). Elevations: 100-5020ft. (30-1530m.) Blooms Apr-Jul.	Not Expected	No suitable chaparral, mixed chaparral, coastal scrub, meadows or grassland habitat occurs within the BSA. The BSA does not contain vernal pools.
Chorizanthe xanti var. *leucotheca* white-bracted spineflower	None/None G4T3/S3 1B.2	Annual herb. Coastal scrub, Mojavean desert scrub, pinyon and juniper woodland. Gravelly (sometimes), sandy (sometimes). Elevations: 985-3935ft. (300-1200m.) Blooms Apr-Jun.	Not Expected	No suitable coastal scrub, desert scrub or juniper woodland occurs within the BSA.

Scientific Name Common Name	Status	Habitat Requirements	Potential to Occur in BSA	Habitat Suitability/Observations
Deinandra mohavensis Mojave tarplant	None/SE G3/S3 1B.3	Annual herb. Chaparral, coastal scrub, riparian scrub. Low sand bars in riverbed; mostly in riparian areas or in ephemeral grassy areas. Elevations: 2100-5250ft. (640-1600m.) Blooms (Jan-May) Jun-Oct.	Low Potential	Sandy, dry soils in the San Jacinto River occur within the BSA. The BSA is outside the preferred elevational range of the species; however, there are a few recent occurrences from 2001 approximately 3.5 miles upstream of the BSA. Species was not detected in the BSA during the rare plant survey when it should have been observable.
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	No suitable coastal scrub or grassland habitat occurs within the BSA. The BSA does not contain vernal pools.
Delphinium parishii ssp. *subglobosum* Colorado Desert larkspur	None/None G4T4/S4 4.3	Perennial herb. Chaparral, cismontane woodland, pinyon and juniper woodland, Sonoran desert scrub. On dry stony fans and slopes. Elevations: 1970-5905ft. (600-1800m.) Blooms Mar-Jun.	Not Expected	No suitable chaparral, mixed chaparral, desert scrub or juniper woodland habitat occurs within the BSA. The BSA is outside the preferred elevational range of the species.
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	No suitable chaparral, desert scrub or juniper woodland habitat occurs within the BSA. The BSA is outside the preferred elevational range of the species.
Diplacus clevelandii Cleveland's bush monkeyflower	None/None G4/S4 4.2	Perennial rhizomatous herb. Chaparral, cismontane woodland, lower montane coniferous forest. Disturbed gravelly roadsides and slopes. Gabbro soils. Elevations: 1475-6560ft. (450-2000m.) Blooms Apr-Jul.	Not Expected	No suitable chaparral, mixed chaparral or lower montane coniferous forest occurs within the BSA.
Dodecahema leptoceras slender-horned spineflower	FE/SE G1/S1 1B.1	Annual herb. Chaparral, cismontane woodland, coastal scrub. Flood deposited terraces and washes; associates include Encelia, Dalea, Lepidospartum, etc. Sandy soils. Elevations: 655-2495ft. (200-760m.) Blooms Apr-Jun.	Low Potential	No suitable chaparral, mixed chaparral or coastal scrub habitat occurs within the BSA. The San Jacinto River does provide washes and sandy soils are present throughout the BSA, however the species' preferred habitat, stabilized sandy benches, is not present within the BSA. A few occurrences are documented approximately 7 miles upstream in the San Jacinto River, the most recent as 2005. Species was not detected in the BSA during the rare plant survey when it should have been observable.
Erythranthe diffusa Palomar monkeyflower	None/None G4/S3 4.3	Annual herb. Chaparral, lower montane coniferous forest. Sandy or gravelly soils. Elevations: 4005-6005ft. (1220-1830m.) Blooms Apr-Jun.	Not Expected	No suitable chaparral, mixed chaparral or coastal scrub habitat occurs within the BSA. The BSA is outside the preferred elevational range of the species.

Scientific Name Common Name	Status	Habitat Requirements	Potential to Occur in BSA	Habitat Suitability/Observations
Galium angustifolium ssp. *jacinticum* San Jacinto Mountains bedstraw	None/None G5T2?/S2? 1B.3	Perennial herb. Lower montane coniferous forest. Open mixed forest. Elevations: 4430-6890ft. (1350-2100m.) Blooms Jun-Aug.	Not Expected	No suitable lower montane coniferous forest occurs within the BSA. The BSA is outside the preferred elevational range of the species.
Galium californicum ssp. *primum* Alvin Meadow bedstraw	None/None G5T2/S2 1B.2	Perennial herb. Chaparral, lower montane coniferous forest. Grows in shade of trees and shrubs at the lower edge of the pine belt, in pine forest-chaparral ecotone. Granitic, sandy soils. Elevations: 4430-5580ft. (1350-1700m.) Blooms May-Jul.	Not Expected	No suitable chaparral or lower montane coniferous forest occurs within the BSA. The BSA is outside the preferred elevational range of the species.
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	No suitable chaparral, coastal scrub or grassland habitat occurs within the BSA. The soil within the BSA is sandy rather than clay.
Holocarpha virgata ssp. *elongata* curving tarplant	None/None G5T3/S3 4.2	Annual herb. Chaparral, cismontane woodland, coastal scrub, valley and foothill grassland. Elevations: 195-3610ft. (60-1100m.) Blooms May-Nov.	Not Expected	No suitable chaparral, mixed chaparral, coastal scrub or grassland habitat occurs within the BSA. Riparian Fremont cottonwood does occur within the BSA; however, the soil is primarily loamy sand and gravelly coarse sand, which would not support this species
Hordeum intercedens vernal barley	None/None G3G4/S3S4 3.2	Annual herb. Coastal dunes, coastal scrub, valley and foothill grassland, vernal pools. Vernal pools, dry, saline streambeds, alkaline flats. 5-. Elevations: 15-3280ft. (5-1000m.) Blooms Mar-Jun.	Not Expected	No coastal scrub or grassland habitat occurs within the BSA. The BSA does not contain any vernal pools.
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	No suitable chaparral, mixed chaparral or coastal scrub habitat occurs within the BSA. Riparian Fremont cottonwood does occur within the BSA, and the soil is primarily loamy sand and gravelly coarse sand. However, this species is a perennial herb that would have been detected during the reconnaissance field survey and was not observed.
Hulsea vestita ssp. *callicarpha* beautiful hulsea	None/None G5T4/S4 4.2	Perennial herb. Chaparral, lower montane coniferous forest. Rocky or gravelly, granitic sites. Elevations: 3000-10005ft. (915-3050m.) Blooms May-Oct.	Not Expected	No suitable chaparral or lower montane coniferous forest occurs within the BSA. The BSA is outside the preferred elevational range of the species.

Scientific Name Common Name	Status	Habitat Requirements	Potential to Occur in BSA	Habitat Suitability/Observations
Imperata brevifolia California satintail	None/None G3/S3 2B.1	Perennial rhizomatous herb. Chaparral, coastal scrub, meadows and seeps, Mojavean desert scrub, riparian scrub. Mesic sites, alkali seeps, riparian areas. 3-. Elevations: 0-3985ft. (0-1215m.) Blooms Sep-May.	Not Expected	No suitable chaparral, coastal scrub, meadows or desert scrub habitat occurs within the BSA. No Alkali seeps or mesic soils are present within the BSA.
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	No suitable chaparral, mixed chaparral or coastal scrub habitat occurs within the BSA. Rincon biologists did not observe this species, and this species would be readily observable any time of the year if present.
Lasthenia glabrata ssp. *coulteri* Coulter's goldfields	None/None G4T2/S2 1B.1	Annual herb. Marshes and swamps, playas, vernal pools. Usually found on alkaline soils in playas, sinks, and grasslands. 1-. Elevations: 5-4005ft. (1-1220m.) Blooms Feb-Jun.	Not Expected	No marshes, swamps or vernal pools occur within the BSA.
Lepidium virginicum var. *robinsonii* Robinson's pepper-grass	None/None G5T3/S3 4.3	Annual herb. Chaparral, coastal scrub. Dry soils, shrubland. 4-. Elevations: 5-2905ft. (1-885m.) Blooms Jan-Jul.	Not Expected	No suitable chaparral or coastal scrub habitat occurs within the BSA.
Lilium parryi lemon lily	None/None G3/S3 1B.2	Perennial bulbiferous herb. Lower montane coniferous forest, meadows and seeps, riparian forest, upper montane coniferous forest. Wet, mountainous terrain; generally in forested areas; on shady edges of streams, in open boggy meadows and seeps. Elevations: 4005-9005ft. (1220-2745m.) Blooms Jul-Aug.	Not Expected	The BSA is not wet or mountainous terrain, and no suitable mixed chaparral, meadows, or upper montane coniferous forest occurs within the BSA. The BSA is outside the preferred elevational range of the species.
Mentzelia tricuspis spiny-hair blazing star	None/None G4/S2 2B.1	Annual herb. Mojavean desert scrub. Sandy or gravelly slopes and washes. Elevations: 490-4200ft. (150-1280m.) Blooms Mar-May.	Not Expected	No desert scrub habitat occurs within the BSA. The soil within the BSA is primarily loamy sand and gravelly coarse sand.
Microseris douglasii ssp. *platycarpha* small-flowered microseris	None/None G4T4/S4 4.2	Annual herb. Cismontane woodland, coastal scrub, valley and foothill grassland, vernal pools. Alkaline clay in river bottoms. Elevations: 50-3510ft. (15-1070m.) Blooms Mar-May.	Not Expected	No suitable mixed chaparral, coastal scrub or grassland habitat occurs within the BSA. The BSA does not contain vernal pools.

Scientific Name Common Name	Status	Habitat Requirements	Potential to Occur in BSA	Habitat Suitability/Observations
Monardella macrantha ssp. *hallii* Hall's monardella	None/None G5T3/S3 1B.3	Perennial rhizomatous herb. Broadleafed upland forest, chaparral, cismontane woodland, lower montane coniferous forest, valley and foothill grassland. Dry slopes and ridges in openings. Elevations: 2395-7200ft. (730-2195m.) Blooms Jun-Oct.	Not Expected	No broadleafed upland forest, chaparral or lower montane coniferous forest occurs within the BSA. The BSA is outside the preferred elevational range of the species.
Monardella nana ssp. *leptosiphon* San Felipe monardella	None/None G4G5T2Q/S2 1B.2	Perennial rhizomatous herb. Chaparral, lower montane coniferous forest. Sometimes in openings and fuelbreaks or in the understory of forest or chaparral. Elevations: 3935-6085ft. (1200-1855m.) Blooms Jun-Jul.	Not Expected	No chaparral or lower montane coniferous forest occurs within the BSA. The BSA is outside the preferred elevational range of the species.
Myosurus minimus ssp. *apus* little mousetail	None/None G5T2Q/S2 3.1	Annual herb. Valley and foothill grassland, vernal pools. Alkaline soils. Elevations: 65-2100ft. (20-640m.) Blooms Mar-Jun.	Not Expected	No suitable grasslands or vernal pools occur within the BSA.
Nama stenocarpa mud nama	None/None G4G5/S1S2 2B.2	Annual/perennial herb. Marshes and swamps. Lake shores, river banks, intermittently wet areas. Elevations: 15-1640ft. (5-500m.) Blooms Jan-Jul.	Not Expected	No marshes or swamps occur within the BSA.
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 suitable vernally moist areas occur within the BSA.
Orcuttia californica California Orcutt grass	FE/SE G1/S1 1B.1	Annual herb. Vernal pools. Elevations: 50-2165ft. (15-660m.) Blooms Apr-Aug.	Not Expected	No vernal pools occur within the BSA.
Parkinsonia microphylla little-leaved palo verde	None/None G5/S3 4.3	Perennial deciduous shrub. Mojavean desert scrub. Rocky or gravelly sites. Elevations: 150-3510ft. (45-1070m.) Blooms Apr-May.	Not Expected	No suitable desert scrub habitat occurs within the BSA.
Penstemon californicus California beardtongue	None/None G3/S2 1B.2	Perennial herb. Chaparral, lower montane coniferous forest, pinyon and juniper woodland. Stony slopes and shrubby openings; sandy or granitic soils. Elevations: 3840-7545ft. (1170-2300m.) Blooms May-Jun (Aug).	Not Expected	No suitable chaparral, lower montane coniferous forest or juniper woodland occurs within the BSA. The BSA is outside the preferred elevational range of the species.

Scientific Name Common Name	Status	Habitat Requirements	Potential to Occur in BSA	Habitat Suitability/Observations
Petalonyx linearis narrow-leaf sandpaper-plant	None/None G4/S3? 2B.3	Perennial shrub. Mojavean desert scrub, Sonoran desert scrub. Sandy or rocky canyons. Elevations: -80-3660ft. (-25-1115m.) Blooms (Jan-Feb)Mar-May (Jun-Dec).	Not Expected	No suitable desert scrub habitat occurs within the BSA.
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	The Fremont cottonwood habitat within the BSA may serve as suitable riparian woodland for this species. There is one recent CNDDB occurrence approximately 2.8 miles downstream of the BSA within the San Jacinto River. Furthermore, a population of this species occurred in an open sandy wash that burned in 2003. However, it was not detected in the BSA during the rare plant survey when it should have been observable.
Quercus engelmannii Engelmann oak	None/None G3/S3 4.2	Perennial deciduous tree. Chaparral, cismontane woodland, riparian woodland, valley and foothill grassland. Elevations: 165-4265ft. (50-1300m.) Blooms Mar-Jun.	Not Expected	No suitable chaparral, mixed chaparral or grassland habitat occurs within the BSA. The Fremont cottonwood habitat within the BSA may serve as suitable riparian woodland for this species. Rincon biologists did not observe this species, and this species would be readily observable any time of the year if present.
Saltugilia latimeri Latimer's woodland-gilia	None/None G3/S3 1B.2	Annual herb. Chaparral, Mojavean desert scrub, pinyon and juniper woodland. Rocky or sandy substrate; sometimes in washes, sometimes limestone. Elevations: 1310-6235ft. (400-1900m.) Blooms Mar-Jun.	Not Expected	No suitable chaparral, desert scrub or juniper woodland habitat occurs within the BSA. There is only one recent CNDDB occurrence that is over 14 miles from the BSA.
Scutellaria bolanderi ssp. *austromontana* southern mountains skullcap	None/None G4T3/S3 1B.2	Perennial rhizomatous herb. Chaparral, cismontane woodland, lower montane coniferous forest. In gravelly soils on streambanks or in mesic sites in oak or pine woodland. Elevations: 1395-6560ft. (425-2000m.) Blooms Jun-Aug.	Not Expected	No suitable chaparral, mixed chaparral or lower montane coniferous forest occurs within the BSA. The Fremont cottonwood habitat within the BSA may serve as suitable riparian woodland for this species; however, no recent occurrences were identified.
Sidalcea neomexicana salt spring checkerbloom	None/None G4/S2 2B.2	Perennial herb. Chaparral, coastal scrub, lower montane coniferous forest, Mojavean desert scrub, playas. Alkali springs and marshes. Elevations: 50-5020ft. (15-1530m.) Blooms Mar-Jun.	Not Expected	No suitable alkali springs and marshes occur within the BSA. There are no recent CNDDB occurrences within 9 quadrangles of the BSA.
Sidotheca caryophylloides chickweed oxytheca	None/None G4/S4 4.3	Annual herb. Lower montane coniferous forest. Sandy sites. Elevations: 3655-8530ft. (1114-2600m.) Blooms Jul-Sep (Oct).	Not Expected	No suitable lower montane coniferous forest occurs within the BSA. The BSA is outside the preferred elevational range of the species.

Scientific Name Common Name	Status	Habitat Requirements	Potential to Occur in BSA	Habitat Suitability/Observations
Streptanthus bernardinus Laguna Mountains jewelflower	None/None G3G4/S3S4 4.3	Perennial herb. Chaparral, lower montane coniferous forest. Clay or decomposed granite soils; sometimes in disturbed areas such as streamsides or roadcuts. Elevations: 2200-8205ft. (670-2500m.) Blooms May-Aug.	Not Expected	No chaparral or lower montane coniferous forest occurs within the BSA. The BSA is outside the preferred elevational range of the species.
Symphyotrichum defoliatum San Bernardino aster	None/None G2/S2 1B.2	Perennial rhizomatous herb. Cismontane woodland, coastal scrub, lower montane coniferous forest, marshes and swamps, meadows and seeps, valley and foothill grassland. Vernally mesic grassland or near ditches, streams and springs; disturbed areas. Elevations: 5-6695ft. (2-2040m.) Blooms Jul-Nov.	Not Expected	No suitable mixed chaparral, coastal scrub, meadows or lower montane coniferous forest occurs within the BSA. The BSA does not contain marshes or swamps.
Tortula californica California screw moss	None/None G2G3/S2? 1B.2	Moss. Chenopod scrub, valley and foothill grassland. Moss growing on sandy soil. Elevations: 35-4790ft. (10-1460m.)	Not Expected	No suitable chenopod scrub or grasslands occur within the BSA. The closest CNDDB occurrence is from 2013 and is approximately 5.5 miles west of the BSA.

Regional Vicinity refers to within a 9-quadrangle search radius of site.

CRPR (CNPS California Rare Plant Rank)
1B = Rare, Threatened, or Endangered in California and elsewhere
2A = Presumed extirpated in California, but common elsewhere
2B = Rare, Threatened, or Endangered in California, but more common elsewhere

Status (Federal/State)
FE = Federal Endangered
FT = Federal Threatened

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

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

Attachment 3

Floral Compendium

Floral Compendium

Scientific Name[1]	Common Name	Status[2]	Native or Introduced
Plants			
Abronia villosa var. *aurita*	chaparral sand-verbena	CRPR 1B.1	Native
Amaranthus albus	pigweed amaranth	–	Introduced
Amaranthus blitoides	prostrate pigweed	–	Native
Ambrosia psilostachya	western ragweed	–	Native
Artemisia californica	California sagebrush	–	Native
Artemisia douglasiana	mugwort	–	Native
Artemisia dracunculus	tarragon	–	Native
Arundo donax	giant reed	Cal-IPC High	Introduced
Astragalus pomonensis	Pomona milkvetch	–	Native
Atriplex canescens	fourwing saltbush	–	Native
Avena barbata	slim oat	Cal-IPC Moderate	Introduced
Avena fatua	wild oats	Cal-IPC Moderate	Introduced
Baccharis salicifolia	mulefat	–	Native
Brassica tournefortii	Saharan mustard	Cal-IPC High	Introduced
Bromus diandrus	ripgut brome	Cal-IPC Moderate	Introduced
Bromus madritensis ssp. *rubens*	red brome	Cal-IPC High	Introduced
Cenchrus spiniflex	coastal sandbur	–	Native
Centaurea melitensis	tocalote	Cal-IPC Moderate	Introduced
Chenopodium album	lamb's quarters	–	Introduced
Chenopodium murale	nettle leaf goosefoot	–	Introduced
Croton californicus	California croton	–	Native
Croton setiger	dove weed	–	Native
Cucurbita palmata	coyote melon	–	Native
Cylindropuntia bernardina	valley cholla	–	Native
Cynodon dactylon	Bermuda grass	Cal-IPC Moderate	Introduced
Cyperus eragrostis	tall-flat sedge	–	Native
Datura wrightii	Jimson weed	–	Native
Elymus condensatus	giant wild rye	–	Native
Erigeron canadensis	Canada horseweed	–	Native
Erigonum gracile var. *gracile*	slender buckwheat	–	Native
Eriogonum fasciculatum var. *fasciculatum*	coastal California buckwheat	–	Native
Erodium cicutarium	coastal heron's bill	Cal-IPC Limited	Introduced
Festuca myuros	rattail fescue	Cal-IPC Moderate	Introduced
Helianthus annus	common sunflower	–	Native
Heliotropium curassavicum	seaside heliotrope	–	Native
Heterotheca grandiflora	telegraph weed	–	Native
Hirschfeldia incana	shortpod mustard	Cal-IPC Moderate	Introduced
Hordeum murinum	foxtail barley	Cal-IPC Moderate	Introduced
Isocoma menziesii var. decumbens	decumbent goldenbush	1B.2	Native

Scientific Name[1]	Common Name	Status[2]	Native or Introduced
Lactuca serriola	prickly lettuce	–	Introduced
Lepidospartum squamatum	scalebroom	–	Native
Melilotus albus	white sweetclover	–	Introduced
Nerium oleander	oleander	–	Introduced
Nicotiana glauca	tree tobacco	Cal-IPC Moderate	Introduced
Oenothera avita ssp. *californica*	California evening primrose	–	Native
Oncosiphon pilulifer	stinknet	Cal-IPC High	Introduced
Opuntia littoralis	coast prickly pear	–	Native
Parkinsonia aculeata	Mexican palo verde	–	Introduced
Pennisetum setaceum	fountain grass	Cal-IPC Moderate	Introduced
Phacelia ramosissima	branching phacelia	–	Native
Phoradendrum leucarpum ssp. *macrophyllum*	mistletoe	–	Native
Polypogon monspeliensis	rabbitsfoot grass	Cal-IPC Limited	Introduced
Populus fremontii	Fremont cottonwood	–	Native
Robinia pseudoacacia	black locust	Cal-IPC Limited	Introduced
Salix exigua	sandbar willow	–	Native
Salix gooddingii	black willow	–	Native
Salsola tragus	Russian thistle	Cal-IPC Limited	Introduced
Salvia apiana	white sage	–	Native
Salvia columbariae	chia	–	Native
Sambucus mexicana	blue elderberry	–	Native
Sporobolus cryptandrus	sand dropseed	–	Native
Stephanomeria exigua	small wirelettuce	–	Native
Tamarix ramosissima	salt cedar	Cal-IPC High	Introduced
Tribulus terrestris	puncture vine	Cal-IPC Limited	Introduced
Xanthium strumarium	rough cocklebur	–	Native

[1] Jepson Flora Project 2024.

[2] CNPS 2024; Cal-IPC 2024

Attachment 4

Representative Site Photographs (July 15, 2024)

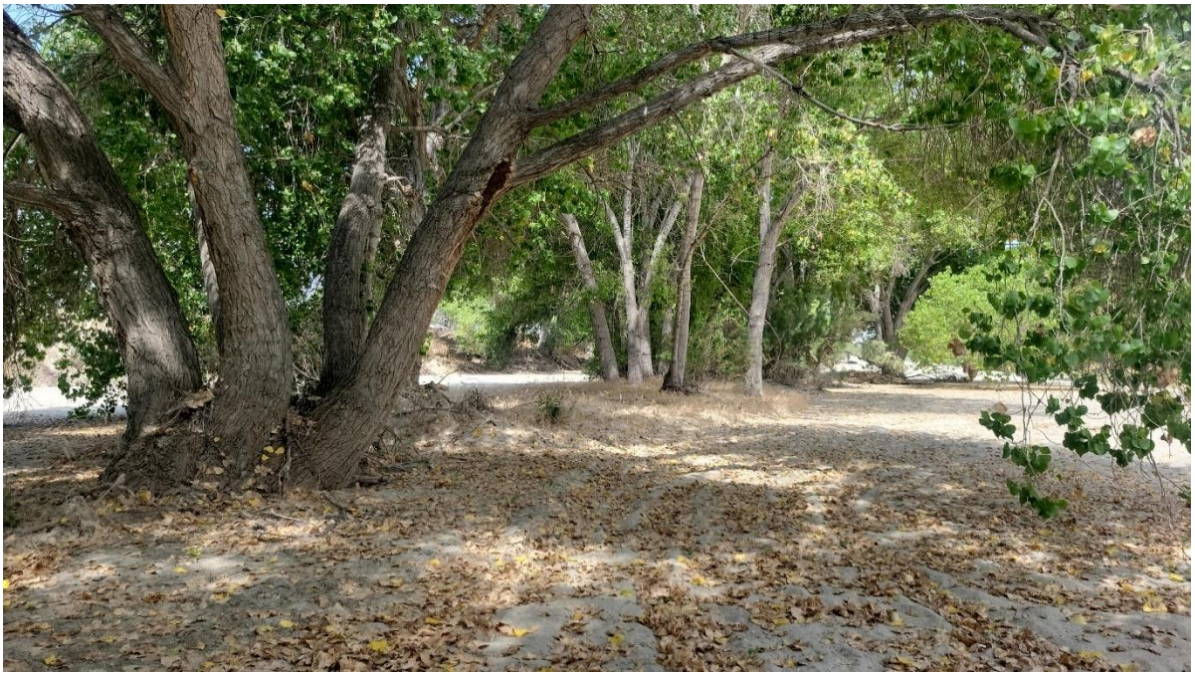
Photograph 1. Chaparral sand-verbena individual within the San Jacinto River in the BSA.

Photograph 2. Chaparral sand-verbena individual along a sandy bank of the San Jacinto River in the BSA.

Photograph 3. Overview of occupied chaparral sand-verbena habitat along a bank of the San Jacinto River in the BSA.

Appendix I

San Bernardino Kangaroo Rat Trapping Focused Survey Report



Casa Loma Siphon No. 1 and San Jacinto Pipeline Project

San Bernardino Kangaroo Rat Trapping Focused Survey Report

prepared for

The Metropolitan Water District of Southern California
700 North Alameda
Los Angeles, California 90012

prepared by

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

July 2024

RINCON CONSULTANTS, INC. SINCE 1994

Table of Contents

1 Introduction 1
2 Methodology 2
3 Project Location and Environmental Setting 5
4 Species Background 6
5 Survey Results and Discussion 7
6 Certification 8
7 References 9

Tables

Table 1 San Bernardino Kangaroo Rat Trapping Results 7

Figures

Figure 1 Regional Location of Project Site 3
Figure 2 Project Location on USGS 7.5-minute Topographic Quadrangle 4

Appendices

Appendix A Representative Transect Photographs

This page left intentionally blank.

1 Introduction

Rincon Consultants, Inc. (Rincon) herein presents the results of a focused small mammal live-trapping effort conducted on behalf of The Metropolitan Water District of Southern California (Metropolitan) for the Casa Loma Siphon No. 1 and San Jacinto Pipeline Project (project). Rincon completed the survey to determine the presence/absence of the federally listed endangered San Bernardino kangaroo rat (*Dipodomys merriami parvus*; SBKR) on or near the project site prior to project activities. The project location is within the current range of the species; therefore, a survey was conducted to determine if SBKR was present within the project site and, if documented, to then determine if burrows within the project footprint were being used by SBKR.

The project site is located near the city of San Jacinto, in unincorporated Riverside County, California (Figure 1 and Figure 2). During storm activity in early 2023, accelerated flows within the San Jacinto River exposed an approximate 200-foot-long segment of one of Metropolitan's Casa Loma Siphon No. 1 and San Jacinto Pipelines. In response to the emergency, Metropolitan installed protective measures to achieve temporary protection of the pipelines until a permanent solution could be developed. Metropolitan is now proposing a permanent engineering solution within the approximate 20-acre project site to properly cover the three existing pipelines (Colorado River Aqueduct [CRA] Siphon, San Jacinto Pipeline and Casa Loma Canal Siphon).

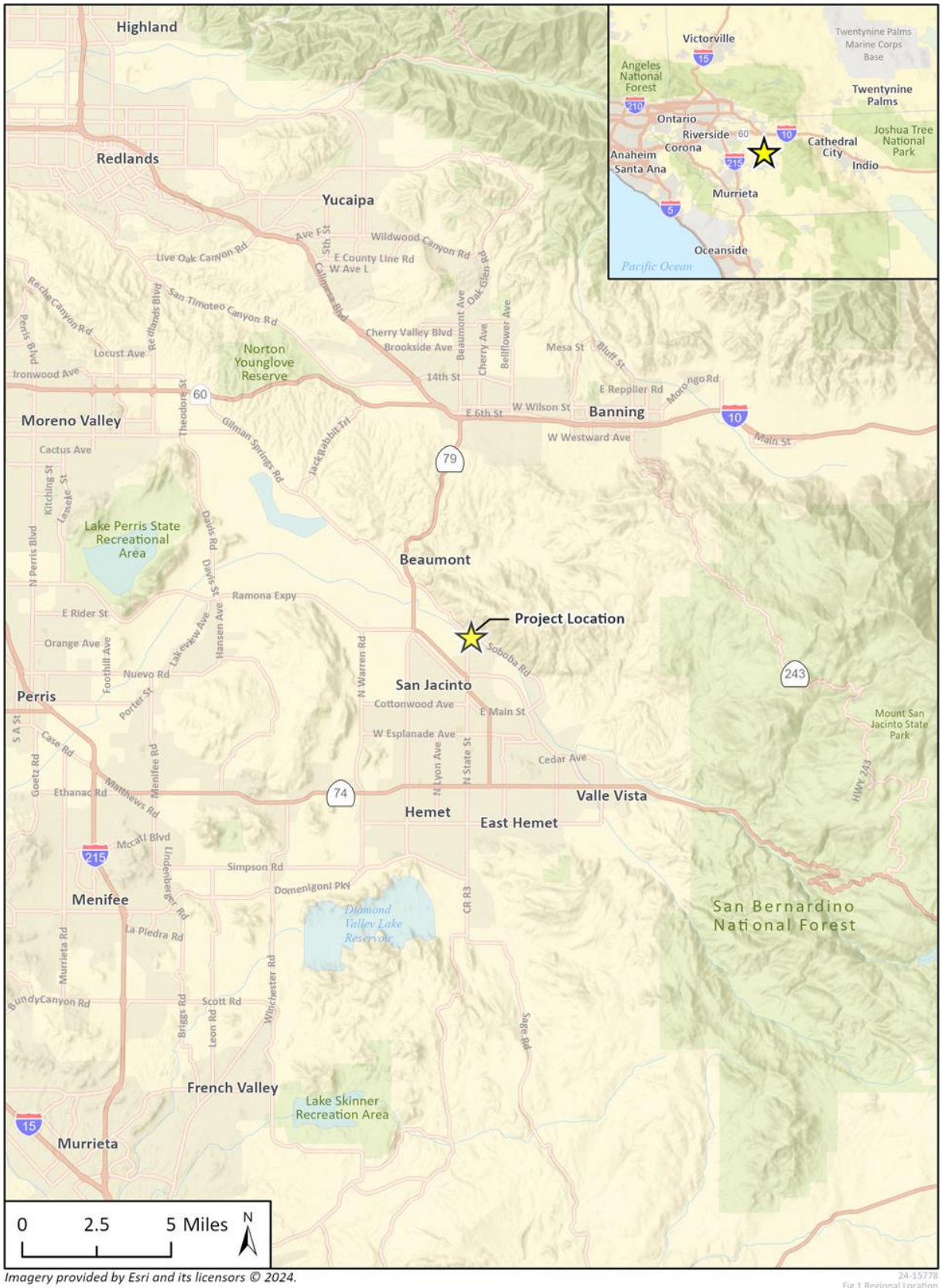
All surveys for the SBKR were conducted by Rincon biologist Kelly Rios under USFWS permit number TE-018909-6.

2 Methodology

Notification to commence protocol trapping surveys for SBKR was submitted to the United States Fish and Wildlife (USFWS) Carlsbad Field Office via email on May 15, 2024, by Kelly Rios. Trapping efforts were led by Rincon Biologist Kelly Rios (Permit # TE-018909-6) with assistance from Rincon biologist, Nick Julier. Focused surveys for SBKR were conducted according to established U.S. Fish and Wildlife USFWS protocols for 10(a)(1)(A) permit specifications. The current protocol requires five consecutive nights of trapping, conducted when the animal is active aboveground at night, and preferably during a new moon phase. One trapping session was conducted from June 10 - 15, 2024.

A total of 43 twelve-inch Sherman live traps were placed in three distinct transects; one located west of the dirt access road and two in lower sand terraces of the San Jacinto River. The traps were placed in areas of suitable habitat containing sandy soils, suitable vegetation, and nearby burrow locations. Areas lacking vegetation and coverage along the sand banks were identified, as well as non-native grassland within the northeast portion of the site. No suitable burrows or habitat were observed in these locations; therefore, traps were not placed in these areas. Trapping was conducted on five consecutive nights for a total of 215 trap nights. Each trap was baited with a mixture of birdseed that was placed at the back of the traps. The traps were left in the same place for five nights. Traps were checked every morning, at which time any captured animals were identified and released at the point of capture. All animals were identified using field guides (Burt 1986; Hall 1981), recorded in a field notebook.

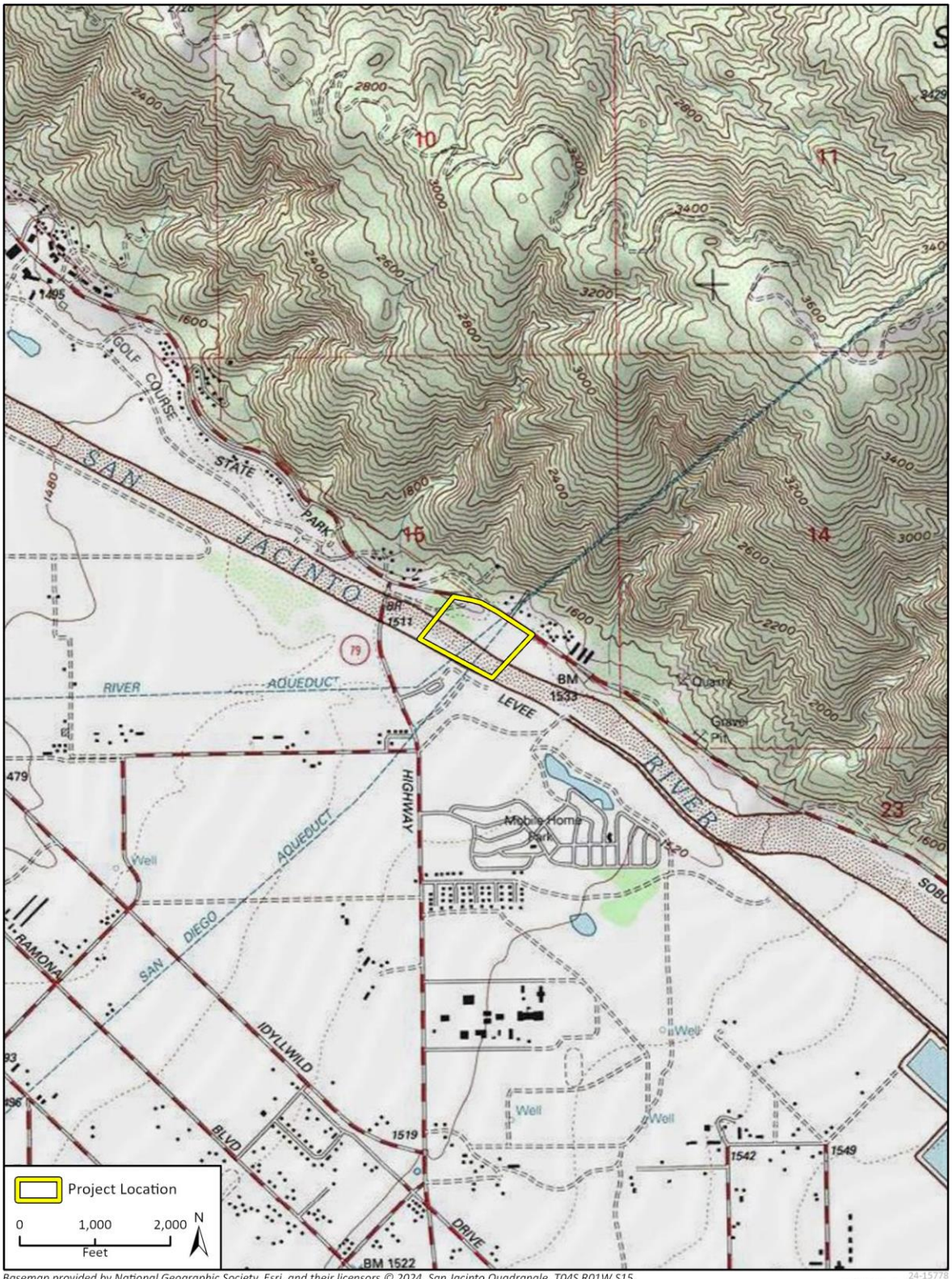
Figure 1 Regional Location of Project Site



Imagery provided by Esri and its licensors © 2024.

24-15778
Fig 1 Regional Location

Figure 2 Project Location on USGS 7.5-minute Topographic Quadrangle



Basemap provided by National Geographic Society, Esri, and their licensors © 2024. San Jacinto Quadrangle. T04S R01W S15
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.

24-15778
CRFig 2 Project Site Topo

3 Project Location and Environmental Setting

The project site is located within and adjacent to the San Jacinto River, between Soboba Road and State Street, near the city of San Jacinto, unincorporated Riverside County, California (Figure 1 and Figure 2). The site is depicted on the United States Geological Survey (USGS) *San Jacinto, California*, 7.5-minute topographic map within Township 4 South, Range 1 West, Section 15, San Bernardino Baseline and Meridian (33.820600°, 116.969914°). The project site is located within federally designated Critical Habitat for the SBKR.

The survey area contains Fremont cottonwood woodland, upland mustards, and fourwing saltbush scrub vegetation communities, as well as developed/disturbed land cover. The trapping survey focused on the Fremont cottonwood woodland, upland mustards, and fourwing saltbrush scrub vegetation communities. The topography of the project site is flat with an incline that drops into the wash from the brushland. The wash characteristics are a result of intermittent flow from the San Jacinto River.

Adjacent land use consists of Soboba Road and undeveloped arid hills further to the north. Agricultural land and residential communities occur to the south, west, and east of the project site.

4 Species Background

The SBKR is one of three subspecies of the Merriam's kangaroo rat (*Dipodomys merriami*). Merriam's kangaroo rat is a widespread species that can be found from the inland valleys to the deserts of southern California. The subspecies known as SBKR is confined to inland valley scrub communities, and more particularly, to scrub communities occurring along rivers, streams and drainages. Most of these systems have been historically altered because of flood control efforts and the increased use of river resources, including mining, off-road vehicle use, and road and housing development. This increased use of arid river resources has resulted in a reduction in both the amount and quality of habitat available for SBKR. The past habitat losses and potential losses prompted an emergency listing of SBKR as an endangered species (USFWS 1998a).

The SBKR is one of several kangaroo rat species in its range. The Dulzura kangaroo rat (*Dipodomys simulans*), the Pacific kangaroo rat (*Dipodomys agilis*), and the Stephens' kangaroo rat (*Dipodomys stephensi*) (SKR) can occur in areas also occupied by SBKR, but these other species have a wider habitat range. SBKR habitat is confined to primary and secondary alluvial fan sage scrub habitats, with sandy soils deposited by fluvial (water) rather than aeolian (wind) processes. Burrows are dug in loose soil, usually near or beneath shrubs.

5 Survey Results and Discussion

Weather conditions during the trapping survey included morning temperatures ranging from 58-64 degrees Fahrenheit with clear skies. Night temperatures ranged from 81-88 degrees , between 6:00 to 7:30 p.m.

Table 1 summarizes the results from the 2024 trapping survey. A total of six small mammal species were trapped and include deer mouse (*Peromyscus maniculatus*), San Diego pocket mouse (*Chaetodipus fallax*), long-tailed pocket mouse (*Chaetodipus formosus*), Los Angeles pocket mouse (*Perognathus longimembris brevinasus*) and harvest mouse (*Reithrodontomys megalotis*). Of these species, the Los Angeles pocket mouse is a California Department of Fish and Wildlife (CDFW) Species of Special Concern (SSC). The two subspecies of San Diego pocket mouse (*C. fallax fallax* and *C. fallax pallidus*) are listed on the CDFW Special Animals list but are not designated as SSC. No SBKR, or kangaroo rats of any kind, were captured during the 5-night trapping survey.

Table 1 San Bernardino Kangaroo Rat Trapping Results

Trap Night	Deer Mouse (*Peromyscus maniculatus*)	San Diego pocket mouse (*Chaetodipus fallax*)	Long-tailed pocket mouse (*Chaetodipus formosus*)	Los Angeles pocket mouse (*Perognathus longimembris brevinasus*)	Harvest mouse (*Reithrodontomys megalotis*)
1	7	-	3	-	1
2	6	-	3	-	3
3	13	-	3	1	1
4	11	1	2	-	-
5	7	-	8	-	3
Total	**44**	**1**	**19**	**1**	**8**

Wildlife activity was low to moderate, with most wildlife observed being avian species. Burrowing mammal species, including California ground squirrel (*Otospermophilus beecheyi*) and Botta's pocket gopher (*Thomomys bottae*), were also observed within the survey area.

6 Certification

I certify that the information in this survey report and attached exhibits fully and accurately represents my work.

Signed: Kelly Rios Date: July 15, 2024

Kelly Rios
Senior Biologist
TE-018909-6

7 References

Burt, W.H. 1986. A Field Guide to the Mammals in North American North of Mexico.

Houghton Mifflin Company, Boston, Massachusetts.

Hall, E.R. 1981. The Mammals of North America, Volumes I and II. John Wiley and Sons,

New York, New York.

United States Fish and Wildlife Service (USFWS). 1998. Emergency Rule to List the San Bernardino Kangaroo Rat, San Bernardino and Riverside Counties in Southern California, as Endangered. Vol. 63, No. 17, pp. 3835 – 3843.

USFWS. 2017. Native Endangered & Threatened Species Recovery 10(a)(1)(B) Permit TE-018909-5.

This page intentionally left blank.

Appendix A

Representative Transect Photographs

Photograph 1: Date: 6/17/24. Transect 1; facing west from dirt access road.

Photograph 2: Date: 6/17/24. Transect 2; facing southeast.

Photograph 3: Date: 6/17/24. Transect 3; facing southwest.

Casa Loma Siphon No. 1 and San Jacinto Pipeline Protection Project

Responses to Comments Received

The Metropolitan Water District of Southern California
700 North Alameda Street
Los Angeles, CA 90012

March 2026

Table of Contents

CHAPTER 1 RESPONSES TO COMMENTS RECEIVED 1

Responses to Comments 1

Response to Comment Letter 1 4

This page intentionally left blank.

CHAPTER 1
RESPONSES TO COMMENTS RECEIVED

Responses to Comments

This section includes comments received during public circulation of the Proposed Initial Study-Mitigated Negative Declaration (IS-MND) prepared for the proposed Casa Loma Siphon No. 1 and San Jacinto Pipeline Protection Project (proposed Project). This document includes a copy of the one comment letter submitted during the 30-day public review period for the Proposed IS-MND, which was submitted by the United States Fish and Wildlife Service (USFWS), along with The Metropolitan Water District of Southern California's (Metropolitan) responses to this comment letter. Although not required by the California Environmental Quality Act (CEQA) or the CEQA Guidelines, Metropolitan is voluntarily providing written responses to comments received on the Proposed IS-MND as part of the administrative record and for the Metropolitan Board of Directors (Board) to review when considering adoption of the MND. This document provides information for the record explaining why the comments do not affect the Lead Agency's conclusion that there are no potential significant environmental effects. In accordance with the requirements of CEQA Guidelines Section 15073(e), Metropolitan will provide notification in writing to USFWS of the Board of Directors meeting to be held for the proposed Project.

All written comments received have been coded to facilitate identification and tracking. The one comment letter received during the public review period was reviewed and divided into individual comments, with each comment containing a single theme, issue, or concern. Individual comments were bracketed and numbered, and the responses were assigned corresponding numbers (Response 1-1, for example, indicates that the response is for the first issue raised in the first (only) comment letter). To aid the readers and commenter, comments have been reproduced in this chapter together with the corresponding responses.

Letter 1

From: Christensen, Rebecca A <rebecca_christensen@fws.gov>
Sent: Thursday, January 8, 2026 12:15 PM
To: EPT <ep@mwdh2o.com>
Cc: Cleary-Rose, Karin <Karin_Cleary-Rose@fws.gov>
Subject: Comments on IS-MND for the Casa Loma Siphon No.1 and San Jacinto Pipeline Protection Project

In response, please refer to: 2024-0008042_CEQA_MND_WRIV

Hello,

The U.S. Fish and Wildlife Service (Service) has reviewed the Draft Initial Study/Mitigated Negative Declaration (IS/MND) for the Casa Loma Siphon No. 1 and San Jacinto Pipeline Protection Project (Project) proposed by the Metropolitan Water District of Southern California. The proposed Project encompasses an approximately 6.7-acre area located within and adjacent to the San Jacinto River, between Soboba Road and State Street, near the city of San Jacinto in unincorporated Riverside County, California. The primary concern and mandate of the U.S. Fish and Wildlife Service is the protection of fish and wildlife resources and their habitats. The Service has legal responsibility for the welfare of migratory birds, anadromous fish, and endangered animals and plants occurring in the United States. The Service is also responsible for administering the Federal Endangered Species Act (ESA) of 1973, as amended (16 U.S.C. 1531 et seq.) and the Migratory Bird Treaty Act (MBTA) of 1918, as amended (16 U.S.C. 703 et seq.). 1-1

The Services acknowledges that Metropolitan may choose to obtain coverage of take for the federally endangered least Bell's vireo (*Vireo bellii pusillus*) through an ESA Section 7 consultation, if a Clean Water Act Section 404 permit is required by the Corps of Engineers. The effects determination for a consultation would lie with the action agency (i.e., the Corps of Engineers). Alternatively, Metropolitan may choose to use the Western Riverside Multiple Species Habitat Conservation Plan Participating Special Entity process for incidental take coverage of listed species instead of ESA Section 7. 1-2

Additionally, although surveys for the federally endangered San Bernardino kangaroo rat (*Dipodomys merriami parvus*; SBKR) were performed in 2024 and no SBKR were trapped within the Project footprint, there was one SBKR trapped less than 200 feet southeast of the Project footprint in 2006. SBKR are attracted to recently disturbed soils and stockpiles, and could move into the Project footprint as a result. Therefore, the Service recommends an additional avoidance measure be included in the Project Description, to fully avoid effects to this listed subspecies: 1-3

- A temporary barrier fence should be constructed along the southeastern/upstream side of the Project footprint. The barrier fencing should be unburied (i.e., in an L-shaped apron) with

a minimum height of 3 feet above grade, 2 feet at grade faced out away from the work area, and then covered with sandbags. Support should be with standard barb or smooth wire fence "T-posts". Fencing material should be ¼-in mesh, 23-gauge galvanized hardware cloth; metal flashing; or shade cloth attached to chain link fence. Fencing needs may be fulfilled through Animex® or similar fencing. The fencing should be inspected for tears/breaches at the end of each workday so that they may be repaired. Additionally, the Project manager should monitor for significant rain events and temporarily remove the barrier fencing from the active wash in advance of the storm event (and replace after storm event). The barrier fence should be removed upon Project completion. 1-3

Please feel free to contact me if you have any questions.

Thank you for the opportunity to provide comments on this Project.

Rebecca Christensen
Fish and Wildlife Biologist
U.S. Fish and Wildlife Service
Palm Springs Fish and Wildlife Office
777 E. Tahquitz Canyon Way, Suite 208
Palm Springs, California 92262
(442) 303-7914 1-4

This communication, together with any attachments or embedded links, is for the sole use of the intended recipient(s) and may contain information that is confidential or legally protected. If you are not the intended recipient, you are hereby notified that any review, disclosure, copying, dissemination, distribution or use of this communication is strictly prohibited. If you have received this communication in error, please notify the sender immediately by return e-mail message and delete the original and all copies of the communication, along with any attachments or embedded links, from your system.

Response to Comment Letter 1

COMMENTER: Rebecca Christensen, Fish and Wildlife Biologist, USFWS

DATE: January 8, 2026

Response 1-1

The commenter provides an introduction to the comment letter, summarizes the proposed Project, and states USFWS's role to protect fish and wildlife resources and administer the Federal Endangered Species Act and Migratory Bird Treaty Act.

The commenter's role is noted.

Response 1-2

The commenter acknowledges that Metropolitan may obtain coverage of take for federally endangered least Bell's vireo (*Vireo bellii pusillus*) through Endangered Species Act Section 7 consultation, or through the Western Riverside Multiple Species Habitat Conservation Plan Participating Special Entity process for incidental take coverage of listed species.

Metropolitan acknowledges the comment and will continue to coordinate with the USFWS to determine the appropriate mechanism for endangered species consultation.

Response 1-3

The commenter notes that although no San Bernardino kangaroo rats (*Dipodomys merriami parvus*; SBKR) were detected within the Project footprint during the protocol surveys conducted in 2024, the species was previously documented nearby and could be attracted to disturbed soils. The commenter recommends adding an avoidance measure requiring installation of temporary barrier fencing along the southeastern/upstream Project boundary. The fencing should meet specific design standards, be regularly inspected and repaired, temporarily removed before significant storm events, and fully removed once construction is complete.

Metropolitan acknowledges this comment. Temporary fencing will be incorporated into Metropolitan's Contractor Construction Specifications to be implemented during project construction. Metropolitan agrees to incorporate this information into the Project Description. Incorporation of avoidance language does not change the significance determination of the Proposed IS-MND. Additional avoidance measures may also be incorporated during subsequent regulatory processes.

Section 1.6.5 in the Project Description of the Final IS-MND (page 9) has been revised and now reads as follows:

> The proposed Project would include the installation of temporary barrier fencing or other equivalent measures along the southeastern/upstream side of the Project footprint to avoid potential intrusion by wildlife species. The temporary barrier fencing would remain in place for the duration of construction activities and would be removed upon Project completion.

Recirculation of a Proposed IS-MND is required when "substantial revision" following public notice occurs, such as when a new avoidable significant effect is identified that requires additional mitigation, or when previously proposed measures are found insufficient and new measures must be added. The above revision to the Proposed IS-MND does not constitute "substantial revision" because it does not introduce new avoidable significant impacts, does not identify mitigation that fails to reduce impacts to a less-than-significant level, and does not add measures that would constitute substantial revisions

necessitating additional public review. As such, recirculation of the Proposed IS-MND is not required pursuant to CEQA Guidelines Section 15073.5.

Response 1-4

The commenter provides their contact information and thanks Metropolitan for the opportunity to provide comments on the Project.

This comment is noted.

This page intentionally left blank.

Casa Loma Siphon No. 1 and San Jacinto Pipeline Protection Project

Mitigation Monitoring and Reporting Program

The Metropolitan Water District of Southern California
700 North Alameda Street
Los Angeles, CA 90012

March 2026

Mitigation Monitoring and Reporting Program

The Mitigation Monitoring and Reporting Program (MMRP) for the proposed Casa Loma Siphon No. 1 and San Jacinto Pipeline Protection Project (proposed Project) has been prepared in accordance with Public Resources Code Section 21081.6 and *State CEQA Guidelines* Section 15074(d). Metropolitan will use this MMRP to track compliance with the required Project mitigation measures.

Metropolitan's Board of Directors will consider the MMRP during the adoption hearing for the Final Initial Study-Mitigated Negative Declaration (IS-MND). The final MMRP will incorporate all mitigation measures adopted for the proposed Project. Metropolitan makes the finding that the measures included in the MMRP constitute changes or alterations that avoid or substantially lessen the potentially significant environmental effects of the proposed Project on the environment.

This MMRP summarizes mitigation commitments identified in the Final IS-MND. Table 1 provides the MMRP, which includes all mitigation measures, monitoring process, and monitoring timing. Metropolitan is the agency responsible for ensuring implementation of all mitigation measures. Impacts and mitigation measures are presented in the same order as in the Final IS-MND. The columns in the table provide the following information:

- **Mitigation Measures:** This column indicates the action(s) that will be taken to reduce the impact to a less-than-significant level.
- **Responsible Party:** This column indicates the party who must ensure each mitigation measure is implemented and that monitoring, and reporting activities occur.
- **Timing of Implementation:** This column indicates the general schedule for conducting each monitoring task, either during the design phase, prior to construction, during construction, and/or after construction.
- **Implementation Party:** This column lists the party responsible for implementing the mitigation measure.

Table 1 Mitigation Monitoring and Reporting Program

Mitigation Measure	Responsible Party	Timing of Implementation	Implementation Party	Comments	Initials/Date
Biological Resources					
BIO-1 Special-Status Plant Species Surveys					
A seasonally timed, pre-activity survey for special-status plants shall be completed prior to any vegetation removal, grubbing, or other ground-disturbing activity (including staging and mobilization). The survey shall be timed to coincide with the blooming period of chaparral sand-verbena (March to September), smooth tarplant (April to September), Mojave tarplant (June to October), and white rabbit-tobacco (August to November). The survey shall provide specific, updated information on the locations of chaparral sand-verbena individuals and determine the continued absence of other special-status plant species. The plant survey shall be conducted by a qualified botanist and shall cover suitable habitat within the entire area proposed for disturbance (including areas for staging and mobilization). All special-status plant species identified on site shall be mapped onto a site-specific aerial photograph and topographic map. The survey shall be conducted in accordance with the most current protocols established by CDFW and USFWS. If federally listed, state listed, or California Rare Plant Rank 1B species are found, avoidance and minimization measures shall be implemented in accordance with Mitigation Measure BIO-2. A report of the survey results shall be submitted to Metropolitan.	Metropolitan	Prior to Construction	Metropolitan Qualified biologist		
BIO-2 Special-Status Plant Species Avoidance and Minimization					
Chaparral sand-verbena and any newly identified federally listed, state listed, or California Rare Plant Rank 1B species shall be avoided, if feasible. Occurrences of these special-status plant species that are not within the immediate disturbance footprint but located within 50 feet of disturbance limits shall be protected at least 30 feet beyond their extent, or other distance as approved by a monitoring biologist, to minimize the potential for impacts. If avoidance of these special-status plant species is not feasible, salvage and transplantation shall be implemented in accordance with Mitigation Measure BIO-3. Any avoidance and minimization measures implemented shall be documented and included in the special-status plant survey report prepared under Mitigation Measure BIO-1.	Metropolitan	During Construction	Metropolitan Qualified biologist		

Mitigation Measure	Responsible Party	Timing of Implementation	Implementation Party	Comments	Initials/Date
BIO-3 Special-Status Plant Species Salvage and Transplantation					
If avoidance of chaparral sand-verbena or any newly identified federally listed, state listed, or California Rare Plant Rank 1B species within the Project site is not feasible, the impacted specimens, seed, and surrounding topsoil shall be salvaged and redistributed into adjacent, undisturbed suitable habitat. Any salvage and transplantation efforts shall be documented and included in the special-status plant survey report prepared under Mitigation Measure BIO-1.	Metropolitan	Prior to Construction	Metropolitan Qualified biologist		
BIO-4 Least Bell's Vireo Pre-Construction Survey and Avoidance					
To avoid potential direct and indirect impacts to least Bell's vireo, Metropolitan shall implement the following measures for all Project work areas at or within 300 feet of riparian vegetation known to be occupied by least Bell's vireo based on 2024 protocol-level survey results, as well as pre-construction surveys conducted by a qualified biologist/ornithologist: • Construction (primarily ground disturbance) activities that occur at or within 300 feet of riparian areas known to be occupied by least Bell's vireo shall occur outside of least Bell's vireo nesting season (generally March 1 to August 31) to the extent feasible. • If construction activities must occur during least Bell's vireo nesting season and could encroach within 300 feet of suitable least Bell's vireo habitat, a qualified biologist/ornithologist shall conduct a pre-construction survey no more than seven days prior to initiation of construction activities in all areas deemed suitable for least Bell's vireo, including areas determined occupied by least Bell's vireo during the 2024 protocol-level surveys. o If least Bell's vireo is not detected within riparian habitat located at or within 300 feet of construction activities, no further action or exclusion buffers are required. o If least Bell's vireo is detected and construction activities are planned at or within 300 feet of occupied least Bell's vireo habitat, the following measures shall be implemented: ▪ A qualified biologist/ornithologist shall establish a 300-foot exclusion buffer measured from the edge of the occupied riparian habitat to the closest edge of the construction work area, if feasible. If it is not feasible to maintain a 300-foot	Metropolitan	Prior to Construction During Construction	Metropolitan Qualified biologist/ ornithologist		

Mitigation Measure	Responsible Party	Timing of Implementation	Implementation Party	Comments	Initials/Date
exclusion buffer due to site constraints, the qualified biologist/ ornithologist may reduce the buffer based on the intensity of construction activities, construction noise levels, and observed behavior of individual birds. The qualified biologist/ornithologist shall be present for the duration of the construction activities that occur at or within 300 feet of the edge of riparian areas occupied by least Bell's vireo. If any signs of nest disturbance or stress are observed, then additional avoidance and minimization measures shall be implemented, such as installing noise barriers or modifying buffer distances. ▪ If an appropriate exclusion buffer is unable to be established that would ensure direct and indirect impacts to nesting least Bell's vireo can be fully avoided, construction shall be halted and shall not occur until it is confirmed by the qualified biologist/ ornithologist that the young are no longer dependent on the nest. ▪ Monitoring reports shall document the ambient noise level recorded prior to construction initiation, as well as document the recorded noise levels used to determine least Bell's vireo exclusion buffer distances, whether increased or reduced.					
BIO-5 Compensatory Mitigation for Fremont Cottonwood Woodland, Jurisdictional Waters, and Least Bell's Vireo Habitat					
Compensatory mitigation for impacts to Fremont cottonwood woodland and jurisdictional waters regulated by USACE, RWQCB, and CDFW shall be identified prior to disturbance of these features. Mitigation shall be required at a minimum ratio of 1:1 for temporary and permanent impacts, including removal of mature cottonwood trees, unless a higher ratio is required by RWQCB, CDFW, or USACE during their respective permitting processes. Mitigation may take the form of permittee-responsible on-site or off-site mitigation, payment to an in-lieu fee program, or the purchase of credits from an approved mitigation bank. If on-site or off-site restoration would occur, Metropolitan shall retain a qualified biologist to develop a Habitat Revegetation, Restoration, and Monitoring Program prior to the commencement of Project construction (including, but not limited to, site preparation, staging and mobilization, vegetation clearance/mowing/trimming, grading, and excavation). At a minimum, the program shall include the following:	Metropolitan	Prior to Construction	Metropolitan, Qualified biologist		

Mitigation Measure	Responsible Party	Timing of Implementation	Implementation Party	Comments	Initials/Date
• A description of the purpose and goals of the restoration • Identification of success criteria and performance standards • Methods of site preparation, including topsoil salvage and replacement procedures • Irrigation plan and schedule • Best management practices • Maintenance and monitoring program • Adaptive management strategies • Key stakeholders and responsible parties • Funding • Contingencies The Habitat Revegetation, Restoration, and Monitoring Program plant palette shall avoid use of species from MSHCP Table 6-2 (Plants to be Avoided Within or Adjacent to Conservation Areas)[1] for any restoration of temporary impacts. If payment to an in-lieu fee program or the purchase of credits from an approved mitigation bank is utilized, Metropolitan shall retain proof of purchase in the Project file.					
BIO-6 Western Burrowing Owl Pre-Activity Survey and Avoidance					
Metropolitan shall retain a qualified biologist to conduct a pre-activity burrowing owl clearance survey of suitable habitat within the Project site and a 500-foot buffer, as feasible, to confirm the absence of wintering western burrowing owl individuals, no more than 14 days prior to start of construction. The survey methodology shall be consistent with the methods outlined in the CDFW Staff Report on Burrowing Owl Mitigation (CDFW 2012). If no active wintering owls or evidence of occupied habitat is identified, then Project construction in suitable habitat may commence, and no further action is required. If active wintering owls are detected within the Project site, Metropolitan shall implement the following measures to avoid and/or minimize potential	Metropolitan	Prior to Construction	Metropolitan Qualified biologist		

[1] The Project site is located within the boundaries of the Western Riverside County Multiple Species Habitat Conservation Plan (MHSCP). Table 6-2 of the MSHCP identifies plant species that are discouraged for use within or adjacent to MSHCP Conservation Areas due to their potential to impact covered species or habitat functions.

Mitigation Measure	Responsible Party	Timing of Implementation	Implementation Party	Comments	Initials/Date
impacts in accordance with the CDFW Staff Report on Burrowing Owl Mitigation (CDFW 2012): • A qualified biologist shall be present on site during initial ground disturbing activities in suitable burrowing owl habitat • During the nonbreeding (winter) season (September 1 to January 31), ground-disturbing work can proceed near active burrowing owl burrows at the discretion of the qualified biologist as long as the work occurs no closer than 165 feet (50 meters) from the burrow, depending on whether the level of disturbance is low and if the active burrow is not directly affected by the Project activity. A smaller/larger buffer may be established by the qualified biologist following monitoring and assessment of the Project's effects on the burrowing owl(s). • Smaller non-disturbance buffers may be permitted in the winter for burrowing owl individuals if a noise and visual barrier, such as hay bale walls, is installed between the occupied burrowing owl burrow and construction activities, if the qualified biologist determines the reduced buffer will provide adequate protection. • If active winter burrows are found that would be directly affected by ground-disturbing activities and cannot be avoided, Metropolitan shall coordinate with CDFW to determine a course of action and obtain incidental take authorization, if necessary. A final letter shall be prepared by the qualified biologist documenting the results of the pre-activity surveys and monitoring, which shall be submitted to Metropolitan.					
BIO-7 Special-Status Bats Avoidance and Minimization					
To the extent feasible, demolition or disturbance of suitable bat roosting habitat (e.g., live and dead trees) shall be scheduled between October 1 and February 28, outside of the maternity roosting season. If suitable roost trees must be encroached during the maternity season (March 1 to September 30) or structures must be removed at any time of the year, Metropolitan shall retain a qualified bat specialist to conduct a pre-activity survey no more than seven days prior to the start of Project construction in a given work area to identify those trees proposed for disturbance that could provide hibernacula or nursery colony roosting habitat for bats. The trees or structures shall be closely inspected by the bat specialist to determine the presence or absence of roosting bats. If potentially suitable	Metropolitan	Prior to Construction During Construction	Metropolitan Qualified bat specialist		

Mitigation Measure	Responsible Party	Timing of Implementation	Implementation Party	Comments	Initials/Date
hibernacula or nursery colony roosting habitat for bats is not present in areas anticipated to be directly impacted by Project construction, no additional action is required. If bats are not detected, but the bat specialist determines roosting bats may be present at any time of year, trees shall be felled in a controlled manner using heavy machinery. To ensure the optimum warning for any roosting bats that may still be present, the trees or structures shall be nudged lightly two to three times, with a pause of approximately 30 seconds between each nudge to allow bats to become active. Trees or structures may then be pushed to the ground slowly under the supervision of a qualified bat specialist. Felled trees shall remain in place until they are inspected by a bat specialist. Trees that are known to be bat roosts shall not be sawed or mulched immediately. A period of at least 48 hours shall elapse prior to such operations to allow bats to escape. The bat specialist shall document all demolition monitoring activities and prepare a summary report for Metropolitan upon completion of tree removal activities.					
Tribal Cultural Resources					
TCR-1 Tribal Cultural Resource Management Plan					
Metropolitan shall prepare a Tribal Cultural Resources Management Plan in coordination with the Soboba Band of Luiseño Indians prior to Project construction. The plan shall include a description of Project construction activities that shall require tribal monitoring. The plan shall also include detailed processes and procedures for unanticipated tribal cultural resource discoveries during Project ground-disturbing activities and procedures for the unanticipated discovery of human remains and burials. The provisions of the Tribal Cultural Resources Management Plan shall be implemented during Project construction, and any monitoring logs/reports shall be submitted to Metropolitan.	Metropolitan	Prior to Construction During Construction	Metropolitan Soboba Band of Luiseño Indians		

This page intentionally left blank.